City of Oakley
Community Development Department

California Environmental Quality Act (CEQA) Initial Study

Acacia Project

(GPA 03-18, RZ 07-18, TM 04-18, DR 11-18)

September 2019

Prepared by

RANEY PLANNING & MANAGEMENT, INC. 20 years
1501 Sports Drive, Suite A, Sacramento, CA 95834

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APPENDIX:

INITIAL STUDY
September 2019

A. BACKGROUND

1. Project Title: Acacia Project

2. Lead Agency Name and Address: City of Oakley
Community Development Department
3231 Main Street
Oakley, CA 94561

3. Contact Person and Phone Number: Joshua McMurray
Planning Manager
(925) 625-7000

4. Project Location: Southeast of the Main Street/Honey Lane Intersection
Oakley, CA 94561
Assessor's Parcel Numbers (APNs): 033-030-001 & -027

5. Project Sponsor: Signature Homes, Inc.
4760 Willow Road #200
Pleasanton, CA 94588

6. Existing General Plan: Single-Family Residential, High Density (SFH)

7. Proposed General Plan: Multi-Family Residential, Low Density (ML)

8. Existing Zoning: Single-Family Residential (R-6)

9. Proposed Zoning: Planned Development (P-1)

10. Surrounding Land Uses and Setting:

The project site consists of approximately 13.4 acres located southeast of the Main Street and Honey Lane intersection. The site is bordered by Main Street to the west, Honey Lane to the north, and Salvador Lane to the east. Surrounding existing land uses include residential uses on all sides of the project site. Currently the western portion of the project site is undeveloped and regularly disked. The eastern portion of the site is developed with two single-family homes and seven sheds.

11. Project Description Summary:

The Acacia Project (proposed project) would include demolition of the existing on-site structures and redevelopment of the project site with a gated housing subdivision containing 108 single-family residential lots, one private street lot, twelve private drive lots, one public right of way, two water quality lots, and three landscape lots. The proposed lots would be a minimum of 3,375-square feet (sf) and include one of three designs for a two-story, four-bedroom home with an attached garage. The project would require approval of a General Plan Amendment, Rezone, Tentative Map to subdivide the 13.4-acre site,

and a Design Review for the home designs, site landscaping, fence plans, and site design.

12. Status of Native American Consultation Pursuant to Public Resources Code Section 21080.3.1.:

    In compliance with Assembly Bill (AB) 52 (Public Resources Code Section 21080.3.1), project notification letters were distributed to the Amah Mutsun Tribal Band of Mission San Juan Bautista, Muwekma Ohlone Indian Tribe of the SF Bay Area, the Ohlone Indian Tribe, North Valley Yokuts Tribe, Wilton Rancheria, Indian Canyon Mutsun Band of Costanoan, Torres Martinez Desert Cahuila Indians, and the Ione Band of Miwok Indians. The letters were distributed on January 7, 2019 and requests to consult were not received during the consultation period.

B. SOURCES

All technical reports prepared for the project analysis are available upon request at the City of Oakley City Hall, located at 3231 Main Street, Oakley, CA 94561. The following documents are referenced information sources utilized by this analysis:

1. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.
2. California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.
3. California Department of Conservation. *Contra Costa County Important Farmland 2016.* Published August 2018.
4. California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. June 12, 2018.
5. California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Potrero Hill Landfill (48-AA-0075)*. Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/48-AA-0075/. Accessed August 2019.
6. California Department of Toxic Substances Control. EnviroStor. Available at: http://www.envirostor.dtsc.ca.gov. Accessed August 2019.
7. California Department of Transportation. *California Scenic Highway Mapping System Contra Costa County*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed August 2019.
8. California Geologic Survey. *Seismic Hazard Zone Report for the Brentwood 7.5-Minute Quadrangle, Contra Costa County, California.* 2018.
9. City of Oakley Police Department. *2017 Annual Report*. 2017. Available at http://www.ci.oakley.ca.us/wp-content/uploads/2018/04/Annual-Report-2017-2-2.pdf. Accessed June 19, 2018.
10. Consulting Associates California. *Phase I Environmental Site Assessment, The Minor and Hardcastle Properties Oakley California.* June 13, 2018.
11. Consulting Associates of California. *Summary Surface Soil Sampling at Minor and Hardcastle Properties in Oakley, California.* July 10, 2018.
12. Contra Costa County Clean Water Program. *Stormwater C.3 Guidebook.* May 17, 2017.
13. Contra Costa County Flood Control District. *Contra Costa County Formed Drainage Areas.* February 7, 2008.
14. Diablo Water District. *Final 2015 Urban Water Management Plan.* June 2016.

15. Federal Emergency Management Agency. *Flood Insurance Rate Map 06013C0355G.* Effective March 21, 2007.
16. Moore Biological Consultants. *Application Form and Planning Survey Report*. September 2018.
17. Sacramento Metropolitan Air District. *Guide to Air Quality Assessment in Sacramento County*. Available at: http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools. Accessed February 2019.
18. Saxelby Acoustics. *Environmental Noise Assessment, Acacia Residential Project*. August 18, 2019.
19. TJKM. *Acacia Residential Traffic Impact Analysis.* May 2019.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☐ **Aesthetics**	☐ **Agriculture and Forest Resources**	✖ **Air Quality**
✖ **Biological Resources**	✖ **Cultural Resources**	☐ **Energy**
✖ **Geology and Soils**	☐ **Greenhouse Gas Emissions**	✖ **Hazards and Hazardous Materials**
✖ **Hydrology and Water Quality**	☐ **Land Use and Planning**	☐ **Mineral Resources**
✖ **Noise**	☐ **Population and Housing**	☐ **Public Services**
☐ **Recreation**	✖ **Transportation**	☐ **Tribal Cultural Resources**
☐ **Wildfire**	☐ **Utilities and Service Systems**	

D. DETERMINATION

On the basis of this Initial Study:

☐ 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 applicant. 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" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

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

Signature	9/15/19 Date
Joshua McMurray Printed Name	City of Oakley For

E. BACKGROUND AND INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) provides an environmental analysis pursuant to the California Environmental Quality Act (CEQA) for the proposed project. The applicant has submitted this application to the City of Oakley, which is the Lead Agency for the purposes of CEQA review. The IS/MND contains an analysis of the environmental effects of construction and operation of the proposed project.

In December 2002, the City of Oakley adopted the Oakley General Plan and the Oakley General Plan Environmental Impact Report (EIR). The General Plan EIR was a program-level EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 *et seq*.). The General Plan EIR analyzed full implementation of the Oakley General Plan and identified measures to mitigate the significant adverse project and cumulative impacts associated with the General Plan. Pursuant to CEQA Guidelines Section 15150(a), the City of Oakley General Plan and General Plan EIR are incorporated by reference. Both documents are available at the City of Oakley, 3231 Main Street, Oakley, CA 94561.

The impact discussions for each section of this IS/MND have been largely based on information in the Oakley General Plan and the Oakley General Plan EIR, as well as technical studies prepared for the proposed project.

The mitigation measures prescribed for environmental effects described in this IS/MND would be implemented in conjunction with the project, as required by CEQA, and the mitigation measures would be incorporated into the project. In addition, a project Mitigation Monitoring and Reporting Program (MMRP) would be adopted in conjunction with approval of the project.

F. PROJECT DESCRIPTION

The following section includes a description of the project's location and surrounding land uses, as well as a discussion of the project components and discretionary actions requested of the City of Oakley by the applicant.

Project Location and Surrounding Land Uses

The project site is located southeast of the intersection of Main Street and Honey Lane in the City of Oakley. The site is identified by APNs 033-030-001 and -027 and totals approximately 13.4 acres (see Figure 1). Currently, the project site contains a single-family residence and three sheds in the southwestern corner of the site, along Main Street, and an existing single-family residence and three sheds on the eastern border of the site. The remainder of the western parcel is vacant and regularly disked. Several trees exist on the parcel to the east.

The site is bounded by Main Street to the west and a single-family residence to the east, with single-family residences bordering the site directly north and south, as well as to the west, across Main Street. The Green Leaves Church of God is located south of the site.

Project Components

The proposed project would include demolition of all existing on-site structures and construction of a gated housing subdivision. The housing development would include 108 single-family residential lots, one private street lot, twelve private drive lots, landscape areas, and associated improvements.

Figure 1
Project Site

The single-family residential lots would range from 3,375 sf to 5,661 sf (see Figure 2). Each unit would have a private garage and driveway with access from the new private drive aisles. All houses would have four bedrooms over two stories. Each unit would have access to a front, side, and rear private yard. A landscaping area would be included along Honey Lane on the eastern boundary of the project site.

Proposed Residences

The proposed single-family residences would be offered in three different styles and layouts. Each two-story residence would contain four bedrooms and would have a private, two-car garage with a driveway. The private yards provided at each residence would adhere to the required setbacks, including a 12-foot minimum from the road to the porch, 15-feet to the living area, and 18-feet to the garage. All residences would be surrounded by a six-foot high wood fence. The development of 108 residences across 13.4 acres of land would result in a density of 8.1 dwelling units per acre.

Access and Circulation

Access to the project site would be provided by two new gated driveways, one with entrance from Main Street, and one from Honey Lane. The Main Street access point would include a one-way entrance on the south side and a one-way exit on the northern side. The entrance and exit lanes would each be 19-feet wide and would be separated by a 20-foot wide median. At the Honey Lane driveway, the entrance lane would be 14-feet wide on the western side and the exit lane would be 19-feet wide on the eastern side. Both lanes would be separated by a 20-foot wide median.

The main drive aisle would be L-shaped and would provide access to the entire project site through connection with 12 smaller drive aisles. Each entrance would provide access to the entire project site. All of the residences would include a private driveway and two-car garage, which would total 432 possible private parking spaces. Additionally, 62 on-street parallel parking spaces would be included, primarily for guests.

Landscape

Landscaping would be included throughout the project site within the main drive aisles and at both entrances. Three landscaping lots would be provided throughout the project site. A variety of trees and shrubs would line the smaller drive aisles off the main aisle. In addition, six-foot lattice panel fences would separate the lots from the main aisle. The two bioretention areas would be landscaped with trees and shrubs which would treat stormwater.

Utilities

Diablo Water District (DWD) provides potable water service to the project site. As shown in Figure 3, the proposed project would include connection of a new eight-inch water main within the main drive aisle to an existing 12-inch water line within Main Street and Honey Lane. Sanitary sewer services are provided by Ironhouse Sanitary District (ISD). A new eight-inch sanitary sewer line would be constructed in the main drive aisle with connection to the City's existing eight-inch sewer line in Honey Lane. The project would also include construction of 11 new six-inch sanitary sewer lines in the small private drive aisles with connection to the new sewer line in the main drive aisle. Development of the project would also include construction of a new 18-inch storm drain in the main drive aisle with connection to both an existing 18-inch storm drain in Main Street and a 24-inch storm drain in Honey Lane. The project would include two bioretention areas which would treat water prior to discharge into the City's stormwater system.

Figure 2
Tentative Site Map

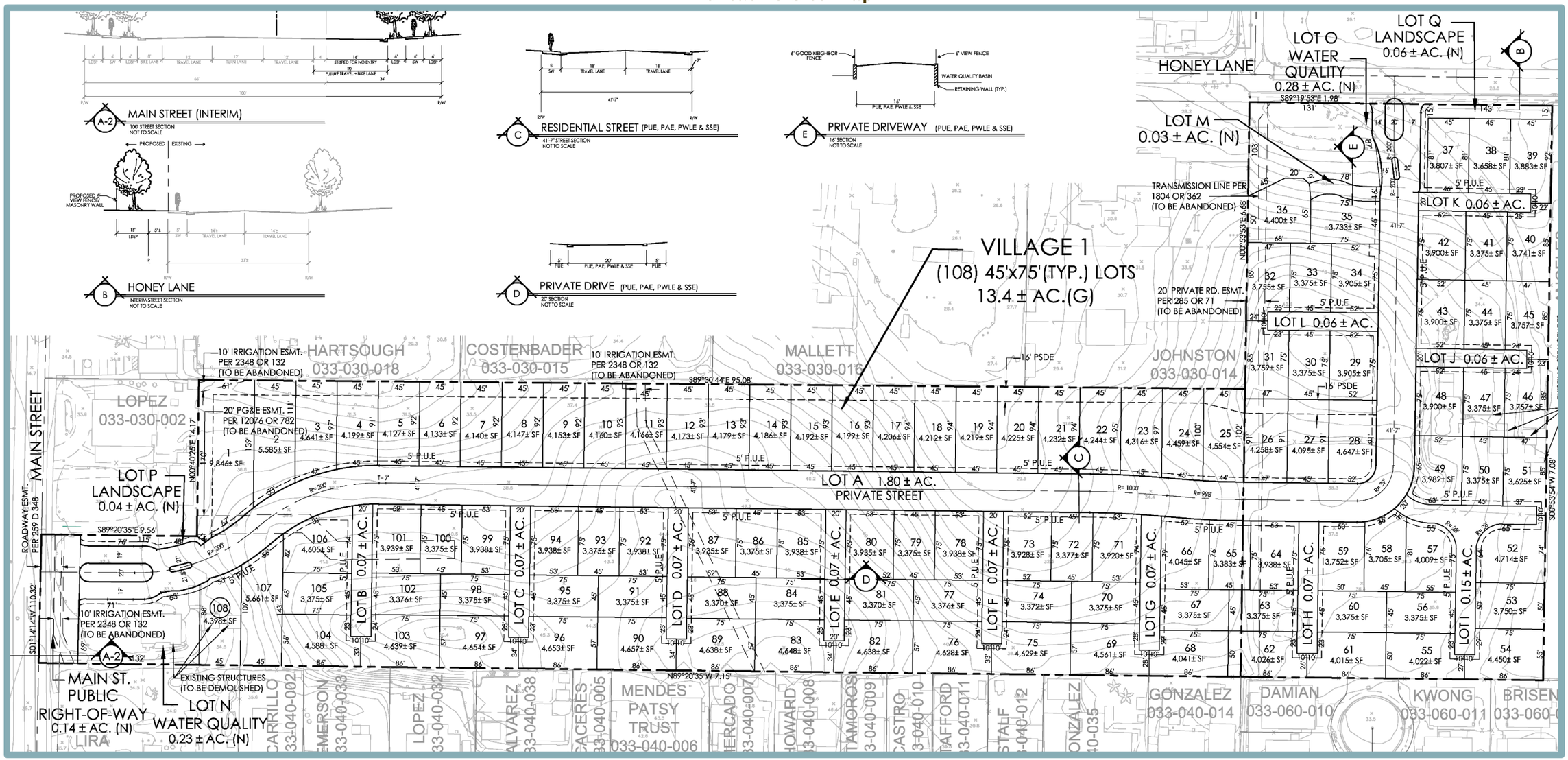
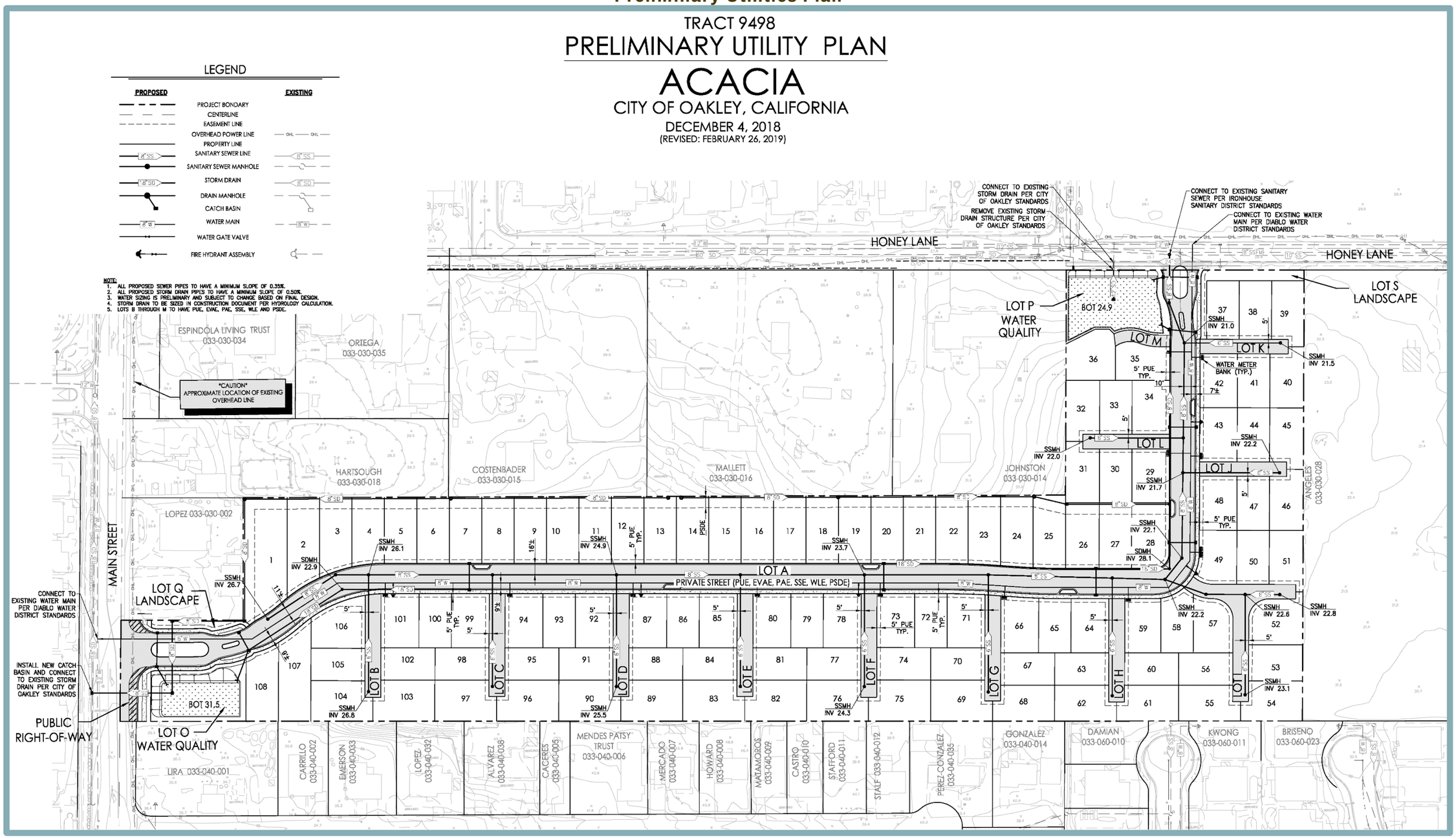


Figure 3
Preliminary Utilities Plan



General Plan Amendment

The proposed project would include a General Plan Amendment to change 13.4 acres of the project site from Single Family Residential, High Density to Multi-Family Residential, Low Density. The purpose of designating the site Multi-Family Residential, Low Density is to provide a more affordable, small lot development. The designation allows for a minimum of 5.5 dwelling units and maximum of 9.6 dwelling units per gross acre.

Rezone

The project would include a rezone of both parcels from Single-Family Residential (R-6) to Planned Unit Development (P-1). The purpose of the P-1 District is to allow diversification in the relationship of various uses, buildings, structures, and lot sizes, ensure compatibility with surrounding land uses, and to ensure substantial compliance with the General Plan.

Construction Details

For the purposes of this analysis, construction is assumed to begin in February 2020 and occur over an approximately 24-month period. The project would include demolition, site preparation, grading, paving, and building construction. The following phase lengths have been assumed for the purposes of this analysis based on available project information:

- Demolition: 11 days;
- Site preparation: two weeks;
- Grading (including soil hauling): 30 days;
- Paving: three days; and
- Building construction: 24 months.

Construction equipment used for construction activities would likely include, but would not be limited to, bulldozers, loaded trucks, auger/drill rigs, jackhammers, vibratory hammers, vibratory compactors/rollers, graders, tractors/loaders/backhoes, cranes, forklifts, cement and mortar mixers, pavers, excavators, scrapers, generators, and air compressors.

Discretionary Actions

Implementation of the proposed project would require the approval of the following entitlements by the City of Oakley:

- Adoption of the IS/MND;
- Adoption of the Mitigation Monitoring and Reporting Program;
- General Plan Amendment of 13.4 acres from Single Family High to Multi-Family Low;
- Rezone of both parcels from R-6 to P-1;
- Tentative Subdivision Map; and
- Site Plan and Design Review of 108 single-family units.

G. ENVIRONMENTAL CHECKLIST

The following checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue area identified in the checklist. Included in each discussion are project-specific mitigation measures required, where necessary, as part of the proposed project.

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which mitigation has not been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant With Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

Issues	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
I. AESTHETICS. *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 buildings within a State scenic highway?	☐	☐	✖	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	✖	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	✖	☐

Discussion

a. Scenic resources in Oakley, as defined in the City's General Plan, include predominant natural landscape features such as the Delta Waterway, Dutch Slough, Marsh Creek, and views of Mount Diablo to the west. The City of Oakley does not specifically identify scenic vistas within the City's planning area, but the conclusion could be drawn that any development which would impact views of any of the aforementioned landscape features from public viewpoints would result in an impact to scenic vistas. Marsh Creek flows approximately 0.2-mile east of the project site. The creek is not currently visible from the project site or surrounding areas, and thus, the proposed project would not interfere with existing views. Additionally, the project site is currently designated for residential use and developed with two single-family residential units. Although the project would include a General Plan Amendment, the site has been anticipated for residential use and the development of the project would not further obstruct views beyond what has been analyzed in the General Plan. Because the proposed project is not in an area designated as a scenic vista by the City of Oakley and would not have a substantial adverse effect on a scenic vista, the project would result in a ***less-than-significant*** impact related to such.

b. According to the California Scenic Highway Mapping System, administered by Caltrans, the project site is not in the vicinity of any Officially Designated State Scenic Highways[1]. Although State Route (SR) 4 is considered an Eligible State Scenic Highway, the eligible portion is located 2.5 miles to the west. Thus, the site would not substantially damage a scenic resource, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway, and a ***less-than-significant*** impact would occur.

[1] California Department of Transportation. *California Scenic Highway Mapping System Contra Costa County*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed August 2019.

c. The project site is located within an urbanized area of the City. Currently, the project site contains a single-family residence and three sheds on the southwestern portion of the site, as well as a single-family residence and associated sheds on the eastern portion of the site. Residential land uses surround the project site. The proposed project would develop 108 single-family residences on the project site, along with an internal circulation system, and associated improvements.

The City's General Plan has anticipated development of the site with high density single-family development. The proposed General Plan Amendment would modify the site to be developed as a low density multi-family development. While the housing density on the site may increase slightly above what has been anticipated and analyzed in the General Plan EIR, the overall visual character of the site would remain the same as was anticipated by the City. The residences would be designed in keeping with the surrounding residential land uses, and thus, would not substantially degrade the visual character of the project site or the surroundings and a ***less-than-significant*** impact would occur.

d. Currently, the project site consists of two single-family residences and vacant land. The development of the proposed project would add 108 new single-family residences, resulting new sources of light and glare to the site from interior light spilling through windows, exterior lighting on homes, street lighting on the internal roadway, and light reflected off of windows. However, as previously discussed, the General Plan designates the site for development of single-family homes. Thus, development of the site with residences has been anticipated and analyzed by the City's General Plan EIR. The creation of new sources of light would be consistent with what is expected. Additionally, the project site is surrounded by residential land uses to the north and south and bordered to the west by Main Street, which is lined with street lamps.

Furthermore, pursuant to Section 9.1.1604, the project would be required to undergo a design review to ensure that development of the project would be in compliance with the Residential Design Guidelines, including lighting standards that establishes the City's standard for residential street lights and limits residential lighting for security purposes. Therefore, any creation of new sources of light and glare by the future project would be considered a ***less-than-significant*** impact.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
II. AGRICULTURE AND FOREST 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 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 individually or cumulatively result in loss of Farmland to non-agricultural use?	☐	☐	✖	☐

Discussion

a,e. Currently, the eastern and southwestern portions of the project site are developed with two single-family residences and associated sheds. The undeveloped portions of the site are covered in ruderal grasses, trees, and shrubs. The project site is designated as "Farmland of Local Importance" on the Contra Costa County Important Farmland Map 2016, published by the Department of Conservation.[2] While a small portion of the site was historically used for growth of grapevines and orchard trees, agriculture has not been produced on the site since the 1950s. By 1982, the majority of the former trees had been removed. Furthermore, the project site is not zoned or designated in the General Plan for agricultural uses. Thus, development of the site with single-family residences would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use and a ***less-than-significant*** impact would occur.

b. The project site is currently zoned R-6 and would be rezoned to P-1 for development of 108 single-family residences. Consequently, the project would not conflict with any agricultural zoning use for the project site. Additionally, the site is not under a Williamson Act contract. Thus, the proposed project would not conflict with existing zoning for agricultural use and would not conflict with a Williamson Act contract, and ***no impact*** would occur.

c,d. The project site is not considered forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526) and is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

[2] California Department of Conservation. *Contra Costa County Important Farmland 2016.* Published August 2018.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
III. AIR QUALITY.					
Where available, the significance criteria established by the applicable air quality management 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) adversely affecting a substantial number of people?	☐	☐	✖	☐

Discussion

a,b. The City of Oakley is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB area is currently designated as a nonattainment area for State and federal ozone, State and federal fine particulate matter 2.5 microns in diameter ($PM_{2.5}$), and State respirable particulate matter 10 microns in diameter (PM_{10}) ambient air quality standards (AAQS). The SFBAAB is designated attainment or unclassified for all other AAQS. It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour $PM_{2.5}$ federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal $PM_{2.5}$ AAQS until such time as the BAAQMD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation.

In compliance with regulations, due to the nonattainment designations of the area, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG).

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2017 Clean Air Plan (CAP), adopted on April 19, 2017. The 2017 CAP was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM_{10}

standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 CAP. The control strategy serves as the backbone of the BAAQMD's current PM control program.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal AAQS within the SFBAAB. Adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. The BAAQMD's established significance thresholds associated with development projects for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_x), as well as for PM_{10} and $PM_{2.5}$, expressed in pounds per day (lbs/day) and tons per year (tons/yr), are listed in Table 1. By exceeding the BAAQMD's mass emission thresholds for ROG, NO_X, PM_{10}, or $PM_{2.5}$, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts.

Table 1
BAAQMD Thresholds of Significance

Pollutant	Construction	Operational	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10} (exhaust)	82	82	15
$PM_{2.5}$ (exhaust)	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2017.

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2 – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, vehicle mix, trip length, average speed, compliance with the California Building Standards Code (CBSC), etc. Where project-specific information is available, such information should be applied in the model. Accordingly, the proposed project's modeling assumes the following project and/or site-specific information:

- Construction would begin in February 2020;
- Construction would occur over an approximately two-year period;
- A total of 2,200 sf of building space would be demolished;
- A total of 100 cubic yards (CY) of soil/material would be imported during site preparation;
- A total of 33,000 CY of soil/material would be exported during grading activities;
- On-site renewable energy would generate 100 percent of electricity use;
- The site is within 0.3 mile of a transit station;
- Traffic calming measures, such as speed bumps and traffic circles would be included; and

- An average vehicle trip rate of 9.44 was applied based on project-specific information provided by TJKM.

The proposed project's estimated emissions associated with construction and operations are presented and discussed in further detail below. A discussion of the proposed project's contribution to cumulative air quality conditions is provided below as well. All CalEEMod results are included as Appendix A to this IS/MND.

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 2. As shown in the table, the proposed project's construction emissions would be below the applicable thresholds of significance for ROG, PM_{10}, and $PM_{2.5}$. However, NO_x emissions related to construction of the proposed project would exceed the applicable BAAQMD threshold of significance.

Table 2
Maximum Unmitigated Construction Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	7.82	54	**NO**
NO_X	90.60	54	**YES**
PM_{10} (exhaust)	2.31	82	**NO**
PM_{10} (fugitive)	18.2	None	**N/A**
$PM_{2.5}$ (exhaust)	2.13	54	**NO**
$PM_{2.5}$ (fugitive)	9.97	None	**N/A**

Source: CalEEMod, August 2019 (see appendix).

All projects under the jurisdiction of the BAAQMD are required to implement all of the BAAQMD's Basic Construction Mitigation Measures, which include the following:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. 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.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. 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.
7. 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.

8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

The proposed project's required implementation of the BAAQMD's Basic Construction Mitigation Measures listed above would help to further minimize construction-related emissions.

The proposed project's required implementation of the BAAQMD's Basic Construction Mitigation Measures listed above would reduce the construction-related emissions from the levels estimated and presented in Table 2. However, the proposed project could still result in emissions above the applicable threshold of significance for construction NO_x. Therefore, the proposed project would be considered to result in a potentially significant air quality impact during construction.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 3. As shown in the table, the proposed project's operational emissions would be below the applicable thresholds of significance.

Table 3
Unmitigated Maximum Operational Emissions

Pollutant	Proposed Project Emissions		Threshold of Significance		Exceeds Threshold?
	lbs/day	tons/yr	lbs/day	tons/yr	
ROG	9.33	1.13	54	10	**NO**
NO_X	6.70	1.19	54	10	**NO**
PM_{10} (exhaust)	4.07	0.06	82	15	**NO**
PM_{10} (fugitive)	4.41	0.77	None	None	**N/A**
$PM_{2.5}$ (exhaust)	4.08	0.06	54	10	**NO**
$PM_{2.5}$ (fugitive)	1.18	0.21	None	None	**N/A**

Source: CalEEMod, August 2019 (see appendix).

Because the proposed project's operational emissions would be below the applicable thresholds of significance, the proposed project would not be considered to conflict with air quality plans during project operations.

Cumulative Emissions

Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is not sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The thresholds of significance presented in Table 1 represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. If a project

exceeds the significance thresholds presented in Table 1, the proposed project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region's existing air quality conditions. The proposed project would be below all applicable thresholds for criteria pollutants during operation, and would be below most thresholds during construction. However, because the proposed project would result in emissions above the applicable thresholds of significance for construction-related NO_X emissions, the project could result in a cumulatively considerable contribution to the region's existing air quality conditions.

Conclusion

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2017 CAP. Because the proposed project would result in short-term construction-related emissions of NO_X, an ozone precursor, above the applicable threshold of significance, the project could conflict with or obstruct implementation of regional air quality plans. Therefore, the proposed project could contribute to the region's nonattainment status of ozone, thus contributing to the violation of an air quality standard, and a ***potentially significant*** impact associated with construction-related emissions of NO_X would result.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the construction-related emissions of NO_X from 90.60 lbs/day to 52.17 lbs/day, which would be below BAAQMD's threshold of significance of 54 lbs/day. Thus, implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

III-1. *Prior to approval of any demolition or grading permits, the project applicant shall show on the demolition and grading plans via notation that the contractor shall ensure that all heavy-duty diesel-powered equipment (e.g., rubber-tired dozers, scrapers, excavators, etc.) to be used in the demolition and grading phases of construction of the project (including owned, leased, and subcontractor vehicles) shall, at a minimum, meet U.S. Environmental Protection Agency standards for Tier 4 engines or equivalent. The plans shall be submitted to the Community Development Department for review and approval.*

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptor would be the single-family residences located south of the project site.

The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and toxic air contaminant (TAC) emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a proposed project would result in a less-than-significant impact related to localized CO emission concentrations if all of the following conditions are true for the project:

- 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;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- 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, underpass, etc.).

As discussed in Section XVII, Transportation, of this IS/MND, the project would generate more than 100 new peak hour trips and, thus, a Traffic Impact Analysis was prepared, consistent with the requirements of the Contra Costa Transportation Authority (CCTA) Congestion Management Plan. Per the Traffic Impact Analysis prepared for the project by TJKM, all of the study intersections currently experience volumes well below 44,000 vehicles per hour. Furthermore, intersections where air mixing is inhibited do not exist in proximity to the project site. As such, based on the BAAQMD screening criteria, the proposed project would result in a less-than-significant impact related to localized CO emissions concentrations and would not expose sensitive receptors to substantial concentrations of localized CO.

TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. The nearest sensitive receptors to the project site are the single-family residences located south of the site.

The proposed project does not include any operations that would be considered a substantial source of TACs. Accordingly, operations of the proposed project would not expose sensitive receptors to excess concentrations of TACs.

Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. Specifically, the amount of soil removal required for the proposed project would result in a high number of haul trips to and from the site per day. However, as discussed above, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project would likely be limited to approximately two years. All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. Additionally, Mitigation Measure III-1 above would require the use of Tier 4 construction equipment during the demolition and grading phases in order to reduce NO_X emissions below the acceptable threshold. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources.

Because construction equipment on-site would not operate for long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, the potential for any one sensitive receptor in the area to be exposed to concentrations of pollutants for a substantially extended period of time would be low. Therefore, construction of the proposed project would not be expected to expose nearby sensitive receptors to substantial pollutant concentrations.

The BAAQMD thresholds of significance were established with consideration given to the health-based air quality standards established by the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), and are designed to aid the district in achieving attainment of the NAAQS and CAAQS,[3] for which the SFBAAB is in nonattainment, but the thresholds of significance do not represent a level above which individual project-level emissions would directly result in public health impacts. Rather, the thresholds of significance represent emissions levels that would ensure that project-specific emissions would not inhibit attainment of regional NAAQS and CAAQS. Considering that implementation of the proposed project would not result in short-term construction-related or long-term operational emissions of criteria pollutants that would exceed BAAQMD standards, the proposed project would not inhibit attainment of regional NAAQS and CAAQS.

Conclusion

Based on the above discussion, the proposed project would not expose any sensitive receptors to substantial concentrations of pollutants, including localized CO or TACs, during construction or operation. Therefore, the proposed project would result in a ***less-***

[3] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.

than-significant impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Emissions such as those leading to odor have the potential to adversely affect people. Emissions of principal concern include emissions leading to odors, emission that have the potential to cause dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in sections "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

Per the BAAQMD CEQA Guidelines, odors are generally regarded as an annoyance rather than a health hazard.[4] Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on a number of variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses and is not located in the vicinity of any such existing or planned land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction activities would be temporary, and hours of operation for construction equipment would be restricted to the hours of 7:30 AM and 5:30 PM on Monday through Friday per Section 4.2.208 of the City of Oakley Municipal Code. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize emissions, including emissions leading to odors. Accordingly, substantial objectionable odors would not be expected to occur during construction activities.

It should be noted that BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitation on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have been received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. Thus, although not anticipated, if odor complaints are made after the proposed project is developed, the BAAQMD would ensure that such odors are addressed and any potential odor effects are minimized or eliminated.

[4] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.

With respect to dust, as noted previously, all projects under the jurisdiction of BAAQMD are required to implement the BAAQMD's Basic Construction Mitigation Measures. While the project would require several truckloads of soil removal, all haul trucks with loose material are required to be covered, which would ensure that soil from the site would not create significant amounts of dust during transport. Additionally, the Construction Mitigation Measures limit vehicle speeds within the project site and require removal of all mud or dirt tracked on to adjacent roads, which would ensure that construction of the proposed project does not result in substantial emissions of dust. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, and non-paved areas would be landscaped. Thus, project operations would not include sources of dust that could adversely affect a substantial number of people.

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less-than-significant*** impact would result.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IV. 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 US Fish and Wildlife Service?	☐	☐	✖	☐
c.	Have a substantial adverse effect on state or federally protected (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 resident or migratory fish or wildlife species or with established 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 Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	✖	☐

Discussion

a. The following is based primarily on a Planning Survey Report (PSR) prepared for the proposed project by Moore Biological Consultants.[5]

Currently, the project site is occupied by two single-family residences and associated sheds in the southwestern and eastern portions of the site. The remainder of the site is vacant and covered in ruderal grasses and various shrubs and trees.

[5] Moore Biological Consultants. *Application Form and Planning Survey Report*. September 2018.

Special-status species include those plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal and State Endangered Species Acts. Both acts afford protection to listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, sensitive species included in USFWS Recovery Plans, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally do not have special legal status, they are given special consideration under CEQA. In addition to regulations for special-status species, most birds in the U.S., including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal. In addition, plant species on California Native Plant Society (CNPS) Lists 1 and 2 are considered special-status plant species and are protected under CEQA.

The project site is located within the boundaries of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCCHCP/NCCP), which is intended to provide an effective framework to protect natural resources in the County, including special-status species. Per the PSR prepared for the proposed project, approximately 4.74 acres of the site are categorized by the Grassland (Ruderal) land cover type, 7.82 acres are categorized by the Vineyard land cover type, and 0.93 acre of the site is considered Developed (Urban) (see Figure 4). Based on the land cover types found on-site, Moore Biological Consultants conducted planning-level surveys on the project site for western burrowing owl, Swainson's hawk, and golden eagle.

In addition, Raney Planning & Management, Inc. conducted a search of the California Natural Diversity Database (CNDDB) for the project site quadrangle, Brentwood, as well as the eight surrounding quadrangles (Clifton Court Forebay, Byron Hot Springs, Tassajara, Woodward Island, Bouldin Island, Jersey Island, Antioch North, and Antioch South). The intent of the database review was to identify documented occurrences of special-status species in the vicinity of the project area, to determine their locations relative to the project site, and to evaluate whether the site meets the habitat requirements of such species. Based on the results of the CNDDB search, a total of 48 special-status plant species and 40 wildlife species are known to occur within the project region.

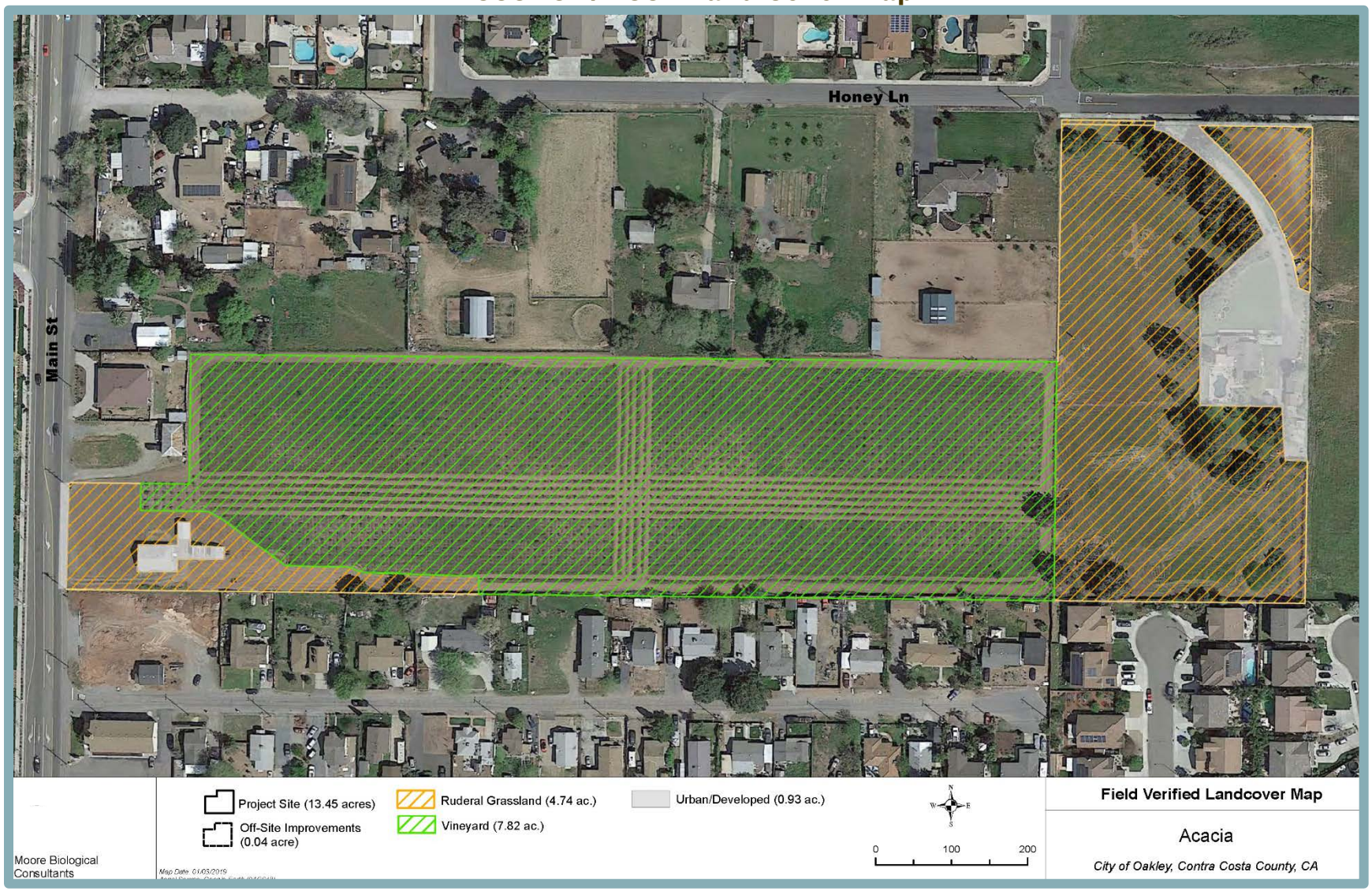
The potential for species covered by the ECCCHCP/NCCP and other special-status species to occur on the project site is discussed in further detail below.

Special-Status Plants

Special-status plants generally occur in relatively undisturbed areas within vegetation communities such as vernal pools, marshes and swamps, chenopod scrub, seasonal wetlands, riparian scrub, chaparral, alkali playa, dunes, and areas with unusual soil characteristics.

A survey to assess potentially suitable habitat for special-status plants was undertaken by Moore Biological Consultants on August 31, 2018. The site was systematically searched by walking throughout the site. The southwestern portion of the site's land use coverage is abandoned vineyard that has been previously disturbed by agricultural uses. The northeast portion of the site contains ruderal grassland vegetation that has been highly disturbed by agricultural use, development on the site, and other human activities. The on-site grasslands are periodically disked and/or mowed for weed abatement.

Figure 4
ECCCHCP / NCCP Land Cover Map



Due to the disturbed nature of the site and the absence of potentially suitable habitat, special-status plants do not currently occur on the project site and are not anticipated to be present on the site upon commencement of construction. Thus, construction activities associated with the proposed project would not result in adverse effects to special-status plant species.

Special-Status Wildlife

Many of the 40 special-status wildlife species identified as a result of the CNDDB search have habitat requirements that are not present on the project site (i.e., wetlands, chaparral, oak woodland, etc.). As noted previously, the site has been disturbed through past agricultural use and periodic disking.

Of the 40 special-status species, 37 are unlikely to occur on-site due to habitat limitations. However, per the PSR, despite the low quality of the existing habitat within the project site, the on-site ruderal grassland and nearby trees provide potential habitat for western burrowing owl (*Athene cunnicularia*), Swainson's hawk (*Buteo swainsoni*), and golden eagle (*Aquila chrysaetos*). Furthermore, other avian species protected by the MBTA could use the existing grassland as foraging and potential nesting habitat.

Western Burrowing Owl

The primary habitat requirement for western burrowing owls is small mammal burrows that the species uses for nesting. Typically, the species uses abandoned ground squirrel burrows, but western burrowing owls have been known to dig burrows in softer soils. In urban areas, western burrowing owls may use pipes, culverts, and piles of material as artificial burrows. Western burrowing owls breed semi-colonially from March through August.

The project site contains ruderal grassland within the range of western burrowing owl. CNDDB contains one record of the species within the vicinity of the project site. As part of the planning survey, the site was inspected for burrowing owls and ground squirrel burrows with evidence of burrowing owl occupancy (i.e., white wash, pellets, feathers). Burrowing owls or burrows with evidence of burrowing owl occupancy were not observed during the survey. Nonetheless, pre-construction surveys for western burrowing owl are required by the ECCCHCP/NCCP.

Swainson's Hawk

Per the PSR, over 30 potential nest trees exist on the site and several potential nest trees are located near and visible from site. As part of the PSR, trees on the site and visible from the site were inspected for raptor stick nests. Raptor stick nests were not observed in the on-site trees or in trees visible from the site. In addition, Swainson's hawks were not observed during the field survey, which was conducted toward the end of the nesting season of the species.

Given that the site is located in an urban area along the west edge of the Swainson's hawk nesting range and is defined by a primarily urban setting, the species is not likely to nest in trees in or near the site. Nonetheless, pre-construction surveys for Swainson's hawk are required by the ECCCHCP/NCCP.

Golden Eagle

The project site contains ruderal grassland and an abandoned vineyard that is located within the range of the golden eagle. The site contains over 30 potential nest trees, as well as a few potential nest trees near and visible from the site. As part of the PSR, trees on the site and visible from the site were inspected for raptor stick nests. However, raptor stick nests were not observed in the trees on site or any of the off-site trees visible from the site, and the species was not sighted during the survey. The CNDDB does not identify any occurrences of golden eagle within 0.5-mile of the site. In addition, per the PSR, the species typically nests more often on cliffs in remote natural areas than in trees near urban areas. Nonetheless, pre-construction surveys for golden eagle are required by the ECCCHCP/NCCP.

Nesting Raptors and Migratory Birds

The project site contains existing trees that could be used by raptors and migratory birds protected by the MBTA for nesting. Such trees would be removed as part of the proposed project. Construction activities that adversely affect the nesting success of raptors and migratory birds (i.e., lead to the abandonment of active nests) or result in mortality of individual birds constitute a violation of State and federal laws. Thus, in the event that such species occur on-site during the breeding season, project demolition and construction activities could result in an adverse effect to species protected under the MBTA.

Conclusion

Based on the above, the field survey did not identify any special-status species within the project site and the site is considered low-quality habitat. Special-status species are unlikely to occur on-site during construction of the proposed project. However, per the ECCCHCP/NCCP, pre-construction surveys are required for western burrowing owl, Swainson's hawk, and golden eagle. In addition, the site contains suitable nest trees for nesting raptors and migratory birds protected by the MBTA. Thus, the proposed project could have an adverse effect, either directly or through habitat modifications, on species identified as special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS, and a ***potentially significant*** impact could result.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

IV-1. *Prior to the issuance of demolition permits for the existing structures on the project site, the developer shall pay the applicable ECCCHCP/NCCP per-acre fee in effect for the applicable zone in compliance with Section 9.2.712 of the Oakley Municipal Code.*

Western Burrowing Owl

IV-2(a). *Prior to any ground disturbance related to activities covered under the ECCCHCP/NCCP, the project applicant shall retain a USFWS/CDFW-approved biologist to conduct a pre-construction survey for western burrowing owls within the disturbance footprint and within 500 feet from the perimeter of the footprint where possible. Surveys shall take place no more than 30 days prior to construction and shall be conducted near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls*

shall be identified and mapped. During the breeding season (February 1 to August 31), surveys shall document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1 to January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted. Written results of the preconstruction survey shall be submitted to the City of Oakley Community Development Department. If western burrowing owls are not discovered, then further mitigation is not necessary.

IV-2(b). *If burrowing owls are found during the breeding season (February 1 to August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance shall include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 to January 31), the project proponent shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a buffer zone (described below).*

During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur shall be established around each occupied burrow (nest site). Buffer zones of 160 feet shall be established around each burrow being used during the nonbreeding season. The buffers shall be delineated by highly visible, temporary construction fencing.

If occupied burrows for burrowing owls are not avoided, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. Such doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for one week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Swainson's Hawk

IV-3(a). *Prior to any ground disturbance related to activities covered under the ECCCHCP/NCCP, which are conducted during the nesting season (March 15 to September 15), a qualified biologist shall conduct a preconstruction survey no more than one month prior to construction in order to establish whether occupied Swainson's hawk nests are located within 1,000 feet of the project site. A written summary of the survey results shall be submitted to the City of Oakley Community Development Department. If occupied nests are not found during the survey, further mitigation is not required.*

IV-3(b). *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 (see below).*

During the nesting season (March 15 to September 15), covered activities within 1,000 feet of occupied nests or nests under construction shall 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 shall coordinate with CDFW/USFWS to determine the appropriate buffer size. If young fledge prior to September 15, covered activities may 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 may apply to the City of Oakley Community Development Department for a waiver of this avoidance measure. Any waiver must also be approved by USFWS and CDFW. While the nest is occupied, activities outside the buffer may take place. All active nest trees shall be preserved on site, if feasible. Nest trees, including non-native trees, lost to covered activities shall be mitigated by the project proponent according to the requirements below.

The loss of non-riparian Swainson's hawk nest trees shall be mitigated by the project proponent by:

- *If feasible on-site, planting 15 saplings for every tree lost with the objective of having at least five mature trees established for every tree lost according to the requirements listed below.*

  AND either

  1) *Pay the City of Oakley an additional fee to purchase, plant, maintain, and monitor 15 saplings on the ECCCHCP/NCCP Preserve System for every tree lost according to the requirements listed below, OR*

  2) *The project proponent shall plant, maintain, and monitor 15 saplings for every tree lost at a site to be approved by the City of Oakley Community Development Department (e.g., within an ECCCHCP/NCCP Preserve or existing open space linked to ECCCHCP/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 five years, then every other year until year 12. All trees lost during the first five years shall be replaced. Success shall be reached at the end of 12 years if at least five trees per tree lost survive without supplemental*

irrigation or protection from herbivory. Trees must also survive for at least three 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 the project site shall be planted. When site conditions permit, a variety of native trees shall 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 (five to 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.*
- *Riparian woodland restoration conducted as a result of covered activities (i.e., loss of riparian woodland) can be used to offset the nest tree planting requirement above, if the nest trees are riparian species.*
- *Whenever feasible and when site conditions permit, trees shall 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 shall occur closest to suitable foraging habitat outside the Urban Development Area.*
- *Trees planted in the ECCCHCP/NCCP preserves or other approved offsite location shall occur within the known range of Swainson's hawk in the inventory area and as close as possible to high-quality foraging habitat.*

Golden Eagle

IV-4(a). *Prior to any ground disturbance related to activities covered under the ECCCHCP/NCCP, a qualified biologist shall conduct a preconstruction survey to establish whether nests of golden eagles are occupied. A written summary of the survey results shall be submitted to the City of Oakley Community Development Department.*

IV-4(b). *If nests are occupied, minimization requirements and construction monitoring shall be required.*

Covered activities shall be prohibited within 0.5-mile of active nests. Nests can be built and active at almost any time of the year, although mating and egg incubation occurs late January through August, with peak activity in March through July. 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 appropriate or that a larger buffer should be implemented, the project applicant shall coordinate with CDFW/USFWS to determine the appropriate buffer size.

Construction monitoring shall focus on ensuring that covered activities do not occur within the buffer zone established around an active nest. Although known golden eagle nest sites do not occur within or near the Urban Limit Line (ULL), covered activities inside and outside of the Preserve System have the potential to disturb golden eagle nest sites. Construction monitoring shall ensure that direct effects to golden eagles are minimized.

Raptors and Migratory Birds

IV-5(a). *Prior to any ground disturbance related to covered activities during the nesting season (March 15 to September 15), a qualified biologist shall conduct a preconstruction survey 30 days or less prior to construction in order to establish whether occupied migratory bird and/or raptor nests are located within 250 feet of the project site. A written summary of the survey results shall be submitted to the City of Oakley Community Development Department. If occupied nests occur on-site or within 250 feet of the project site, then Mitigation Measure IV-5(b) shall be implemented. If occupied nests are not found, further mitigation is not necessary.*

IV-5(b). *During the nesting season (March 15-September 15), if occupied nests occur on-site or within 250 feet of the project site, covered activities within 250 feet of occupied nests or nests under construction shall be prohibited to prevent nest abandonment. If site-specific conditions, or the nature of the covered activity (e.g., dense vegetation, limited activities) indicate that a smaller buffer could be used, the project applicant may coordinate with CDFW/USFWS to determine the appropriate buffer size. If young fledge prior to September 15, covered activities can proceed normally.*

b,c. An assessment of potentially jurisdictional waters of the U.S. or wetlands on the project site was performed during the field survey conducted on August 31, 2018 as part of the PSR. According to the PSR, the site consists of vineyard and ruderal grassland habitats that support upland grasses and weeds. The project site does not contain riparian habitat or other sensitive natural communities, including wetlands, or potentially jurisdictional waters of the State. Therefore, the proposed project would not have a substantial adverse effect on riparian habitat, sensitive natural communities, or federally protected wetlands, and a ***less-than-significant*** impact would occur.

d. The project site is located in an urbanized area and is bordered by existing residential development in all directions. Thus, the project site does not support any substantial wildlife movement corridors. Despite the proximity of the site to Marsh Creek, which could be used by migratory fish or as a corridor for other wildlife species, the area surrounding the creek is dominated by residential development. In addition, existing residential units separate the project site from the creek and, thus, the project is not likely to interfere with any species using the creek as a migratory corridor. As such, the project would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites, and a ***less-than-significant*** impact would occur.

e. A Tree Inventory Summary was performed for the project site by Sierra Nevada Arborists.[6] Currently, the project site contains 24 trees across the site. A total of 21 trees would be removed as part of the proposed project.

Section 9.1.1112 of the Municipal Code defines protected trees and establishes requirements governing the removal of such. The Tree Inventory Summary determined that of the 24 trees measuring four inches in diameter or larger, one has been recommended for removal due to the nature and extent of defects, compromised health, and/or structural instability noted at the time of the field inventory. The remaining on-site trees to be removed would include 19 non-protected trees and two protected California Pepper trees. While the project site does contain one Chinaberry tree with a diameter at breast height of 44 inches, the tree is not considered protected due to the poor structure and advanced maturity. It should be noted that two protected trees are located just off-site; however, the off-site protected trees would not be removed as part of the proposed project.

Based on the Tree Inventory Summary, the removal of the two protected trees on the project site would require an application and permit for removal. The application and permitting process would be followed according to Section 9.1.1112 of the Municipal Code. According to the Municipal Code, the removal of the trees would require replacement at a ratio of 12 to 1 or payment of in-lieu fees equal to the cost of 12 protected trees. The replacement or payment of fees would ensure that the removal of two protected trees would not be significant.

Although the two protected trees located off-site would not be removed as part of the proposed project, the trees are subject to a tree protection plan. Without a plan developed according to Section 9.1.1112 of the Municipal Code, the protected trees could be disturbed during construction and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

IV-6. Prior to the issuance of grading permits, the applicant shall develop a tree preservation plan that would implement the following practices:

1. *Install protective fencing at the edge of the dripline radius of the protected trees;*
2. *Place appropriate signage on the fencing indicating that the trees are protected and construction activity should not take place under the canopy of the protected trees. The fencing and signage should remain in place for the duration of the construction;*
3. *For tree #107, excavation, grading, and trenching should be done in a way to prevent damage to the roots of the trees. Roots greater than one inch in diameter that need to be cut for trenching or grading should be done in accordance with ANSI standards, under the direction of a qualified project arborist; and*

[6] Sierra Nevada Arborists. *Amended Tree Inventory Summary, Construction Impact Assessment and Tree Protection Plan.* February 19, 2019.

4. *Any pruning of the canopy of protected tree #107 to facilitate construction should be performed in accordance with ANSI standards, under the direction of a qualified project arborist.*

The tree preservation plan shall be submitted to the Community Development Department for review and approval.

f. The project site is located within the boundaries of the ECCCHCP/NCCP, which establishes an effective framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species and provides guidance for the mitigation of impacts to covered species. As noted previously, the site is within the range of potential habitat for several wildlife species covered under the ECCCHCP/NCCP. The PSR and field survey for the proposed project were conducted in adherence with requirements by the ECCCHCP/NCCP. Applicable Avoidance and Minimization Measures for western burrowing owl, Swainson's hawk, golden eagle, and nesting and migratory birds, as adapted from Chapter 6 of the ECCCHCP/NCCP, have been included in Mitigation Measures IV-2 through IV-5 of this IS/MND. Additionally, the proposed project would be subject to pay all applicable fees according to the Fee Zone Map of the ECCCHCP/NCCP prior to construction (Mitigation Measure IV-1). The developer would be required to pay the appropriate fees based on the applicable fee calculator at the time of development. Therefore, the proposed project would not conflict with the applicable provisions of the ECCCHCP/NCCP and a ***less-than-significant*** impact would occur related to conflicts with an adopted HCP, NCCP, or other approved local, regional, or State HCP.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
V. CULTURAL RESOURCES. *Would the project:*					
a.	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	✖	☐
b.	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	☐	✖	☐	☐
c.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	✖	☐	☐

Discussion

a. The Oakley General Plan EIR on page 3-149 states that "while there are no officially designated historic structures in Oakley, there are numerous buildings, primarily in the old town area, eligible for such designation or listing […] Oakley's historic resources are generally in need of official recognition." Historical resources are features that are associated with the lives of historically-important persons and/or historically-significant events, or that embody the distinctive characteristics of a type, period, region, or method of construction. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics.

Per the results of the California Historical Resources Information System (CHRIS) records search conducted by the Northwest Information Center (NWIC), the State Office of Historic Preservation Historic Property Directory (which includes listings of the California Register of Historical Interest, and the National Register of Historic Places) does not list any recorded buildings or structures within or adjacent to the project area. In addition, the NWIC base maps do not show any recorded buildings or structures within the project site.

Currently, the project site contains a single-family residence and three sheds in the southwestern corner of the site, along Main Street, and a single-family residence and three sheds on the eastern border of the site. While the residences on the project site are not listed on any State or National Register, the buildings were built between the 1930s and 1940s. Structures that are 50 years of age or older may be eligible for consideration as historic resources under the California Register of Historic Places (CRHP) and the National Register of Historic Places (NRHP). Thus, the structures have been evaluated pursuant to the CRHP and NRHP criteria. The CRHR eligibility criteria include the following:

(1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
(2) It is associated with the lives of persons important to local, California, or national history;

(3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
(4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

The NRHP eligibility criteria include the following: "The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess aspects of integrity of location, design, setting, materials, workmanship, feeling, association, and

(a) is associated with events that have made a significant contribution to the broad patterns of our history;
(b) is associated with the lives of a person or persons significance in our past;
(c) embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction; or
(d) has yielded or may be likely to yield information important in prehistory or history.

According to the City's General Plan EIR, the largest concentration of potential historic resources from the period of early development are located in Old Town Oakley, which is approximately one mile from the project site. While several farm structures were built in the City between 1901 and 1955, and farming in Oakley was historically significant, the site was not associated with historic farming activities, and thus, the structures would not embody a distinctive characteristic of a type, period, region, or method of construction, or yield information important to the prehistory or history of the local area. In addition, the existing residences are not associated with the lives of any persons important to local, California, or national history.

Furthermore, the Contra Costa County Conservation and Development, Community Development Division has compiled a list of historical structures and sites throughout Contra Costa County. The buildings on the project site, nor any structures or sites in the vicinity, are listed on the Historic Resources Inventory.[7]

Thus, the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5, and a ***less-than-significant*** impact would occur.

b,c. According to the Oakley General Plan EIR (p. 3-148), few archeological finds have occurred in the City of Oakley. However, the City's General Plan EIR states that given the rich history of the region, the City will continue to require procedures if artifacts are unearthed during construction. The project site has been disturbed during past agricultural operations as well as during periodic disking and mowing. Additionally, review of historical literature and maps did not give indication of the possibility of historic-period activity within

[7] Contra Costa County Conservation and Development, Community Development Division. *Historic Resources Inventory*. July 2019.

the project site. As a result, the project would be unlikely to unearth cultural resources in the previously disturbed areas where soil and debris would be excavated.

Based on evaluation of the environmental setting and features associated with known sites, Native American resources in Contra Costa County have been found along the general margin of the San Joaquin-Sacramento River Delta and associated wetlands. Given the proximity of the site to Marsh Creek, the potential exists for unrecorded Native American resources to be discovered on the project site.

Due to the disturbed nature of the site and the surrounding area, the discovery of archeological resources is not expected. However, unknown archaeological and Native American resources, including human bone, have the potential to be uncovered during ground-disturbing construction activities. As a result, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the potential construction-related impact to a *less-than-significant* level.

V-1. *If buried historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the discovery and the developer shall immediately notify the Planning Division of the discovery. In such case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery, as appropriate. The archaeologist shall be required to submit to the City of Oakley Planning Division for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery would not be allowed until the preceding work has occurred.*

V-2. *Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop within 100 feet of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify the person believed to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. Additional work is not to take place within 100 feet of the find until the identified appropriate actions have been implemented.*

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VI. 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?	☐	☐	✖	☐

Discussion

a,b. The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2016 California Green Building Standards Code and the Building Energy Efficiency Standards, with which the proposed project would be required to comply, as well as discussions regarding the proposed project's potential effects related to energy demand during construction and operations are provided below.

California Green Building Standards Code

The 2016 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the CBSC, which became effective with the rest of the CBSC on January 1, 2017. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of Electric Vehicle charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills;
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board; and
- For some single-family and low-rise residential development developed after January 1, 2020, mandatory on-site solar energy systems capable of producing 100 percent of the electricity demand created by the residence(s). Certain residential developments, including those developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement.

Building Energy Efficiency Standards

The 2016 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2013 Building Energy Efficiency Standards resulting in a 28 percent reduction in energy consumption from the 2013 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards are achieved through various regulations including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high-performance attics and walls.

The 2019 Building Energy Efficiency Standards, which go into effect on January 1, 2020, build upon energy efficiency measures from the 2016 Building Energy Efficiency Standards resulting in a seven percent reduction in energy consumption from the 2016 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards would be achieved through various regulations including requirements for the use of high efficiency lighting, improved water heating system efficiency, and high-performance attics and walls.

One of the improvements included within the 2019 Building Energy Efficiency Standards will be the requirement that certain residential developments, including some single-family and low-rise residential developments, include on-site solar energy systems capable of producing 100 percent of the electricity demanded by the residences. Certain residential developments, including developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement; however, such developments would continue to be subject to all other applicable portions of the 2019 Building Energy Efficiency Standards.

Construction Energy Use

Construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the sites where energy supply cannot be met via a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated per the CARB In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or

other design changes, which could help to reduce demand on oil and emissions associated with construction.

The CARB has recently prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan),[8] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The regulation described above, with which the proposed project must comply, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

Following implementation of the proposed project, PG&E would provide electricity and natural gas to the project site. Energy use associated with operation of the proposed project would be typical of residential uses, requiring electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed single-family homes.

The proposed residential project would be subject to all relevant provisions of the most recent update of the CBSC, including the Building Energy Efficiency Standards. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. Required compliance with the CBSC would ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary. In addition, electricity supplied to the project by PG&E would comply with the State's Renewables Portfolio Standard (RPS), which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 60 percent by 2030. Thus, a portion of the energy consumed during project operations would originate from renewable sources.

[8] California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.

With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, as discussed in Section XVII, Transportation, of this IS/MND, the project site is located in an urban area with access to several public transit lines. Transit would provide access to several grocery stores, restaurants, banks, and schools within close proximity to the project site. The site's access to public transit and proximity to such uses would reduce VMT and, consequently, fuel consumption associated with the proposed single-family residences. Furthermore, the project would include construction of sidewalks along both sides of the proposed internal roadway and along the project frontage at Main Street. Such sidewalks would connect to existing sidewalk facilities to the north and south of the site at Main Street, thereby providing for increased pedestrian connectivity with the surrounding area and resulting in reduced vehicle use.

Conclusion

Based on the above, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***less-than-significant*** impact would occur.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VII. GEOLOGY AND SOILS. *Would the project:*				
a. Expose people or structures to 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 based on other substantial evidence of a known fault?	☐	☐	✖	☐
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 18-1B of the Uniform Building Code?	☐	☐	✖	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	✖
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	✖	☐	☐

Discussion

ai-aii. According to the City's General Plan EIR, the City of Oakley is subject to seismic risk because the City is within the San Francisco Bay Area, an area of high seismicity. The San Francisco Bay Area has been impacted by more than 10 severe earthquakes throughout historic time. As shown in Figure 8-1 of the City's General Plan, *Faults and Seismic Stability*, three active faults exist in the Oakley area, with the Brentwood Fault directly underlying the City, and the Davis and Antioch Faults to the west of the City. However, the project site does not contain any active or potentially active faults, nor is the

site located within a State-designated Alquist-Priolo Fault Zone.[9] Thus, the potential for fault rupture at the project site is relatively low.

An earthquake of moderate to high magnitude generated by the above faults could cause considerable ground shaking at the project site. However, the proposed buildings would be properly engineered in accordance with the CBSC. Projects designed in accordance with the CBSC should be able to: 1) resist minor earthquakes without damage, 2) resist moderate earthquakes without structural damage but with some nonstructural damage, and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance with the design standards is verified by the City prior to the issuance of building permits. Proper engineering of the proposed buildings would ensure that the project would not be subject to substantial risks related to seismic ground shaking.

Based on the above, a ***less-than-significant*** impact would occur related to seismic surface rupture and strong seismic ground shaking

aiii, aiv,

c. The proposed project's potential effects related to liquefaction, landslides, lateral spreading, and subsidence/settlement are discussed in detail below.

Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as that imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded and fine-grained sands. As shown in Figure 8-2, *Estimated Liquefaction Potential*, of the City of Oakley General Plan, most of the City's planning area is within an area of generally high liquefaction potential, including the project site. The General Plan Policy 8.1.9 requires any structures permitted in areas of high liquefaction potential be sited, designed, and constructed to minimize the dangers from damage due to earthquake-induced liquefaction. A geologic engineering study must be performed which defines and delineates potential hazardous geologic and/or soils conditions, recommends means of mitigating any adverse conditions, and provides implementation of the mitigation measures. Because the proposed project would be sited in an area of generally high liquefaction potential, the project would be subject to Policy 8.1.9, and would require a design-level geologic engineering study. Without implementation of relevant design standards, the proposed project could expose people or structures to potential risk of loss, injury, or death involving liquefaction.

Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The topography of the project site is relatively level, and the site is not located on or near any slopes. Furthermore, per the California Geologic Survey, the site is not located within a designated seismic hazard zone for landslides.[10] Thus, landslides are not likely to occur on- or off-site as a result of the proposed project.

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9 California Geologic Survey. *Seismic Hazard Zone Report for the Brentwood 7.5-Minute Quadrangle, Contra Costa County, California.* 2018.

10 California Geologic Survey. *Seismic Hazard Zone Report for the Brentwood 7.5-Minute Quadrangle, Contra Costa County, California.* 2018.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. The project site does not contain any open faces that would be considered susceptible to lateral spreading. Therefore, the potential for lateral spreading to pose a risk to the proposed development is relatively low.

Subsidence/Settlement

Subsidence in Contra Costa County has occurred primarily along the Delta, within the City's planning area. As discussed above, the project's risk of liquefaction would require a geologic study to determine the appropriate design of the structures to minimize the dangers from damage due to liquefaction or subsidence. Implementation of all recommendations would ensure that subsidence/settlement would not pose a substantial risk to the proposed development.

Conclusion

Based on the above, the proposed project would not be subject to substantial risks related to landslides, lateral spreading, or subsidence/settlement. However, the General Plan places the project site within an area of high liquefaction potential. Development of the project would require a geological engineering report to determine the best development standards to minimize risk. Without implementation of the necessary minimization measures, the proposed project could cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction. Thus, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impacts related to liquefiable soils, and ground lurching to a *less-than-significant* level.

VII-1. *Prior to issuance of a grading permit, the applicant/developer shall incorporate the recommendations of a design-level geotechnical report into the Improvement Plans for approval by the City Engineer. The following measures include, but are not limited to, the options available to reduce site liquefaction potential and expansive soils, and/or adverse effects to structures located above potentially liquefiable soils. Once final grading plans are designed, the project's geotechnical engineers shall determine the appropriate methods of mitigating the effects of liquefaction, such as:*

- *Remove and replace potentially liquefiable soils and/or expansive and corrosive soils;*
- *Strengthen foundations (e.g., post-tensioned slab, reinforced mat or grid foundation, or other similar system) to resist excessive differential settlement associated with seismically-induced liquefaction;*
- *Support the proposed structures on an engineered fill pad (minimum of 5 feet thick) in order to reduce differential settlement resulting from seismically-induced liquefaction and post-seismic pore pressure dissipation; and/or*

- *Densify potentially liquefiable soils with an in-situ ground improvement technique such as deep dynamic compaction, vibro-compaction, vibro-replacement, compaction grouting, or other similar methods.*

VII-2. *All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the Director of Public Works/City Engineer, Chief Building Official, and a qualified Geotechnical Engineer prior to issuance of grading and building permits to ensure that all geotechnical recommendations specified in the geotechnical report required by Mitigation Measure VII-1 are properly incorporated and utilized in the project design.*

b. Development of the proposed project would cause substantial ground disturbance of top soil. The ground disturbance would be primarily limited to the areas proposed for grading and excavation. Issues related to erosion and degradation of water quality during construction are discussed in Section X, Hydrology and Water Quality, of this IS/MND. As noted therein, the proposed project would not result in substantial soil erosion or the loss of topsoil. Thus, a ***less-than-significant*** impact would occur.

d. The project site is within a region that is identified in the Oakley General Plan EIR as possessing soils that are very slowly permeable and highly expansive. Highly expansive soils are prone to shrink/swell activity, which could have adverse effects on structures constructed on such soils. Mitigation Measure VII-2 requires compliance with recommendations in a geotechnical report which would ensure that the foundations and pavements are designed in order to reduce the impact of the proposed project from expansive soils to a ***less-than-significant*** level.

e. The proposed project would be serviced by ISD for sanitary sewer collection and treatment. Construction of the proposed project would include connection to existing City sewer service infrastructure. Thus, the project would have ***no impact*** related to soils incapable of adequately supporting septic tanks.

f. As discussed in Section V, Cultural Resources, according to the Oakley General Plan EIR (page 3-148), few paleontological finds have been discovered in the City of Oakley. Additionally, the project site has been disturbed during past agricultural and development activities. As a result, the project would be unlikely to directly or indirectly destroy a unique paleontological resource or unique geologic feature. However, construction activities involving grading, paving, and excavation could result in the discovery of a paleontological feature, and ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impacts related to liquefiable soils, and ground lurching to a *less-than-significant* level.

VII-3. *Implement Mitigation Measures V-1.*

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VIII. 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 an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	✖	☐

Discussion

a,b. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

The proposed project is located within the jurisdictional boundaries of BAAQMD. BAAQMD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move towards climate stabilization. If a project would generate GHG emissions above the threshold level, the project would be considered to generate significant GHG emissions and conflict with applicable GHG regulations. The BAAQMD threshold of significance for project-level operational GHG emissions is 1,100 $MTCO_2e$/yr.

It should be noted that construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. In addition, neither BAAQMD nor the City has adopted thresholds of significance for construction-related GHG emissions. Nevertheless, GHG emissions resulting from construction and operations of the proposed project were modeled using the CalEEMod emissions model under the same assumptions as discussed in Section III, Air Quality, of this IS/MND. In order to evaluate the project's consistency with California's goals, the CO_2

intensity factor within CalEEMod was adjusted to reflect PG&E's progress towards achieving the State's Renewable Portfolio Standard (RPS) goals for the operational year of 2023. All modeling outputs are included in the appendix to this IS/MND.

The project's estimated maximum yearly construction emissions of 581.3 $MTCO_2e$ would be well below BAAQMD's adopted operational threshold of 1,100 $MTCO_2e$/yr. In order to provide a conservative estimate of emissions, the proposed project's construction GHG emissions have been amortized over the anticipated operational lifetime of the project.

The BAAQMD does not recommend any specific operational lifetimes for use in amortizing construction-related GHG emissions; however, the emissions were amortized based off of information from California Executive Order D-16-00 and the US Green Building Council's 2013 report on *The Costs and Financial Benefits of Green Buildings.*[11] In the absence of specific BAAQMD recommendations, the 25 year lifetime is used for analysis. Construction of the proposed project would occur over two years and would result in total GHG emissions of 1,000.5 $MTCO_2e$. Thus, the total construction emissions amortized over 25 years would be 40.0 $MTCO_2e$/yr. Accordingly, the proposed project would not be expected to have a significant impact related to GHG emissions during construction.

The operational emissions were determined to equal 1,053.5 $MTCO_2e$/yr per year. Consequently, even if project operational and amortized construction emissions were considered together, the total mass emission of 1,093.5 $MTCO_2e$/yr would be below BAAQMD's threshold of 1,100 $MTCO_2e$/yr. Consequently, neither construction nor operations of the proposed project would be anticipated to result in significant emissions of GHGs.

Based on the above, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs; and impacts would be considered ***less than significant***.

[11] Sacramento Metropolitan Air District. *Guide to Air Quality Assessment in Sacramento County*. Available at: http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools. Accessed February 2019.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IX. 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 likely release of hazardous materials into the environment?	☐	✖	☐	☐
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	✖
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	✖
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	✖
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	✖	☐
g.	Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	✖	☐

Discussion

a. Residential land uses are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future residents may use common household cleaning products, fertilizers, and herbicides on-site, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations

governing use of such products and the amount anticipated to be used on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

b. The following discussion provides an analysis of potential hazards and hazardous materials associated with upset or accident conditions related to the proposed construction activities and existing on-site conditions.

Construction Activities

Construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used at the project site and transported to and from the site during construction. However, the project contractor would be required to comply with all California Health and Safety Codes and local City ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Thus, construction of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Existing On-Site Hazardous Conditions

A Phase I Environmental Site Assessment (ESA) was prepared for the proposed project by Consulting Associates of California for the purpose of identifying potential recognized environmental conditions (RECs) associated with the project site.[12] The Phase I ESA was performed in accordance with the American Society for Testing and Materials (SSTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* . The Phase I ESA consisted of a reconnaissance of the site, summary of historical information review, regulatory agency records review, and interviews.

Sources reviewed as part of the Phase I ESA indicate that the two parcels on the project site were developed with a single-family residence in 1932 and 1939. A vineyard and orchard trees were planted on one parcel in 1939 and sustained through the late 1950s. The garages and other structures were built between 1950 and 1963. Between 1982 and 1984, a natural gas well was drilled and operated near the western portion of the site. By 1982, the majority of the former orchard trees and vineyard had been removed from the site.

Septic System and Wells

The project site currently contains one septic tank and leach field located on the northwest portion of the site, and two septic tanks and two leach fields located on the northeast portion of the site. Domestic water is provided by an on-site well on each property that was installed at the time the residence was constructed. The project applicant would be

[12] Consulting Associates California. *Phase I Environmental Site Assessment, The Minor and Hardcastle Properties Oakley California.* June 13, 2018.

required to properly abandon the existing septic systems and wells prior to development of the proposed project.

Additionally, a natural gas supply well was drilled and operated on the western portion of the site from approximately 1983 through 1999. The well was operated by Shohone Oil Corporation and was drilled to approximately 8,140 feet. The above-ground well equipment was removed in 1999 and the Phase I ESA did not identify any RECs associated with past use of the well.

Asbestos-Containing Materials and Lead-Based Paint

Asbestos is the name for a group of naturally occurring silicate minerals that are considered to be "fibrous" and, through processing, can be separated into smaller and smaller fibers. The fibers are strong, durable, chemical resistant, and resistant to heat and fire. They are also long, thin, and flexible, such that they can be woven into cloth. Because of the above qualities, asbestos was considered an ideal product and has been used in thousands of consumer, industrial, maritime, automotive, scientific, and building products. However, later discoveries found that, when inhaled, the material caused serious illness.

For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR 1926.1101) states that all thermal system insulation (boiler insulation, pipe lagging, and related materials) and surface materials must be designated as "presumed asbestos-containing material" unless proven otherwise through sampling in accordance with the standards of the Asbestos Hazard Emergency Response Act. Because the existing structures were built prior to 1980, the potential exists that asbestos-containing materials (ACM) were used in the construction of the residential structures and outbuildings on-site.

Lead-based paint (LBP) is defined by federal guidelines as any paint, varnish, stain, or other applied coating that has one milligram of lead per square centimeter or greater. Lead is a highly toxic material that may cause a range of serious illnesses, and in some cases death. In buildings constructed after 1978, the presence of LBP is unlikely. Structures built prior to 1978, and especially prior to the 1960s, are expected to contain LBP. The existing structures on the property were constructed before the phase-out of LBPs in the 1970s. Therefore, the potential exists that LBPs are present in the on-site residence and outbuildings.

Based on the age of the existing on-site structures, ACM and LBP are presumed to be present. The proposed project would include demolition of all on-site structures. Therefore, without implementation of the appropriate safety measures, the proposed project could potentially expose construction workers during structure demolition to LBP and ACM.

Pesticides

A subsequent soil sampling was conducted to evaluate the presence of residual pesticides and arsenic in surface soil from past agricultural use on the project site.[13] Eight composite samples were analyzed for organochlorine pesticides. Detectable amounts of chemicals were identified in all samples; however, the concentrations were all below the California Environmental Protection Agency's (EPA) California Human Health Screening Levels

[13] Consulting Associates of California. *Summary Surface Soil Sampling at Minor and Hardcastle Properties in Oakley, California.* July 10, 2018.

(CHHSLs). The CHHSLs are concentrations of chemicals in soil that the EPA considers to be below the threshold of concern for risk to human health.

Additionally, six soil samples were analyzed for concentrations of arsenic. Each sample's level of arsenic was below the anthropogenic natural level of 12 ppm for agricultural land in California. Thus, the soil sampling determined that the soils found on the project site do not contain elevated concentrations of organochlorine pesticides or arsenic.

Other Hazardous Conditions

Per the Phase I ESA, features such as stressed vegetation, wells, above-ground storage tanks (ASTs), and underground storage tanks (USTs) were not identified on the site. Hazardous materials or petroleum substances, with the exception of small quantities of household maintenance materials, were not observed.

Conclusion

Although the site has been used for agricultural purposes, soil sampling determined that past agricultural uses have not contaminated on-site soils. However, based on the age of the buildings and the presence of septic and well systems, without proper testing or abandonment, the project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impacts to a *less-than-significant* level.

IX-1. *Prior to issuance of grading permits, the existing septic systems shall be abandoned in consultation with the Contra Costa County Environmental Health Department. Proof of abandonment shall be provided to the City Community Development Department and City Engineer.*

IX-2. *Prior to initiation of any ground disturbance activities within 50 feet of the on-site well, the project applicant shall hire a licensed well contractor to obtain a well abandonment permit from Contra Costa County Environmental Health Division and properly abandon the on-site wells to the satisfaction of the Contra Costa County Environmental Health Division. Proof of abandonment shall be provided to the City Community Development Department and City Engineer.*

IX-3. *Prior to issuance of a demolition permit for the on-site structures, the project applicant shall consult with certified Asbestos and Lead Risk Assessors to complete and submit for review to the Planning Division an asbestos and lead survey. If asbestos-containing materials or lead-containing materials are not discovered during the survey, further mitigation related to asbestos-containing materials or lead containing materials shall not be required. If asbestos-containing materials and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos-containing materials and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal-OSHA)*

Administration regulations and disposed of in accordance with all CalEPA regulations, prior to the demolition and/or removal of the on-site structures. The plan shall include the requirement that work shall be conducted by a Cal-OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR 1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the Planning Division for review and approval. Materials containing more than one (1) percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one (1) percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.

c. The proposed project would not be located within one-quarter mile of a school. Therefore, the project would have ***no impact*** related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. The proposed project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5,[14] and would not create a significant hazard to the public or the environment. Therefore, ***no impact*** would occur.

e. The proposed project is not located in the within an airport land use plan. The closest airport to the project site is the Byron Airport, located 10.5 miles from the project site. As such, the proposed project site is not located within two miles of any public airports and does not fall within an airport land use plan area. Therefore, ***no impact*** related to a safety hazard for people residing or working in the project area would occur.

f. During operation, the proposed project would provide adequate access for emergency vehicles and would not interfere with potential evacuation or response routes used by emergency response teams. The project would not substantially alter the existing circulation system in the surrounding area. As a result, the project would have a ***less-than-significant*** impact with respect to impairing the implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.

g. According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the proposed project site is not located within a Very High Fire Hazard Severity Zone.[15] In addition, the site is located in an urbanized area of the City and is surrounded by residential development on all sides. The site is not located adjacent to wildlands. Therefore, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, and a ***less-than-significant*** impact would occur.

[14] California Department of Toxic Substances Control. EnviroStor. Available at: http://www.envirostor.dtsc.ca.gov. Accessed August 2019.

[15] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. June 12, 2018.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY.				
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	✖	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	✖	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	✖	☐	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	✖	☐	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	✖	☐	☐
iv. Impede or redirect flood flows?	☐	☐	☐	✖
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?	☐	☐	✖	☐

Discussion

a. During the early stages of construction activities, topsoil would be exposed due to grading and excavation of the site. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. Given that the proposed project would disturb 13 acres of land, the proposed construction activities would be subject to applicable SWRCB regulations. The City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes Best Management Practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project, including post-construction impacts. The City of Oakley requires all development projects to use BMPs to treat runoff.

Following completion of project buildout, the site would be largely covered with impervious surfaces and landscaping areas, and topsoil would no longer be exposed. As such, the potential for impacts to water quality would be reduced. However, addition of the impervious surfaces on the site would result in the generation of urban runoff, which could contain pollutants if the runoff comes into contact with vehicle fluids on parking surfaces and/or landscape fertilizers and herbicides. All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit.

The City of Oakley has adopted the County C.3 Stormwater Standards, which require new development and redevelopment projects that create or alter 10,000 or more sf of impervious area to contain and treat all stormwater runoff from the project site. Thus, the proposed project would be subject to the requirements of the SWRCB and the Regional Water Quality Control Board (RWQCB), including the C.3 Standards, which are included in the City's NPDES General Permit. Compliance with such requirements would ensure that impacts to water quality standards or waste discharge requirements would not occur during operation of the proposed project.

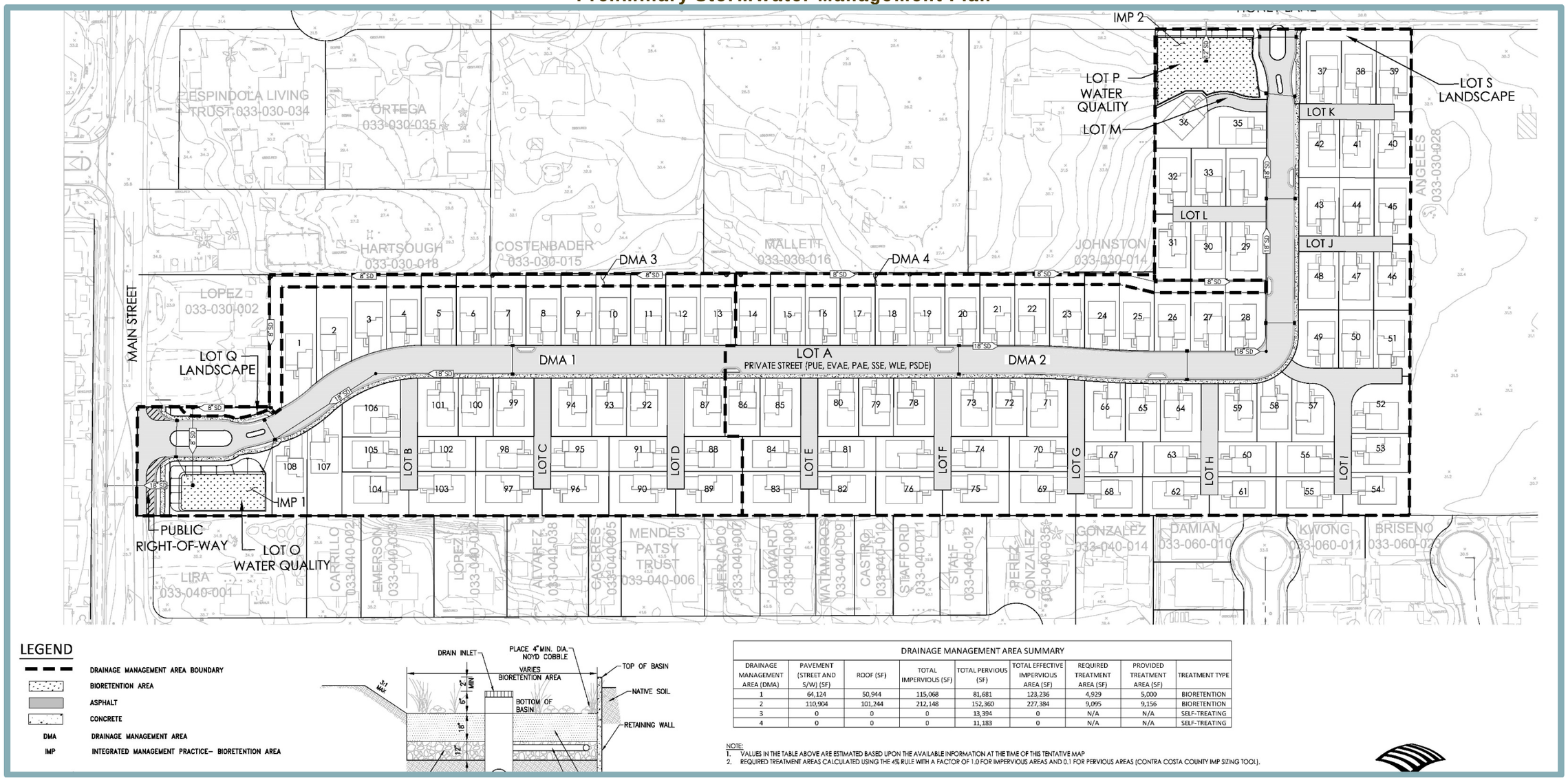
In compliance with the C.3 Guidebook, the proposed project would divide the site into four drainage management areas (DMAs) (see Figure 5). Each DMA would be sized to properly treat runoff from the project site. The Stormwater Management Plan (SWMP) prepared for the proposed project conforms with the most recent Contra Costa Clean Water Program Stormwater C.3 Guidebook and verifies that the proposed project would comply with all City stormwater requirements.

Based on the above, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Thus, a ***less-than-significant*** impact would occur.

b,e. Water supplies for the project site would be supplied by the Diablo Water District (DWD). Per the DWD's 2015 Urban Water Management Plan (UWMP),[16] the primary water supply is surface water. However, the DWD does operate a groundwater supply system that currently consists of groundwater from two wells in Oakley, conveyed in a dedicated well supply pipeline to a blending facility. The wells are connected to the Tracy Subbasin underlying the City.

[16] Diablo Water District. *Final 2015 Urban Water Management Plan*. June 2016.

Figure 5
Preliminary Stormwater Management Plan



LEGEND

- DRAINAGE MANAGEMENT AREA BOUNDARY
- BIORETENTION AREA
- ASPHALT
- CONCRETE
- DMA — DRAINAGE MANAGEMENT AREA
- IMP — INTEGRATED MANAGEMENT PRACTICE– BIORETENTION AREA

DRAINAGE MANAGEMENT AREA SUMMARY

DRAINAGE MANAGEMENT AREA (DMA)	PAVEMENT (STREET AND S/W) (SF)	ROOF (SF)	TOTAL IMPERVIOUS (SF)	TOTAL PERVIOUS (SF)	TOTAL EFFECTIVE IMPERVIOUS AREA (SF)	REQUIRED TREATMENT AREA (SF)	PROVIDED TREATMENT AREA (SF)	TREATMENT TYPE
1	64,124	50,944	115,068	81,681	123,236	4,929	5,000	BIORETENTION
2	110,904	101,244	212,148	152,360	227,384	9,095	9,156	BIORETENTION
3	0	0	0	13,394	0	N/A	N/A	SELF-TREATING
4	0	0	0	11,183	0	N/A	N/A	SELF-TREATING

NOTE:
1. VALUES IN THE TABLE ABOVE ARE ESTIMATED BASED UPON THE AVAILABLE INFORMATION AT THE TIME OF THIS TENTATIVE MAP
2. REQUIRED TREATMENT AREAS CALCULATED USING THE 4% RULE WITH A FACTOR OF 1.0 FOR IMPERVIOUS AREAS AND 0.1 FOR PERVIOUS AREAS (CONTRA COSTA COUNTY IMP SIZING TOOL).

While the proposed project would create new impervious surfaces within the site, the Tracy Subbasin is 345,000 acres in size; therefore, the groundwater basin within which the project site is located would be recharged from many sources over a large area. Additionally, the Tracy Subbasin has been designated as a medium-priority basin by the Department of Water Resources, and is not in overdraft conditions. Therefore, any new impervious surfaces associated with the project would not interfere substantially with groundwater recharge within the Tracy Subbasin.

While the proposed project would require a general plan amendment to allow a greater number of dwelling units per acre, the project site has been anticipated for residential development, which likely involves covering of the entire site in impervious surfaces. As such, the increase in density of residences would not impact the loss of groundwater recharge. However, the project site would include two bio-retention basins and several landscaping areas, which would facilitate recharge.

Based on the above, although the project would increase the amount of impervious surfaces currently on the project site, the DWD has determined the groundwater supply to be adequate based on the current subbasin supplies and future buildout. Therefore, the proposed project would result in a ***less-than-significant*** impact with respect to substantially decreasing groundwater supplies or interfering substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin. In addition, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

ci-iii. Per the Stormwater Management Plan (SWMP) prepared for the project, implementation of the proposed project would involve the creation of approximately 327,216 sf of new impervious surface area (see Figure 5).

All municipalities within Contra Costa County are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. Known as the "C.3 Standards", new development and redevelopment projects that create or replace 10,000 or more sf of impervious surface area must contain and treat stormwater runoff from the site. Because the proposed project would create more than 10,000 sf of impervious surface area, the proposed project would be considered a C.3 regulated project and is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures. In addition, the project site is within Drainage Area 30b, and would be required to pay the applicable Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) drainage fees.[17]

The SWCP prepared for the proposed project incorporates the most recent Stormwater C.3 Guidebook and Contra Costa Clean Water Program requirements,[18] as well as all applicable City stormwater requirements. As noted in the SWCP, stormwater draining off impervious surfaces such as roofs, parking areas, and drive aisles within the project site would be captured by curb inlets and routed, by way of new storm drains, to two bio-retention basins on the western and northeastern borders of the site. The bio-retention basins would include layers of cobbles, soil mix, gravel, and plants to provide for on-site treatment of runoff. Treated runoff would be routed to existing City storm drain inlet located

[17] Contra Costa County Flood Control District. *Contra Costa County Formed Drainage Areas.* February 7, 2008.
[18] Contra Costa County Clean Water Program. *Stormwater C.3 Guidebook.* May 17, 2017.

within Main Street and Honey Lane. As noted previously, the bio-retention basins have been sized to provide for adequate treatment and management of all stormwater runoff.

Furthermore, because the proposed project is consistent with the type of development that has been anticipated on the site, the City's infrastructure has been designed and built to accommodate stormwater runoff associated with development of the site with residential uses, in addition to stormwater flows associated with existing development in the area. Thus, the existing pipeline would not require upsizing or replacement as a result of the proposed project.

Although the calculations included in the SWMP demonstrate that the bio-retention areas would be adequately sized, the design of the proposed bio-retention facilities has not yet been finalized. Therefore, the efficacy of the bio-retention areas in controlling post-project stormwater discharge rates cannot be determined. Pre- and post-project stormwater discharge calculations would be necessary to demonstrate compliance with the C.3 Standards and the efficacy of the proposed bio-retention areas.

Because stormwater discharge calculations are not yet available for the proposed project, compliance with the C.3 Standards cannot be assured at this time, and implementation of the proposed project could result in the discharge of stormwater in a manner that could exceed the capacity of the City's storm drain system. Consequently, the proposed project could result in a ***potentially significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

X-1. *Prior to issuance of grading permits, the applicant shall submit to the City final plans, identifying permanent stormwater control measures to be implemented on the project. The final plans shall include calculations demonstrating that post-project stormwater flows comply with the applicable provisions of the C.3 Standards and meet City standards. The final plans shall be submitted to the Public Works Department for review and approval.*

civ. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the project site, the project site is located within an Area of Minimal Flood Hazard (Zone X).[19] The site is not classified as a Special Flood Hazard Area or otherwise located within a 100-year or 500-year floodplain. Therefore, development of the proposed project would not impede or redirect flood flows and ***no impact*** would result.

d. As discussed under question 'civ' above, the project site is not located within a flood hazard zone. Tsunamis are defined as sea waves created by undersea fault movement or other underwater disturbance that displace a large volume of water, resulting in flooding hazards to coastal development. The project site is not located in proximity to a coastline and would not be potentially affected by flooding risks associated with tsunamis. A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir. Seiches do not pose a risk to the proposed project, as the project site is

[19] Federal Emergency Management Agency. *Flood Insurance Rate Map 06013C0355G.* Effective March 21, 2007.

not located adjacent to a large closed body of water. While the Sacramento-San Joaquin Delta is located to the north, the site is over two miles away. Additionally, per General Plan Policy 8.2.13, levees have been properly engineered and designed to ensure protection against seiches. Based on the above, the proposed project would not pose a risk related to the release of pollutants due to project inundation due to flooding, tsunami, or seiche, and ***no impact*** would occur.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XI. 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 on environmental effect?	☐	☐	✖	☐

Discussion

a. A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. Existing land uses in the project vicinity include single-family residences to the north, south, east, and west across Main Street. The General Plan has anticipated development of residences on the project site. The project would be developed on two contiguous parcels and would not isolate an existing land use. As such, the proposed project would not physically divide an established community and a ***less-than-significant*** impact would occur.

b. The proposed project includes a request for a General Plan Amendment from Single-Family Residential High Density to Multi-Family Residential Low Density, as well as a rezone from R-6 to P-1. Upon approval of both amendments, the proposed project would develop 108 single-family homes at a density of 8.1 dwelling units per acre. The current designations would be amended to reflect the characteristics of the proposed project. The site is currently anticipated to be developed with residential land uses, and as such, the type of development included with the proposed project would be consistent with the type of development expected in the General Plan.

In addition, the General Plan contains several policies which govern the development of residential land uses, including preservation of the City's design qualities, protection of existing residential areas from intrusion of incompatible land uses, and preservation of multi-family residential development. The proposed project would ensure compliance with all such policies. Furthermore, the City has implemented several policies designed for the preservation of biological resources, such as developing projects in an ecologically sensitive manner and encouraging preservation of portions of wildlife habitats that would be disturbed by major development. The mitigation measures set forth in Section IV, Biological Resources, of this IS/MND would promote the goals of the City and ensure compatibility with the applicable General Plan policies. The Noise Element of the General Plan also requires that the proposed project would not exceed the allowable standard of 65 dBA L_{dn} at nearby residences. As discussed in Section XII, Noise, of this IS/MND, with mitigation, the proposed project would be in compliance with all applicable noise thresholds.

Compliance with all applicable policies and regulations regarding environmental protection would ensure that the proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the

proposed of avoiding or mitigating an environmental effect and a ***less-than-significant*** impact would occur.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XII. 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?	☐	☐	☐	✖

Discussion

a,b. The City of Oakley General Plan EIR states that the only viable mineral resource currently mined in the City of Oakley is sand. Currently mining of sand does not occur at the project site and much of the adjacent land is developed for residential uses. Thus, proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral recovery site; therefore, the proposed project would have ***no impact*** to mineral resources.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIII. 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?	☐	☐	☐	✖

Discussion

The following discussion is based primarily on an Environmental Noise Assessment and Traffic Noise Analysis prepared for the proposed project by Saxelby Acoustics.[20]

a. The following sections present information regarding sensitive noise receptors in proximity to the project site, the existing noise environment, and the potential for the proposed project to result in impacts during project construction and operation. The following terms are referenced in the sections below:

- Decibel (dB): A unit of sound energy intensity. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.
- Day-Night Average Level (Ldn): The average sound level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours.

Sensitive Noise Receptors

Some land uses are considered more sensitive to noise than others, and, thus, are referred to as sensitive noise receptors. Land uses often associated with sensitive noise receptors generally include residences, schools, libraries, hospitals and passive recreational areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise. In the vicinity of the project site, sensitive land uses include existing single-family residential uses located on the north, east, and south boundaries of the project site.

[20] Saxelby Acoustics. *Environmental Noise Assessment, Acacia Residential Project*. August 18, 2019.

Existing Noise Environment

The existing noise environment in the project vicinity is primarily defined by vehicle traffic on Main Street. To quantify the ambient noise environment at the project site, Saxelby Acoustics conducted continuous (24-hour) noise level measurements at two locations on the site (see Figure 6). Larson Davis Laboratories (LDL) Model 812 and 831 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. Table 4 below provides a summary of the noise measurement results.

Table 4
Summary of Existing Background Noise Measurement Data

Continuous (24-hour) Noise Level Measurements								
			Average Measured Hourly Noise Levels (dB)					
			Daytime (7 AM to 10 PM)			Nighttime (10 PM to 7 AM)		
Site	Date	L_{dn}	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
LT-1	4/17/19-4/18/19	60	57	55	73	53	43	68
LT-2	4/17/19-4/18/19	53	47	43	65	46	40	59

Short Term Noise Level Measurements						
Site	Date	Time	L_{eq}	L_{50}	L_{max}	Notes
ST-1	4/17/19	1:31 PM	46	46	51	Primary noise source is traffic on Main St.
ST-2	4/17/19	2:01 PM	45	40	63	Primary noise source is traffic on Main St. L_{max} caused by traffic on Honey Ln.
ST-3	4/17/19	2:19 PM	43	41	54	Primary noise source is traffic on Main St. L_{max} caused by small aircraft overhead
ST-4	4/17/19	2:36 PM	56	54	67	Primary noise source is lawnmower and farm animals at adjacent residence

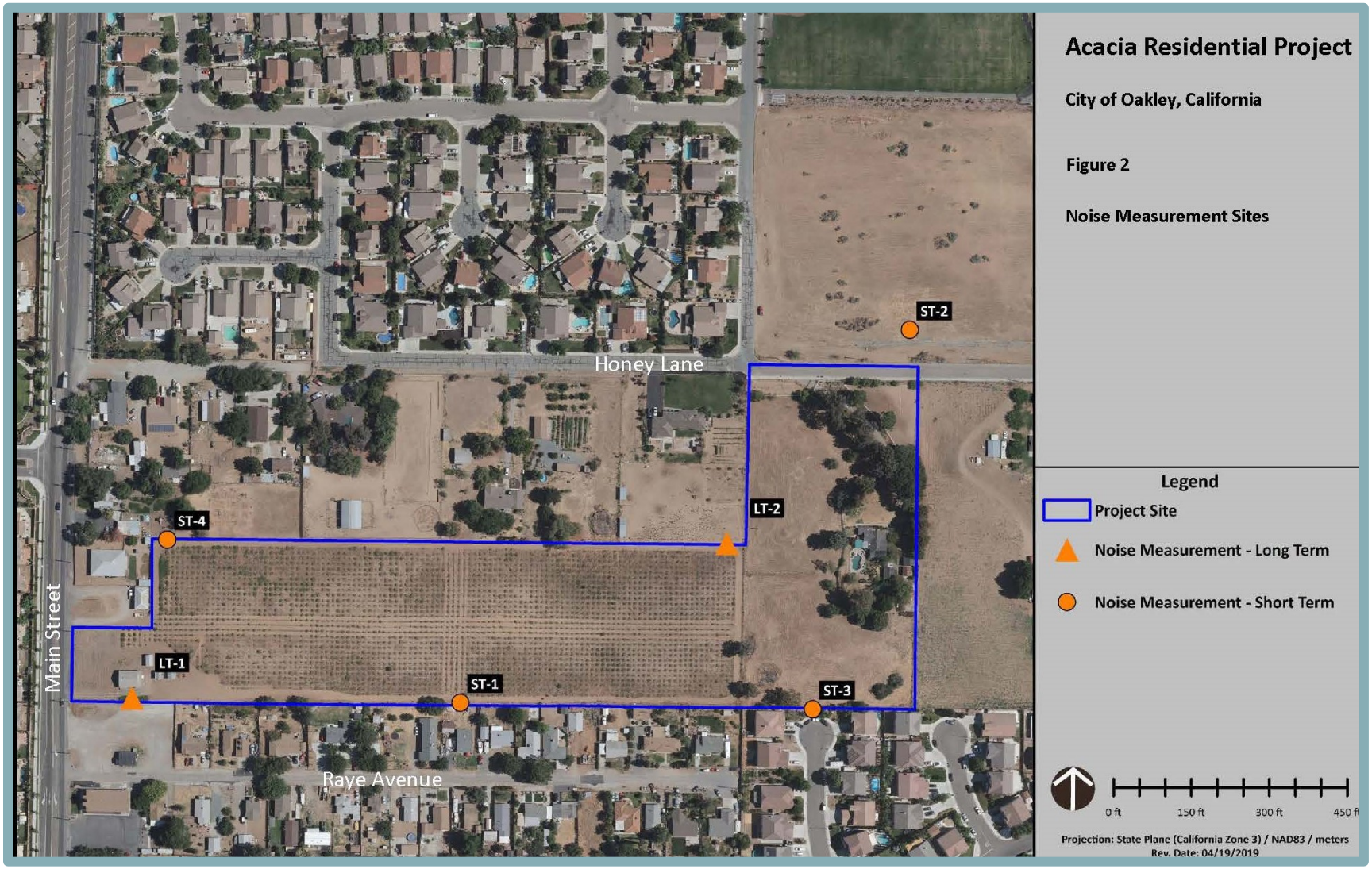
Source: Saxelby Acoustics. 2019.

Standards of Significance

The City of Oakley General Plan Noise Element establishes a noise level standard of 60 dB as normally acceptable at residential land uses. The noise level performance standards for transportation noise compatibility are shown in Table 5. With regard to transportation noise sources, Policy 9.1.6 from the City's General Plan establishes the following significance criteria:

- Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a 5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a 3 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise sensitive uses, a +1.5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant.

Figure 6
Noise Measurement Locations



Source: Saxelby Acoustics, 2019.

Table 5
Maximum Allowable Noise Exposure Transportation Noise Sources

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	65	45	--
Transient Lodging	65[3]	45	--
Hospitals, Nursing Homes	65	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	65	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes:
1. Where the location of outdoor activity areas is unknown, the exterior noise level standards shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
2. As determined for a typical worst-case hour during periods of use.
3. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

Source: City of Oakley 2020 General Plan, Table 9-3.

Impact Analysis

The following sections provide an analysis of potential noise impacts associated with construction and operation of the proposed residences.

Construction Noise

During construction of the proposed project, heavy-duty equipment would be used for demolition, grading, excavation, paving, and building construction, which would result in temporary noise level increases. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. In addition, noise exposure at any single point outside the project site would vary depending on the proximity of construction activities to that point. Standard construction equipment, such as graders, backhoes, loaders, and haul trucks would be used on-site.

Table 6 shows the predicted construction noise levels for each of the project construction phases. Based on the table, site preparation and grading are predicted to be the loudest phases of construction with an average noise exposure of 88 dBA at 50 feet. Based on the SoundPLAN noise model calculations performed by Saxelby Acoustics, the proposed project is predicted to generate construction noise levels ranging between 58-71 dBA L_{eq} at the nearest sensitive receptor. The results of the measurements are shown in Figure 7 below.

Table 6
Construction Equipment Noise

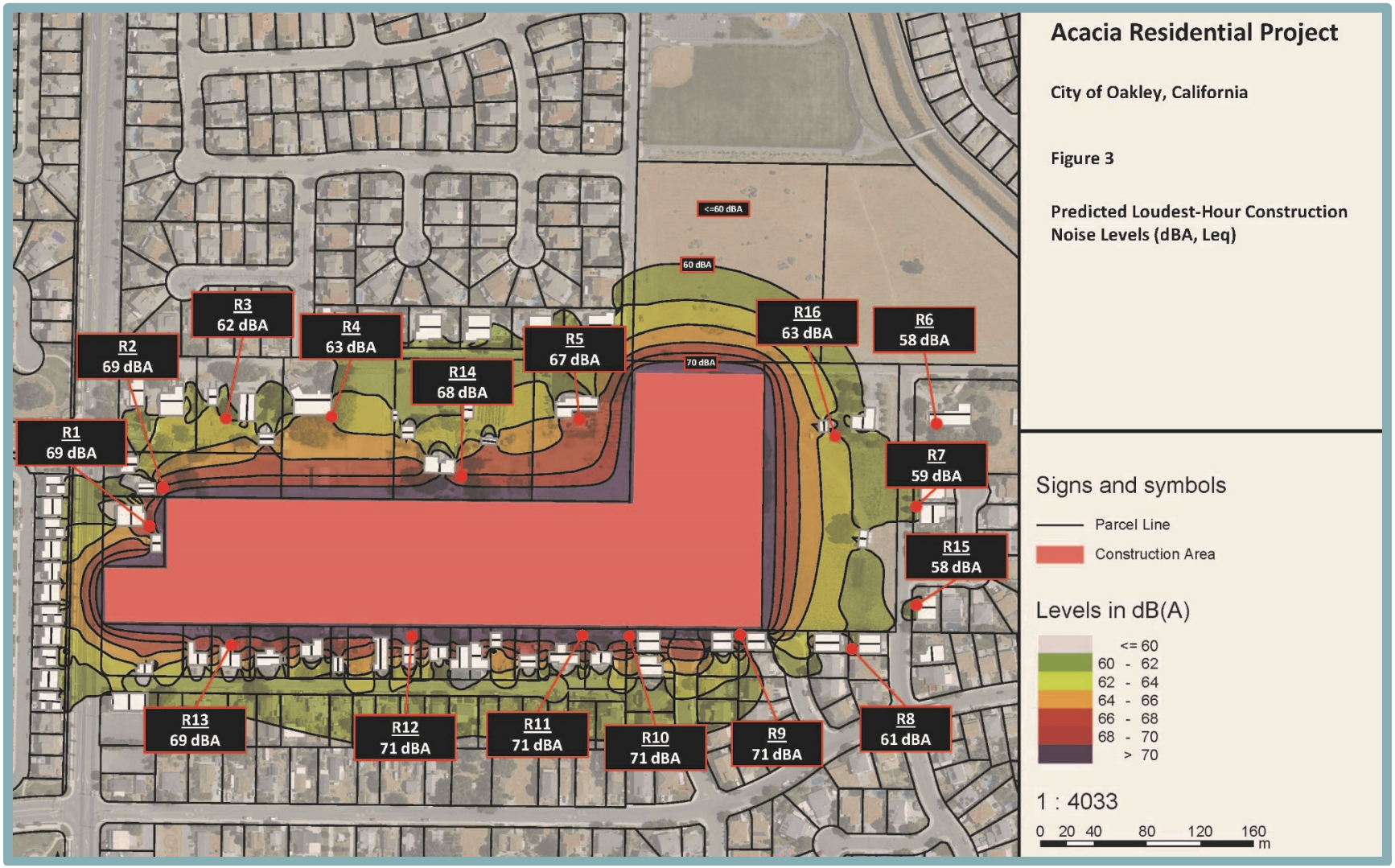
Equipment	Quantity	Usage (%)	Maximum, L_{max} (dBA at 50 feet)	Hourly Average, L_{eq} (dBA at 50 feet)
Demolition				
Concrete Saw	1	20	90	83
Excavator	3	40	81	82
Dozer	2	40	82	81
			Total	87
Site Preparation				
Dozer	3	40	82	83
Tractor/Loader/Backhoe	4	40	84	86
			Total	88
Grading				
Grader	2	40	85	84
Dozer	1	40	82	78
Scraper	1	40	84	80
Tractor/Loader/Backhoe	2	40	84	83
			Total	88
Building Construction				
Crane	1	16	81	73
Forklift	3	40	83	84
Generator	1	50	81	78
Tractor/Loader/Backhoe	3	40	84	85
Welder/Torch	1	40	74	70
			Total	88
Paving				
Paver	2	50	77	77
Paving Equipment	2	50	77	77
Rollers	2	20	80	76
			Total	81
Architectural Coating				
Air Compressor	1	40	79	75
			Total	75

Source: FHWA, Roadway Construction Noise Model (RCNM), January 2006.

The City of Oakley establishes permissible hours of construction in Section 4.2.208 of the Municipal Code. The ordinance restricts noise producing construction activities to weekday hours between 7:30 AM and 5:30 PM, with work not allowed on weekends unless otherwise authorized by the City in writing.

However, given that the project could expose nearby sensitive receptors to noise levels above the acceptable 60 dB threshold, construction of the project could have a significant impact related to the generation of a substantial temporary 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.

Figure 7
Predicted Loudest Hour Construction Noise Levels



Project Operational Noise

Operations of the proposed project would generate noise sources primarily associated with increased traffic on nearby roadways. To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. Traffic volumes were sourced from the Transportation Assessment prepared for the proposed project by TJKM and truck usage and vehicle speeds were based on field observations.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment. In some locations, sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the study roadway segments.

Table 7 summarizes traffic noise levels along each study roadway segment in the project vicinity for the Existing No Project and Existing Plus Project conditions. Cumulative No Project and Cumulative Plus Project conditions are summarized in Table 8.

Table 7
Predicted Traffic Noise Level and Project-Related Traffic Noise Level Increases

Roadway	Segment	Noise Levels at Nearest Sensitive Receptors (L_{dn}, dB)		
		Existing No Project	Existing Plus Project	Change
Main Street	North of Laurel	61.8	61.9	0.1
	Between Laurel and Shady Oak	58.9	59.2	0.3
	North of project access	60.9	61.2	0.3
	North of Malicoat/Simoni Ranch	61.6	61.6	0.1
	North of Brownstone	65.8	65.9	0.1
	North of Delta	60.6	60.6	0.0
	South of Delta	65.5	65.6	0.0
Creekside Way	North of Laurel	39.2	39.2	0.0
	North of Honey	49.9	50.9	1.0
Laurel Road	West of Main	55.3	55.7	0.4
	West of Creekside	57.9	58.0	0.1
	East of Creekside	52.5	52.5	0.0
Honey Lane	West of Creekside	44.3	46.9	2.6
	West of project access	51.5	52.5	1.0
	East of project access	47.8	47.8	0.0
Simoni Ranch Road	West of Main	53.3	53.3	0.0
Malicoat Avenue	East of Main	55.7	55.7	0.0

Source: Saxelby Acoustics, 2019.

Table 8
Predicted Cumulative Traffic Noise Levels and Cumulative Plus Project Increase

Roadway	Segment	Noise Levels at Nearest Sensitive Receptors (L_{dn}, dB)		
		Cumulative No Project	Cumulative Plus Project	Change
Main Street	North of Laurel	64.1	64.2	0.1
	Between Laurel and Shady Oak	59.8	60.0	0.2
	North of project access	61.8	62.0	0.2
	North of Malicoat/Simoni Ranch	62.4	62.4	0.0
	North of Brownstone	66.4	66.4	0.0
	North of Delta	60.7	60.8	0.1
	South of Delta	66.0	66.1	0.1
Creekside Way	North of Laurel	39.2	39.2	0.0
	North of Honey	49.9	50.9	1.0
Laurel Road	West of Main	58.1	58.3	0.2
	West of Creekside	58.5	58.6	0.1
	East of Creekside	53.3	53.3	0.0
Honey Lane	West of Creekside	44.3	46.9	2.6
	West of project access	51.5	52.5	1.0
	East of project access	47.8	47.8	0.0
Simoni Ranch Road	West of Main	55.2	55.2	0.0
Malicoat Avenue	East of Main	55.7	55.7	0.0

Source: Saxelby Acoustics, 2019.

As shown in the two tables, the proposed project is predicted to increase traffic noise levels by a maximum of 2.6 dBA on Honey Lane, west of Creekside Way. An increase of 2.6 dBA is below the City's 5 dBA threshold where existing noise levels are below 60 dBA, as established by General Plan Policy 9.1.6. Thus, impacts related to project traffic noise would be less than significant.

Impacts of the environment on a project (as opposed to impacts of a project on the environment) are beyond the scope of required CEQA review. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (*Ballona Wetlands Land Trust v. City of Los Angeles,* (2011) 201 Cal.App.4th 455, 473 (*Ballona*).) The California Supreme Court recently held that "CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents. What CEQA does mandate… is an analysis of how a project might exacerbate existing environmental hazards." (*California Building Industry Assn. v. Bay Area Air Quality Management Dist.* (2015) 62 Cal.4th 369, 392; see also *Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal.App.5th 160, 197 ["identifying the effects on the project and its users of locating the project in a particular environmental setting is neither consistent with CEQA's legislative purpose nor required by the CEQA statutes"], quoting *Ballona*, *supra*, 201 Cal.App.4th at p. 474.)

Therefore, for the purposes of the CEQA analysis, the relevant inquiry is not whether the proposed project's future residents would be exposed to preexisting environmental noise-related hazards, but instead whether project-generated noise would exacerbate the pre-existing conditions. Nonetheless, the Environmental Noise Assessment modeled traffic noise to predict the anticipated noise levels at the proposed residences.

Modern building construction typically yields an exterior-to-interior noise level reduction of 25 dBA. Therefore, where exterior noise levels are 70 dBA, or less, additional interior noise control measures are not typically required. Based on the predicted noise level of 57 dBA at the exterior of the propose residences, the interior noise levels would reach up to 32 dBA. Therefore, the proposed residences would not be exposed to interior noise levels above the City's 45 dB interior noise level standard.

Conclusion

Based on the above, operation of the proposed project would not result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City's General Plan and the Municipal Code. However, considering the potential for construction activities to result in temporary increases in noise levels in the project area, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impacts to a *less-than-significant* level.

XIII-1. *The project contractor shall ensure that the following construction noise BMPs are met on-site during all phases of construction:*

- *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 AM and*

5:30 PM, with no work allowed on weekends unless otherwise authorized by the City in writing.

Construction noise BMPs shall be included in the grading plan submitted by the developer for review and approval by the Community Development Director prior to grading permit issuance.

b. Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration is measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 9, which was developed by the California Department of Transportation (Caltrans), shows the vibration levels that would normally be required to result in damage to structures. As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV and continuous vibrations of 0.10 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

Table 9
Effects of Vibration on People and Buildings

PPV		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.

The primary vibration-generating activities associated with the proposed project would occur during demolition, grading, placement of underground utilities, and construction of foundations. Table 10 shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors. Use of vibratory compactors/rollers could be required during construction of the proposed on-site drive aisles and parking areas.

Table 10
Vibration Levels for Various Construction Equipment

Type of Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)
Large Bulldozer	0.089	0.029
Loaded Trucks	0.076	0.025
Small Bulldozer	0.003	0.000
Auger/drill Rigs	0.089	0.029
Jackhammer	0.035	0.011
Vibratory Hammer	0.070	0.023
Vibratory Compactor/roller	0.210 (less than 0.20 at 26 feet)	0.070

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.

The proposed project would only cause elevated vibration levels during construction, as the proposed project would not involve any uses or operations that would generate substantial groundborne vibration. Although noise and vibration associated with the construction phases of the project would add to the noise and vibration environment in the immediate project vicinity, construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. With the exception of vibratory compactors, Table 10 indicates that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at a distance of 26 feet. However, the proposed project includes construction within approximately 15 feet from the adjacent single-family residences to the south. Therefore, project construction could cause vibrations in excess of 0.2 in/sec.

Based on the above, the proposed project could expose people to or generate excessive groundborne vibration or groundborne noise levels, and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impacts to a *less-than-significant* level.

XIII-2. *For construction activity occurring within 26 feet of any adjacent single-family residential uses located to the south, a pre-construction crack documentation and construction vibration monitoring shall be conducted to ensure that construction vibrations do not cause damage to the adjacent structures.*

The results and recommendations of the documentation and monitoring shall be submitted to the Community Development Department prior to issuance of the grading permits.

c. The nearest public airport to the site is Byron Airport, located approximately 10.5 miles south of the site. In addition, a private airfield (Funny Farm Airfield) is located approximately 3.5 miles east of the proposed project site. The project site is not covered by an existing airport land use plan. Given that the project site is not located within two miles of a public or private airport, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with airports. Thus, ***no impact*** would occur.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIV. 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 (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	✖	☐
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	✖	☐

Discussion

a. The proposed project would develop 108 single-family residences. Using the General Plan's average of 3.26 persons per household, the proposed project would add 352 residents to the City's population. Based on a 2018 population estimate of 41,116 residents, the project would constitute a 0.9 increase in population within the City. The General Plan previously anticipated single-family residential development on the project site, and associated population growth was analyzed in the General Plan EIR. The proposed project would not result in substantially more intensive population growth beyond what has been anticipated by the City. Furthermore, the project site is located within an urbanized area of the City and is surrounded by existing residential development. Urban infrastructure exists within the vicinity of the site and would include connection as part of the proposed project. Therefore, development of the proposed project would not induce substantial unplanned population growth in an area, either directly or indirectly, and a ***less-than-significant*** impact would occur.

b. The proposed project would require removal of two dwelling units on the project site. However, the voluntary removal of two residences would not constitute displacement of substantial numbers of people. Moreover, the project would result in the development of 108 single-family residences, which would be a net increase of 106 dwelling units. Therefore, the project would not displace substantial numbers of existing housing or people, and a ***less-than-significant*** impact would occur.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XV. 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?	☐	☐	✖	☐

Discussion

a. Fire protection is currently provided to the City of Oakley by the East Contra Costa Fire Protection District. A new fire station was built to accommodate increased demand, staffing and equipment in 2010. With the completion of the new fire station the City of Oakley General Plan anticipates fire service to be adequate for buildout of the City. Station 93 is located 1.5 miles northwest of the project site. The proposed project would be subject to the fire facilities impact fees established by the City of Oakley Municipal Code Section 9.2.502. Payment of the required impact fee would mitigate any potential impacts caused by increased demands on fire services that may result from the proposed project, as well as ensure that the project conforms with the City of Oakley's General Plan Policy 4.4.2. Additionally, the proposed project does not include any alterations to the circulation system of the surrounding area, which could conflict with the City of Oakley's General Plan Policy 4.4.4, or lead to a degradation in response times. Given the payment of fees in accordance with City of Oakley Municipal Code guidelines the proposed project is not expected to cause significant degradation to response times or service ratios, which would induce the need for physically altered or expanded governmental facilities, the construction of which could cause significant environmental impacts, and the project would, therefore, result in a ***less-than-significant*** impact.

b. Police protection is currently provided to the City of Oakley by the Oakley Police Department and the Contra Costa County Sheriff's Office. The Oakley Police Department currently employs 43 persons, including the Chief of Police, the Lieutenant, six Sergeants, five Detectives, 21 Police Officers, and nine Police Services Assistants.[21] As previously discussed, the proposed project would include construction of 108 single-family residential units. With the development of the project site with single-family residential uses, an increase in demand for police services would occur, because residences typically generate a higher demand for police. Nevertheless, police service demand from residential development at the project site would have been included in City of Oakley's demand

[21] City of Oakley Police Department. *2017 Annual Report*. 2017. Available at http://www.ci.oakley.ca.us/wp-content/uploads/2018/04/Annual-Report-2017-2-2.pdf. Accessed June 19, 2018.

predictions based on anticipated General Plan buildout. The residences would also be located within a gated community, which would reduce some potential for criminal activity. In addition, development fees would be applied to the proposed project, as well as a Police Services levy. Based on the above, the proposed project would create a demand equal to or less than that anticipated for the site and would not induce the need for physically altered or expanded governmental facilities, the construction of which could cause significant environmental impacts. Therefore, the proposed project would result in a ***less-than-significant*** impact.

c. The project site is within the limits of the Oakley Unified School District, which provides K-8 education, and the Liberty Union High School District, which provides 9-12 education. The proposed project would develop 108 single-family residences. Using a standard student generation rate of 0.5 students/dwelling unit, the proposed project would add 54 new students to the local K-12 schools. According to Government Code Section 65995 et. seq. and Education Code Section 17620 et. seq, payment of applicable development fees would be sufficient in reducing the impacts associated with an increase in students from the project. Therefore, the proposed project would result in a ***less-than-significant*** impact regarding an increase in demand for schools.

d,e. The proposed project would result in development of 108 single-family residences. The City of Oakley Municipal Code 9.2.2.08 requires five acres of parkland per 1,000 residents. Based on the rate of 3.26 residents per single-family dwelling unit, the maximum buildout of the proposed project site would result in an increase of 352 new residents to the City. As a result, 1.76 acres of parkland would be required. Oakley resolution 19-03 requires subdividers of land within the City to dedicate land and/or pay fees in lieu of the dedication for the neighborhood and community parks and recreation programs.

The proposed project would not include any on-site parks and, thus, would be subject to payment of in-lieu park fees. Therefore, given that the proposed project would be required to pay the applicable park in-lieu fee, the project would result in a ***less-than-significant*** impact on recreation.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVI. RECREATION.					
Would the project:					
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?	☐	☐	✖	☐

Discussion

a-b. The proposed project would result in development of 108 single-family residences. The development of residences would create an increase in population and therefore, an increase in demand on recreational facilities would occur. The City of Oakley Municipal Code 9.2.2.08 requires five acres of parkland per 1,000 residents. Based on the rate of 3.26 residents per single-family dwelling unit, the maximum buildout of the proposed project site would result in an increase of 352 new residents to the City. As a result, 1.76 acres of parkland would be required. Oakley resolution 19-03 requires subdividers of land within the City to dedicate land and/or pay fees in lieu of the dedication for the neighborhood and community parks and recreation programs. Therefore, given that the proposed project would not include any park acreage, payment of the City's in-lieu fee would be required, and the project would result in a ***less-than-significant*** impact on recreation.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVII. TRANSPORTATION.					
Would the project:					
a.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	✖	☐	☐
b.	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	✖	☐
c.	Substantially increase hazards 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?	☐	☐	✖	☐

Discussion

a. The following is based primarily on a Traffic Impact Analysis (TIA) prepared for the proposed project by TJKM.[22] The TIA evaluates the potential transportation impacts that could result from the proposed project, short- and long-term multi-modal circulation needs where relevant to site access and/or project impacts, potential mitigation measures for any significant transportation impacts, and evaluate the adequacy of the proposed site plan for accommodating multi-modal site access and meeting City of Oakley Guidelines.

Study Intersections

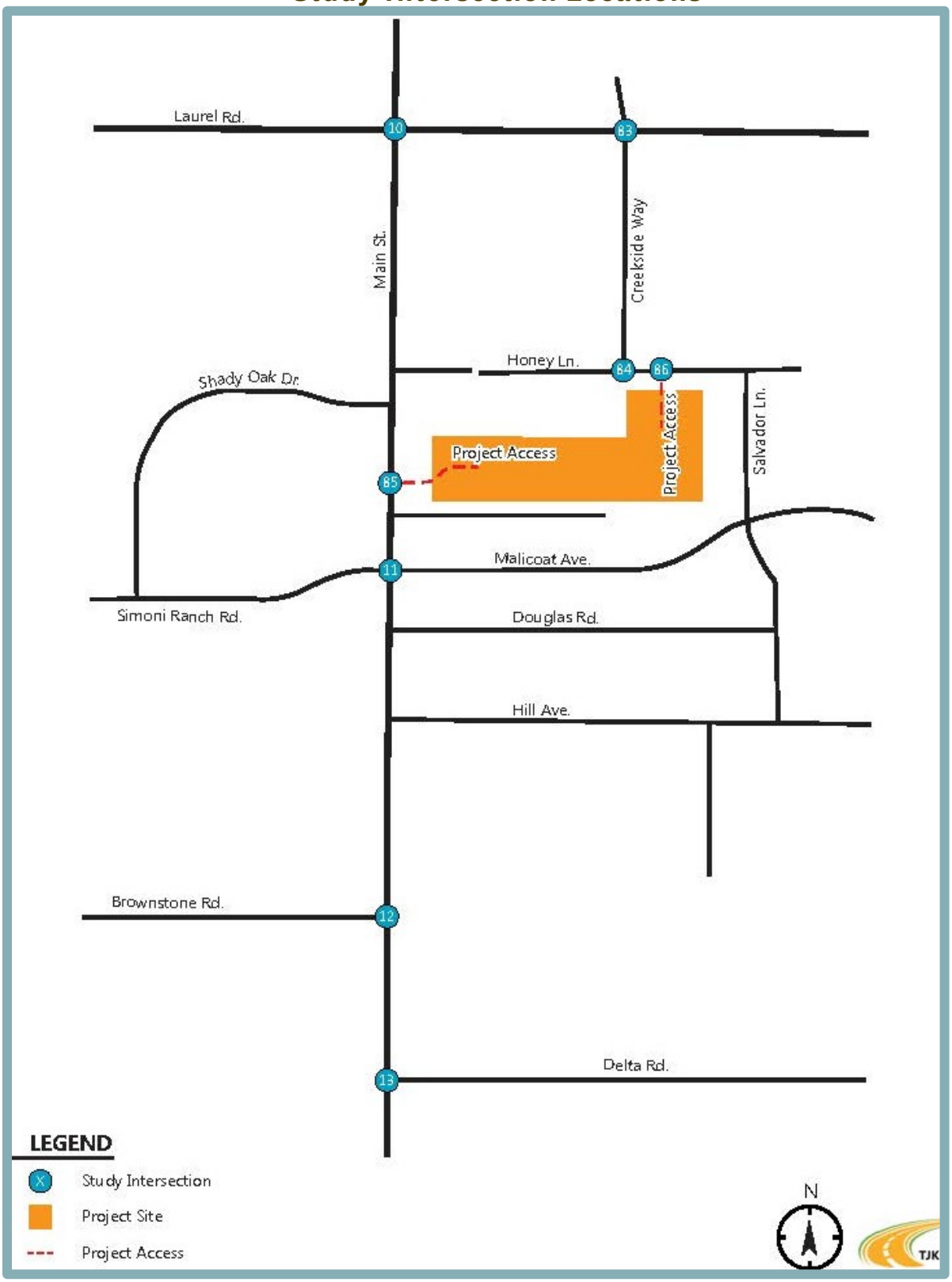
TJKM evaluated transportation conditions at six existing study intersections, and two proposed new intersections that would serve the project site (see Figure 8). Four intersections were evaluated based on conditions provided from the Citywide model, and the remaining two study intersections were evaluated during AM (7:00 AM-9:00 AM) and PM (4:00 PM-6:00 PM) peak periods for a typical weekday with clear weather. The following study intersections were selected in consultation with City staff based on the anticipated trip generation and travel pattern for project trips:

1. Main Street / Laurel Road
2. Main Street / Simoni Ranch Road
3. Main Street / Brownstone Road
4. Main Street / Delta Road
5. Creekside Way / Laurel Road*
6. Creekside Way / Honey Lane*
7. Main Street / Project Access*
8. Honey Lane / Project Access*

*Indicates new count location (not in Citywide model)

[22] TJKM. *Acacia Residential Traffic Impact Analysis.* May 2019.

Figure 8
Study Intersection Locations



Source: TJKM, 2019.

Study Scenarios

Conditions at each intersection were analyzed under the following scenarios:

- **Existing Conditions** – Describes existing transportation conditions in the study area based on the current roadway and sidewalk network characteristics, transit service, and intersection counts conducted on April 11, 2019;
- **Existing Plus Project Conditions** – Similar to Existing Conditions but with the net new trips that would be generated by the project;
- **Background Conditions** – Describes the projected peak hour traffic operations based on the net change to travel patterns anticipated from approved (but not yet constructed) or fully/partially occupied developments in the City at the time of the Existing Conditions assessment. The analysis includes additional trips that would be generated if the proposed developments were to operate at full occupancy;
- **Background Plus Project Conditions** – Similar to Background Conditions but with the inclusion of vehicle trips that would be generated by the project. The Background plus Project Conditions analysis provides an assessment of project impacts that takes into account other projects that would be completed within a similar timeframe as the project.

Thresholds of Significance

Operations at each of the study intersections were evaluated based on Level of Service (LOS), a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions by motorists and passengers. The LOS generally describes conditions in terms of speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. The operational levels of service are given letter designations from A to F, with A representing the best operating conditions and F representing the worst conditions. Table 11 provides descriptions of various LOS and the corresponding ranges of delay.

Per the City of Oakley General Plan, LOS D or a volume-to-capacity (V/C) ratio of 0.90 are the thresholds of acceptability for signalized intersections. Any signalized intersection operating worse than LOS D would be considered inconsistent with the standard. Within the TIA, the study intersections were analyzed using HCM 6th Edition Methodology as per the City's guidance. Average control delay is reported in seconds per vehicle for signalized and all-way-stop-control intersections and critical delay for minor approaches is reported for two-way-stop-control intersections. Signalized intersections or unsignalized intersection operating worse than LOS D are considered inconsistent with the City's standard. At already unacceptably operating intersections, a project constitutes a significant impact if intersection delay increases by five seconds under Existing Plus Project Conditions.

Trip Generation and Distribution

Project vehicle trip generation rates were obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) (see Table 12). Based on the ITE rates, the proposed project is estimated to generate 1,020 daily vehicle trips, including 80 AM peak hour and 107 PM peak hour trips.

Table 11
Signalized Intersection LOS Criteria

LOS	Description	Delay (seconds)
A	Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	< 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0

Source: TJKM, 2019.

Table 12
Vehicle Trip Generation Summary

Land Use (ITE Code)	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 (210)	108 DU	9.44	1,020	0.74	20	60	80	0.99	67	40	107
Total			**1,020**				**80**				**107**

Source: TJKM, May 2019.

The distribution of peak hour vehicle trips generated by the project was determined based on the methodology used for the Citywide Traffic Model. Based on the methodology the following results were determined from the model: 45 percent of peak-hour trips are to/from origins and designations west of Oakley via SR 4; 15 percent are to/from origins and destinations south/east of Oakley via SR 4; 20 percent are to/from other destinations near Oakley via other routes; and 20 percent are internal to Oakley. Based on that distribution: peak-hour vehicle trips generated by the project were manually assigned to each study intersection.

Existing Plus Project Conditions

Table 13 summarizes the peak hour levels of service at the study intersections under Existing Plus Project conditions, based on the addition of project trips to each study intersection. As shown, all study intersections operate at acceptable LOS under Existing Plus Project conditions, except the intersections of Main Street/Brownstone Road and Main Street/Delta Road, which operate at LOS E or F during one or both peak hours.

Table 13
Existing Plus Project Conditions Traffic Level of Service Analysis Results

Intersection	Control	Peak Hour	Existing Conditions		Existing Plus Project Conditions	
			Delay[1]	LOS[2]	Delay[1]	LOS[2]
10. Main Street/Laurel Road	Signal	AM	46.2	D	51.5	D
		PM	37.0	D	42.2	D
11. Main Street/Simoni Ranch Road	Signal	AM	31.6	C	31.8	C
		PM	15.7	B	15.7	B
12. Main Street/Brownstone Road	One-Way Stop	AM	**>100**	**F**	**>100**	**F**
		PM	29.9	D	32.3	D
13. Main Street/Delta Road	One-Way Stop	AM	**>50**	**F**	**>50**	**F**
		PM	**40.5**	**E**	**41.9**	**E**
83. Creekside Way/ Laurel Road	Two-Way Stop	AM	17.4	C	18.6	C
		PM	14.1	B	14.6	B
84. Creekside Way/ Honey Lane	All-Way Stop	AM	7.0	A	7.0	A
		PM	7.0	A	7.1	A
85. Main Street/Project Site	One-Way Stop	AM	N/A	--	16.6	C
		PM	N/A	--	15.8	C
86. Honey Lane/Project Site	One-Way Stop	AM	N/A	--	8.8	A
		PM	N/A	--	8.9	A

Note: **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, May 2019.

Based on the above, the project impact at the Main Street/Delta Road intersection under Existing Plus Project Conditions would not be considered a significant impact because the project would add less than five second of delay to the already unacceptable intersection.

The stop-sign controlled intersection of Main Street/Brownstone Road operates at unacceptable LOS F during the AM peak hour under both Existing and Existing Plus Project Conditions. Under Existing Plus Project Conditions, the project would add more than five seconds of delay to the Main Street/Brownstone Road intersection, which constitutes a significant impact. The project would add 13 AM and 17 PM peak hour vehicle trips, an increase of approximately one percent (0.86 percent AM and 1.09 percent PM) compared to existing peak hour traffic volumes. Thus, implementation of the proposed project would exceed the City's threshold of addition of a five second delay at an already unacceptable intersection.

Background Plus Project Conditions

Using the calibrated and validated Citywide Traffic Model, additional traffic projected to be generated from approved developments was forecasted for Background Conditions. Table 14 summarizes the peak hour levels of service at study intersections under Background and Background Plus Project Conditions. As shown, six intersections operate at an unacceptably without the proposed project. Three of the intersections would not result in a five second delay due to the project and, thus, would not constitute a significant impact; however, the proposed project would increase delay by more than five seconds at the following three intersections:

- Main Street/Laurel Road is forecasted to operate at unacceptable LOS F during both AM and PM peak hours, primarily due to a forecasted large increase in eastbound left-turns from Laurel Road to northbound Main Street, and southbound right-turns from Main Street to westbound Laurel Road;
- Main Street/Brownstone Road is forecasted to continue operating at unacceptable LOS F during both peak hours (as is the case under Existing Conditions) reflecting eastbound delay approaching the stop-sign on Brownstone Road approaching the stop sign; and
- Main Street/Delta Road is forecasted to operate at unacceptable LOS F during the AM peak hour and LOS E during the PM peak hour, reflecting westbound delay on Delta Road approaching the stop sign.

Table 14
Intersection Traffic Level of Service – Background Plus Project Conditions

Intersection	Control	Peak Hour	Existing Conditions		Existing Plus Project Conditions	
			Delay[1]	LOS[2]	Delay[1]	LOS[2]
10. Main Street/Laurel Road	Signal	AM	**>100**	**F**	**>100**	**F**
		PM	**>100**	**F**	**>100**	**F**
11. Main Street/Simoni Ranch Road	Signal	AM	38.8	D	39.5	D
		PM	17.3	B	17.3	B
12. Main Street/Brownstone Road	One-Way Stop	AM	**>100**	**F**	**>100**	**F**
		PM	**80.8**	**F**	**92.9**	**F**
13. Main Street/Delta Road	One-Way Stop	AM	**>100**	**F**	**>100**	**F**
		PM	**47.0**	**E**	**48.2**	**E**
83. Creekside Way/ Laurel Road	Two-Way Stop	AM	21.1	C	23.0	C
		PM	16.0	C	16.8	C
84. Creekside Way/ Honey Lane	All-Way Stop	AM	7.0	A	7.0	A
		PM	7.9	A	7.0	A
85. Main Street/Project Site	One-Way Stop	AM	N/A	--	23.8	C
		PM	N/A	--	23.8	C
86. Honey Lane/Project Site	One-Way Stop	AM	N/A	--	8.8	A
		PM	N/A	--	8.9	A

Note: **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, May 2019.

The proposed project would result in an increased delay at three study intersections forecasted to operate unacceptably due to cumulative traffic growth generated by background growth and the proposed project. The delays would constitute a significant impact because the proposed project would increase delay by five seconds at the already unacceptably operating intersection would have an increased five second delay due to the project's implementation. The City requires a fair share contribution towards the funding of future improvements. Upon payment of the fees, the project would be in compliance with City standards. However, if the fair share fees are not paid in accordance with City standards, the degradation of the intersections could result in a significant impact.

Pedestrian, Bicycle, and Transit Facilities

The proposed project's potential impacts related to pedestrian, bicycle, and transit facilities are discussed below.

Pedestrian Facilities

Sidewalks are provided on both sides of Main Street north of Shady Oak Drive, and on the west side, between Shady Oak Drive and Simoni Ranch Road. Sidewalks are provided on the north side of Honey Lane, west of Creekside Way, and on the project frontage bordering Honey Lane. Sidewalks are not provided on Brownstone Road, Delta Road, and the project frontage bordering Main Street. The project would include construction and connection of new sidewalks to the existing system.

Bicycle Facilities

The City of Oakley General Plan, City of Oakley Parks, Recreation, and Trails Master Plan, and the Contra Costa County Bicycle and Pedestrian Plan proposed that several new bicycle facilities be constructed in the area in the near future, in order to further promote alternative transportation.

The area surrounding the project site currently provides several Class II bicycle facilities, including along Main Street, between Harvest Drive and Main Street on Laurel Road, and between Rose Court and Main Street on Simoni Ranch Road. The project would not introduce any alterations to the existing circulation system, and thus, would not impact the existing bicycle facilities in the vicinity of the site.

Transit Facilities

Eastern Contra Costa Transit Authority (Tri Delta Transit) provides transit service in eastern Contra Costa County, serving the communities of Oakley, Brentwood, Antioch, Concord, Discovery Bay, Bay Point, and Pittsburg. Thirteen routes operate on weekdays, with four routes operating on weekends. Four routes operate in the vicinity of the project site (300, 383, 391, and 393).

Route 300, the Pittsburg BART/Brentwood Park & Ride route, is a weekday express route connecting Brentwood to the Pittsburg/Bay Point BART station by way of Oakley and Antioch. The bus travels along Main Street, operating from 4:15 AM to approximately 10:00 PM with 15 to 30-minute headways.

Route 383, the Oakley/Antioch/Freedom High School route, connects Oakley to Antioch and Freedom High School in Oakley. The route, in both clockwise and counterclockwise directions, provides only weekday service. The counterclockwise route runs with

approximate one-hour headways, and the clockwise route runs twice during the AM peak hour period only.

Route 391, the BART/Pittsburg/Antioch/Oakley/Brentwood route, provides weekday service to most East County Cities. The route operates from 4:00 AM to 1:15 AM with 30 to 60-minute headways.

Route 393, the BART/Pittsburg/Antioch/Oakley/Brentwood route, provides weekend service to Route 391. The route operates from 5:20 AM to 2:00 AM with approximately 60-minute headways.

Alternative Transportation Conclusion

Based on the above, several pedestrian, bicycle, and transit facilities exist within the vicinity of the project site. The proposed project is not anticipated to have adverse impacts to existing or planned pedestrian, bicycle, or transit facilities as per the Contra Costa Countywide Bicycle and Pedestrian Plan and the City of Oakley General Plan.

Conclusion

Based on the above, one intersection in the vicinity of the project site would operate at an unacceptable LOS under Existing Plus Project Conditions, and three intersections would operate unacceptably under Background Plus Project Conditions. The project would be subject to fair share fees which would result in modifications to the City's roadways to improve the LOS at the existing intersections.

The proposed project would include construction of new sidewalks with connection to the existing facilities on Main Street and Honey Lane. Additionally, several bicycle and public transit facilities exist with project site access.

Because the project would degrade several intersections in the vicinity of the site to an unacceptable LOS, the project could conflict with a program, plan, ordinance, or policy addressing the circulation systems, including transit, roadway, bicycle, and pedestrian facilities. With proper payment of the fair share fees, the project would reduce the potential impacts. However, without proper payment, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impacts to a *less-than-significant* level for reasons described below.

Existing Plus Project Impact at Main Street/Brownstone Road: The project impact to the intersection of Main Street/Brownstone Road is potentially significant because the project adds more than five seconds of delay. The stop-sign controlled intersection of Main Street/Brownstone Road operates an unacceptable LOS F during the AM peak hour under Existing and Existing Plus Project Conditions. With implementation of the following mitigation, the LOS would improve to acceptable levels. Thus, implementation of the following mitigation would reduce the potential impacts to a *less-than-significant* level.

XVII-1. *Prior to approval of Improvement Plans, the applicant shall submit all fair share contribution payments to the City's Traffic Impact Fee program for the installation of a traffic signal at the intersection of Main Street and*

Brownstone Road. Proof of payment shall be submitted to the Community Development Department.

Background Plus Project Conditions at Main Street/Laurel Road: Main Street/Laurel Road (Study Intersection #10) is forecasted to operate at unacceptable LOS F during the AM and PM peak hours under Background Conditions with and without the proposed project. Average delay with the addition of project trips under Background plus Project Conditions would increase by more than five seconds during the AM peak hour. All fair share fees would be submitted to an existing Traffic Impact Fee Program. Implementation of the following mitigation would ensure that the LOS under Background Plus Project Conditions would improve to acceptable LOS D (52.5 seconds average delay) during the AM peak hour and LOS D (48.7 seconds average delay) in the PM peak hour and a *less-than-significant* impact would occur.

XVII-2. *Prior to issuance of building permits, the applicant shall pay all fair share contributions towards the Traffic Impact Fee Program for the cost of the future installation of one additional eastbound left-turn lane on Laurel Road and one additional southbound right-turn lane on Main Street to the satisfaction of the Community Development Department.*

Background Plus Project Conditions at Main Street/Brownstone Road: The stop-sign controlled intersection of Main Street/Brownstone Road (Study Intersection #12) is forecasted to operate at unacceptable LOS F during the AM and PM peak hours under Background Conditions with and without the proposed project. The anticipated unacceptable delay is primarily due to anticipated increases in through movement volume on Main Street. Average delay with the addition of project trips under Background Plus Project Conditions would increase by more than five seconds during both the AM and PM peak hours. All fair share fees would be submitted to an existing Traffic Impact Fee Program. Implementation of the mitigation would ensure that the LOS under Background Plus Project Conditions would improve to acceptable LOS C (34.2 seconds average delay) during the AM peak hour and LOS B (13.4 seconds average delay) in the PM peak hour and a *less-than-significant* impact would occur.

XVII-3. *Prior to approval of Improvement Plans, the applicant shall pay all fair share contribution fees towards the Traffic Impact Fee Program for the cost of installation of a future traffic signal at the Main Street/ Brownstone Road intersection to the satisfaction of the Community Development Department.*

Background Plus Project Conditions at Main Street/Delta Road: The stop-sign controlled intersection of Main Street/Delta road (Intersection #13) is forecasted to operate at LOS F during the AM peak hour and LOS E during the PM peak hour under Background Conditions with and without the proposed project. Average delay with the addition of project trips under Background Plus Project Conditions would increase by more than five seconds during the AM peak hour. All fair share fees would be submitted to an existing Traffic Impact Fee Program. Upon implementation of the mitigation, the intersection would operate at acceptable LOS C (23.0 seconds average delay) during the AM peak hour and LOS B (18.6 seconds average delay) in the PM peak hour and a *less-than-significant* impact would occur.

XVII-4. *Prior to approval of Improvement Plans, the applicant shall submit fair share contribution fees towards the Traffic Impact Fee Program for the cost of installing a future traffic signal at the Main Street/Delta Road intersection to the satisfaction of the Community Development Department.*

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Per Section 15064.3, analysis of vehicle miles traveled (VMT) attributable to a project is the most appropriate measure of transportation impacts. While a qualitative discussion of VMT has been provided below, the provisions of Section 15064.3 apply only prospectively; determination of impacts based on VTM is not required Statewide until July 1, 2020.

Per Section 15064.3(3), a lead agency may analyze a project's VMT qualitatively based on the availability of transit, proximity to destinations, etc. While changes to driving conditions that increase intersection delay are an important consideration for traffic operations and management, the method of analysis does not fully describe environmental effects associated with fuel consumption, emissions, and public health. Section 15064.3(3) changes the focus of transportation impact analysis in CEQA from measuring impact to drivers to measuring the impact of driving. As noted in question 'a' above, the project site would be served by the Tri-Delta Transit system with Routes 391 and 393 stopping approximately 0.3 mile north of the site. Additionally, the project would include access to bicycle and pedestrian facilities. The site is located within close proximity to schools, parks, grocery stores, food establishments, and banks. The inclusion of pedestrian and bicycle infrastructure and distance to nearby amenities would encourage residents to use alternative means of transportation to and from the project site.

Based on the above, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and a ***less-than-significant*** impact would occur.

c,d. Primary access to the project site would be provided by two new gated access points. One would be from Main Street, and the other from Honey Lane. The project roadway would have separate gates for each entrance and exit lane and would circulate the site through an "L-shaped" internal street. Vehicle parking would be provided by 494 spaces, including 62 on-street parallel parking spaces, 216 driveway spaces, and 216 garage spaces. Section 9.1.1402 of the City's Municipal Code requires at least two covered, off-street automobile parking space for each single-family dwelling unit. Dwelling units are required to have driveways of a minimum length of 25 feet. Thus, the parking supply and proposed driveway lengths meet the City's requirement.

The proposed intersection of the roadway and Main Street would generate left and right turning traffic onto Main Street from the project site. The intersection is proposed to be one-way stop controlled at the driveway with vehicles exiting the site anticipated to be travelling 15 miles per hour (mph). Main Street has a posted speed limit of 40 mph and requires at least 305 feet of stopping distance for oncoming vehicles from the point where they can see a vehicle exiting the driveway. Oncoming traffic travelling northbound and southbound on Main Street have a clear line of sight to vehicles exiting the driveway well above the minimum stopping distance.

The second proposed intersection of the project roadway at Honey Lane would generate left and right turning traffic onto Honey Lane from the project site, and into the project site from Honey Lane. The intersection is proposed to be one-way stop controlled at the driveway, with vehicles exiting the project site anticipated to be travelling at 15 mph. Honey Lane has a posted speed limit of 25 mph and requires at least 155 feet of stopping distance for oncoming vehicles from the point where they can see a vehicle exiting the driveway. Oncoming vehicles travelling eastbound on Honey Lane must stop at the intersection of Honey Lane & Creekside Way, approximately 135 feet west of the project driveway, and

have an unobstructed line of sight to the project driveway. Oncoming traffic travelling westbound on Honey Lane would have a clear line of sight well above the minimum stopping distance.

Additionally, sufficient emergency access is determined by factors such as the number of access points, the width of access roadways, and the width of internal roadways. The project site would provide two entrance points, each with widths able to accommodate emergency vehicles. The internal roadway would be sized to properly accommodate emergency vehicles circulating the project site.

The TIA did not identify any substantial issues related to project design hazards or emergency access to the project site. Based on the above, the project would not substantially increase hazards due to a design feature or incompatible uses, or result in inadequate emergency access, and a ***less-than-significant*** impact would occur.

Issues	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVIII. 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:*				
a. 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).	☐	☐	✖	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	✖	☐

Discussion

a,b. In compliance with Assembly Bill (AB) 52 (Public Resources Code Section 21080.3.1), a project notification letter was distributed by the City to those Native American tribes who have previously requested notification under AB 52 of projects within the City subject to CEQA. The letters were distributed on January 7, 2019 and the City did not receive any responses within the mandatory 30-day response period for consultation under AB 52/Public Resources Code Section 21080.3.1(b).

The potential for unrecorded Native American resources to exist within the project site is relatively low based on the disturbed nature of the site. Implementation of Mitigation Measures V-1 and V-2, described in detail in Section V, Cultural Resources, would reduce any potential impacts related to unknown resources to less-than-significant levels. Based on a record search of the Native American Heritage Commission (NAHC) Sacred Land files, known tribal resources do not exist for the project area or adjacent lands.

Given that the project would be required to comply with the City's standard conditions of approval regarding cultural resources, as well as mitigation measures in Section V, construction of the proposed project would not result in a substantial adverse change in the significance of a tribal cultural resource. Per Public Resource Code sections 5020.1(k) and 5024.1, the project site is not listed as a historical resource nor does the site contain any known resources with significance to a California Native American tribe. Thus, the

proposed project would have a ***less-than-significant*** impact related to tribal cultural resources.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIX. 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?	☐	☐	✖	☐

Discussion

a-c. Water service for the proposed project would be provided by the DWD. According to the DWD Final 2015 Urban Water Management Plan (UWMP)[23], the DWD has a baseline per capita demand of 177 gallons. The proposed project would develop 108 single-family houses. Based on the City of Oakley's estimate of 3.26 persons per household, the project would add 352 residents. Thus, the project is projected to use 62,304 gallons per day, or 69.8 acre-feet per year. The 2015 UWMP indicates that total water supply in the City is anticipated to increase from 16,830 acre-feet in 2020 to 20,411 acre-feet in 2040. The UWMP water supply projections account for planned growth within the City limits, including the project site. Thus, the project's annual demand of 69.8 acre-feet is a net increase of 22.8 acre-feet over what was previously anticipated at the site. Given the relatively small increase and anticipated water surplus by 2020, adequate long-term water supply exists.

Sanitary sewer services are provided to the project site by ISD. The wastewater system is composed of collection, treatment, and effluent recycling facilities. The Water Recycling Facility has an average daily flow of 2.3 million gallons per day (mgd). The facility has a treatment capacity of approximately 4.3 mgd. Using standard industry assumptions that (1) domestic water use represents 40 percent of consumption; and (2) wastewater

[23] Diablo Water District. *Final 2015 Urban Water Management Plan.* June 2016.

generation represents 90 percent of domestic water use, the proposed project would generate 22,429 gallons of effluent on a daily basis. Thus, the addition of wastewater from the project would represent less than one percent of the available capacity. Given the available capacity within the wastewater facility and the small generation of wastewater, the project would not result in inadequate capacity to serve the project's projected demand in addition to the existing commitments. Furthermore, the project would include connection of a new sewer line within the project site to the City's existing infrastructure in Honey Lane.

The proposed project would include a new storm drain with connection to existing storm drain systems in Main Street and Honey Lane. As discussed above, two bio-retention facilities would treat stormwater on-site and be designed to detain runoff during peak storm events and meter the release into the City's existing system.

Furthermore, electricity, natural gas, and telecommunications utilities would be provided by way of connections to existing infrastructure located within the immediate project vicinity. Therefore, the project would result in a ***less-than-significant*** impact related to the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

d,e. Solid waste, recyclable materials, and compostable material collection within the City of Oakley is hauled to Potrero Hills Landfill located in Solano County to the north. The site has a maximum permitted throughput of 4,330 tons per day. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Potrero Hills Landfill has a remaining capacity of 13,872,000 cubic yards out of a total permitted capacity of 83,100,000, or 83 percent remaining capacity.[24] Due to the substantial amount of available capacity remaining at Potrero Hills Landfill, sufficient capacity would be available to accommodate the project's solid waste disposal needs. Therefore, a ***less-than-significant*** impact related to solid waste would occur as a result of the proposed project.

[24] California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Potrero Hill Landfill (48-AA-0075)*. Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/48-AA-0075/. Accessed August 2019.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XX. 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?	☐	☐	✖	☐

Discussion

a-d. As noted in Section IX, Hazards and Hazardous Materials, according to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the project site is not located within a Very High Fire Hazard Severity Zone.[25] In addition, the surrounding area consist of residential land uses. Thus, the proposed project would not experience result in substantial risk or hazards related to wildfires, and a ***less-than-significant*** impact would occur.

[25] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. June 12, 2018.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	✖	☐
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?	☐	☐	✖	☐

Discussion

a. As discussed in Section IV, Biological Resources, of this IS/MND, while a limited potential exists for western burrowing owl, Swainson's hawk, golden eagle, and nesting raptors and migratory birds protected by the MBTA to occur on-site, Mitigation Measures IV-1 through IV-5 would ensure that any impacts related to special-status species would be reduced to a less-than-significant level. The proposed project would involve demolition of two single-family residences, but does not contain any known historic or prehistoric resources. Thus, implementation of the proposed project is not anticipated to have the potential to result in impacts related to historic or prehistoric resources. Nevertheless, Mitigation Measures V-1 and V-2 would ensure that in the event that prehistoric resources are discovered within the project site, such resources would be protected in compliance with the requirements of CEQA and other State standards.

Considering the above, the proposed project would not degrade the quality of the environment, substantially reduce or impact the habitat of fish or wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, a ***less-than-significant*** impact would occur.

b. The proposed project, in conjunction with other development within the City of Oakley, could incrementally contribute to cumulative impacts in the area. However, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level through compliance with the mitigation measures included in this IS/MND, as well as applicable

General Plan policies, Municipal Code standards, and other applicable local and State regulations. In addition, the proposed project would be consistent with the site's current land use and zoning designations. Accordingly, buildout of the site with residential uses and associated cumulative impacts have been analyzed within the General Plan EIR.

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, 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, Mitigation Measures XVII-1 through XVII-4 would fully mitigate all potential cumulative impacts to a less than significant level. With the implementation of the mitigation measures, the proposed project would not result in cumulatively significant impacts on these areas. Impacts would be less than significant.

Therefore, when viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, development of the proposed project would not result in a cumulatively considerable contribution to cumulative impacts in the City of Oakley, and the project's incremental contribution to cumulative impacts would be ***less than significant***.

c. As described in this IS/MND, the proposed project would comply with all applicable General Plan policies, Municipal Code standards, other applicable local and State regulations, in addition to the mitigation measures included herein. In addition, as discussed in Section III, Air Quality, Section IX, Hazards and Hazardous Materials, and Section XIII, Noise, of this IS/MND, the proposed project would not cause substantial effects to human beings, including effects related to exposure to air pollutants, hazardous materials, traffic, and noise. Therefore, the proposed project would result in a ***less-than-significant*** impact.

Appendix

Air Quality and GHG Modeling Results

CalEEMod Unmitigated Output Results

Acacia Project

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - per applicant

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	27.00	0.00
tblFireplaces	NumberNoFireplace	8.64	0.00
tblFireplaces	NumberWood	46.44	0.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.8091	3.8968	2.7246	6.4300e-003	0.3243	0.1726	0.4969	0.1519	0.1618	0.3137	0.0000	578.7118	578.7118	0.1040	0.0000	581.3116
2021	0.9834	2.6507	2.5787	4.7800e-003	0.0587	0.1381	0.1968	0.0159	0.1305	0.1464	0.0000	417.1910	417.1910	0.0781	0.0000	419.1443
2022	0.3308	0.7666	0.8167	1.5300e-003	0.0190	0.0376	0.0566	5.1300e-003	0.0356	0.0407	0.0000	133.6362	133.6362	0.0247	0.0000	134.2533
Maximum	**0.9834**	**3.8968**	**2.7246**	**6.4300e-003**	**0.3243**	**0.1726**	**0.4969**	**0.1519**	**0.1618**	**0.3137**	**0.0000**	**578.7118**	**578.7118**	**0.1040**	**0.0000**	**581.3116**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.8091	3.8968	2.7246	6.4300e-003	0.3243	0.1726	0.4969	0.1519	0.1618	0.3137	0.0000	578.7113	578.7113	0.1040	0.0000	581.3112
2021	0.9834	2.6507	2.5786	4.7800e-003	0.0587	0.1381	0.1968	0.0159	0.1305	0.1464	0.0000	417.1906	417.1906	0.0781	0.0000	419.1439
2022	0.3308	0.7666	0.8167	1.5300e-003	0.0190	0.0376	0.0566	5.1300e-003	0.0356	0.0407	0.0000	133.6360	133.6360	0.0247	0.0000	134.2532
Maximum	**0.9834**	**3.8968**	**2.7246**	**6.4300e-003**	**0.3243**	**0.1726**	**0.4969**	**0.1519**	**0.1618**	**0.3137**	**0.0000**	**578.7113**	**578.7113**	**0.1040**	**0.0000**	**581.3112**

Acacia Project - Bay Area AQMD Air District, Annual

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-3-2020**	**5-2-2020**	2.0681	2.0681
2	**5-3-2020**	**8-2-2020**	0.9697	0.9697
3	**8-3-2020**	**11-2-2020**	0.9909	0.9909
4	**11-3-2020**	**2-2-2021**	0.9646	0.9646
5	**2-3-2021**	**5-2-2021**	0.8854	0.8854
6	**5-3-2021**	**8-2-2021**	0.9144	0.9144
7	**8-3-2021**	**11-2-2021**	0.9149	0.9149
8	**11-3-2021**	**2-2-2022**	0.8894	0.8894
9	**2-3-2022**	**5-2-2022**	0.7810	0.7810
10	**5-3-2022**	**8-2-2022**	0.0221	0.0221
		Highest	2.0681	2.0681

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9481	0.0134	1.0555	8.7000e-004		0.0458	0.0458		0.0458	0.0458	5.5346	1.3099	6.8445	0.0271	0.0000	7.5228
Energy	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	269.6436	269.6436	0.0147	5.4500e-003	271.6350
Mobile	0.2319	1.0268	2.6340	9.8000e-003	0.8763	8.0200e-003	0.8843	0.2352	7.4900e-003	0.2427	0.0000	900.1057	900.1057	0.0313	0.0000	900.8871
Waste						0.0000	0.0000		0.0000	0.0000	26.3442	0.0000	26.3442	1.5569	0.0000	65.2666
Water						0.0000	0.0000		0.0000	0.0000	2.2324	6.2653	8.4977	0.2300	5.5600e-003	15.9044
Total	**1.1970**	**1.1849**	**3.7510**	**0.0116**	**0.8763**	**0.0655**	**0.9418**	**0.2352**	**0.0650**	**0.3001**	**34.1112**	**1,177.3245**	**1,211.4357**	**1.8600**	**0.0110**	**1,261.2159**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9481	0.0134	1.0555	8.7000e-004		0.0458	0.0458		0.0458	0.0458	5.5346	1.3099	6.8445	0.0271	0.0000	7.5228
Energy	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Mobile	0.2222	0.9678	2.4063	8.7300e-003	0.7729	7.2000e-003	0.7801	0.2074	6.7200e-003	0.2142	0.0000	801.8843	801.8843	0.0286	0.0000	802.5989
Waste						0.0000	0.0000		0.0000	0.0000	26.3442	0.0000	26.3442	1.5569	0.0000	65.2666
Water						0.0000	0.0000		0.0000	0.0000	2.2324	6.1546	8.3870	0.2300	5.5600e-003	15.7926
Total	**1.1873**	**1.1259**	**3.5233**	**0.0105**	**0.7729**	**0.0647**	**0.8375**	**0.2074**	**0.0642**	**0.2716**	**34.1112**	**976.8594**	**1,010.9706**	**1.8458**	**8.6300e-003**	**1,059.6869**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.81**	**4.98**	**6.07**	**9.23**	**11.80**	**1.25**	**11.07**	**11.80**	**1.19**	**9.50**	**0.00**	**17.03**	**16.55**	**0.76**	**21.62**	**15.98**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Acacia Project - Bay Area AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	12.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0800e-003	0.0000	1.0800e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0182	0.1826	0.1196	2.1000e-004		9.1200e-003	9.1200e-003		8.4800e-003	8.4800e-003	0.0000	18.6992	18.6992	5.2800e-003	0.0000	18.8312
Total	**0.0182**	**0.1826**	**0.1196**	**2.1000e-004**	**1.0800e-003**	**9.1200e-003**	**0.0102**	**1.6000e-004**	**8.4800e-003**	**8.6400e-003**	**0.0000**	**18.6992**	**18.6992**	**5.2800e-003**	**0.0000**	**18.8312**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4600e-003	2.9000e-004	0.0000	8.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5711	0.5711	1.0000e-005	0.0000	0.5715
Total	**3.1000e-004**	**1.6600e-003**	**2.3200e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.5000e-004**	**1.9000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.9543**	**0.9543**	**3.0000e-005**	**0.0000**	**0.9552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0800e-003	0.0000	1.0800e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0182	0.1826	0.1196	2.1000e-004		9.1200e-003	9.1200e-003		8.4800e-003	8.4800e-003	0.0000	18.6992	18.6992	5.2800e-003	0.0000	18.8312
Total	**0.0182**	**0.1826**	**0.1196**	**2.1000e-004**	**1.0800e-003**	**9.1200e-003**	**0.0102**	**1.6000e-004**	**8.4800e-003**	**8.6400e-003**	**0.0000**	**18.6992**	**18.6992**	**5.2800e-003**	**0.0000**	**18.8312**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4600e-003	2.9000e-004	0.0000	8.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5711	0.5711	1.0000e-005	0.0000	0.5715
Total	**3.1000e-004**	**1.6600e-003**	**2.3200e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.5000e-004**	**1.9000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.9543**	**0.9543**	**3.0000e-005**	**0.0000**	**0.9552**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.3393	0.1721	3.0000e-004		0.0176	0.0176		0.0162	0.0162	0.0000	26.7445	26.7445	8.6500e-003	0.0000	26.9608
Total	**0.0326**	**0.3393**	**0.1721**	**3.0000e-004**	**0.1445**	**0.0176**	**0.1621**	**0.0795**	**0.0162**	**0.0956**	**0.0000**	**26.7445**	**26.7445**	**8.6500e-003**	**0.0000**	**26.9608**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.7500e-003	3.5000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.4598	0.4598	2.0000e-005	0.0000	0.4604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.4000e-004	3.5400e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9969	0.9969	2.0000e-005	0.0000	0.9975
Total	**5.3000e-004**	**2.0900e-003**	**3.8900e-003**	**1.0000e-005**	**1.2400e-003**	**2.0000e-005**	**1.2600e-003**	**3.3000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.4567**	**1.4567**	**4.0000e-005**	**0.0000**	**1.4579**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.3393	0.1721	3.0000e-004		0.0176	0.0176		0.0162	0.0162	0.0000	26.7445	26.7445	8.6500e-003	0.0000	26.9608
Total	**0.0326**	**0.3393**	**0.1721**	**3.0000e-004**	**0.1445**	**0.0176**	**0.1621**	**0.0795**	**0.0162**	**0.0956**	**0.0000**	**26.7445**	**26.7445**	**8.6500e-003**	**0.0000**	**26.9608**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.7500e-003	3.5000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.4598	0.4598	2.0000e-005	0.0000	0.4604
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.4000e-004	3.5400e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9969	0.9969	2.0000e-005	0.0000	0.9975
Total	**5.3000e-004**	**2.0900e-003**	**3.8900e-003**	**1.0000e-005**	**1.2400e-003**	**2.0000e-005**	**1.2600e-003**	**3.3000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.4567**	**1.4567**	**4.0000e-005**	**0.0000**	**1.4579**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0994	0.0000	0.0994	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.0994**	**0.0326**	**0.1320**	**0.0507**	**0.0300**	**0.0807**	**0.0000**	**81.7264**	**81.7264**	**0.0264**	**0.0000**	**82.3872**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0172	0.6030	0.1212	1.6300e-003	0.0348	1.9500e-003	0.0368	9.5800e-003	1.8600e-003	0.0114	0.0000	158.0645	158.0645	8.1400e-003	0.0000	158.2679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	7.1000e-004	7.3700e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.0768	2.0768	5.0000e-005	0.0000	2.0781
Total	**0.0182**	**0.6037**	**0.1286**	**1.6500e-003**	**0.0372**	**1.9700e-003**	**0.0392**	**0.0102**	**1.8700e-003**	**0.0121**	**0.0000**	**160.1413**	**160.1413**	**8.1900e-003**	**0.0000**	**160.3460**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0994	0.0000	0.0994	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.0994**	**0.0326**	**0.1320**	**0.0507**	**0.0300**	**0.0807**	**0.0000**	**81.7263**	**81.7263**	**0.0264**	**0.0000**	**82.3871**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0172	0.6030	0.1212	1.6300e-003	0.0348	1.9500e-003	0.0368	9.5800e-003	1.8600e-003	0.0114	0.0000	158.0645	158.0645	8.1400e-003	0.0000	158.2679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	7.1000e-004	7.3700e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.0768	2.0768	5.0000e-005	0.0000	2.0781
Total	**0.0182**	**0.6037**	**0.1286**	**1.6500e-003**	**0.0372**	**1.9700e-003**	**0.0392**	**0.0102**	**1.8700e-003**	**0.0121**	**0.0000**	**160.1413**	**160.1413**	**8.1900e-003**	**0.0000**	**160.3460**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0300e-003**	**0.0211**	**0.0220**	**3.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**3.0042**	**3.0042**	**9.7000e-004**	**0.0000**	**3.0285**

3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	**7.0000e-005**	**5.0000e-005**	**5.5000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.0000**	**0.1559**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0300e-003**	**0.0211**	**0.0220**	**3.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**3.0042**	**3.0042**	**9.7000e-004**	**0.0000**	**3.0285**

3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	**7.0000e-005**	**5.0000e-005**	**5.5000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.0000**	**0.1559**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1897	1.7172	1.5079	2.4100e-003		0.1000	0.1000		0.0940	0.0940	0.0000	207.2909	207.2909	0.0506	0.0000	208.5552
Total	**0.1897**	**1.7172**	**1.5079**	**2.4100e-003**		**0.1000**	**0.1000**		**0.0940**	**0.0940**	**0.0000**	**207.2909**	**207.2909**	**0.0506**	**0.0000**	**208.5552**

3.6 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1600e-003	0.1239	0.0312	2.9000e-004	7.0400e-003	6.0000e-004	7.6500e-003	2.0400e-003	5.8000e-004	2.6100e-003	0.0000	28.1194	28.1194	1.4500e-003	0.0000	28.1557
Worker	0.0116	8.2800e-003	0.0857	2.7000e-004	0.0276	1.9000e-004	0.0278	7.3400e-003	1.7000e-004	7.5100e-003	0.0000	24.1641	24.1641	5.8000e-004	0.0000	24.1787
Total	**0.0157**	**0.1322**	**0.1169**	**5.6000e-004**	**0.0346**	**7.9000e-004**	**0.0354**	**9.3800e-003**	**7.5000e-004**	**0.0101**	**0.0000**	**52.2835**	**52.2835**	**2.0300e-003**	**0.0000**	**52.3343**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1897	1.7172	1.5079	2.4100e-003		0.1000	0.1000		0.0940	0.0940	0.0000	207.2907	207.2907	0.0506	0.0000	208.5550
Total	**0.1897**	**1.7172**	**1.5079**	**2.4100e-003**		**0.1000**	**0.1000**		**0.0940**	**0.0940**	**0.0000**	**207.2907**	**207.2907**	**0.0506**	**0.0000**	**208.5550**

3.6 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1600e-003	0.1239	0.0312	2.9000e-004	7.0400e-003	6.0000e-004	7.6500e-003	2.0400e-003	5.8000e-004	2.6100e-003	0.0000	28.1194	28.1194	1.4500e-003	0.0000	28.1557
Worker	0.0116	8.2800e-003	0.0857	2.7000e-004	0.0276	1.9000e-004	0.0278	7.3400e-003	1.7000e-004	7.5100e-003	0.0000	24.1641	24.1641	5.8000e-004	0.0000	24.1787
Total	**0.0157**	**0.1322**	**0.1169**	**5.6000e-004**	**0.0346**	**7.9000e-004**	**0.0354**	**9.3800e-003**	**7.5000e-004**	**0.0101**	**0.0000**	**52.2835**	**52.2835**	**2.0300e-003**	**0.0000**	**52.3343**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

3.6 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1636	0.0408	4.2000e-004	0.0103	3.6000e-004	0.0106	2.9700e-003	3.4000e-004	3.3100e-003	0.0000	40.6133	40.6133	2.0000e-003	0.0000	40.6632
Worker	0.0156	0.0108	0.1142	3.8000e-004	0.0402	2.6000e-004	0.0405	0.0107	2.4000e-004	0.0109	0.0000	33.9974	33.9974	7.6000e-004	0.0000	34.0164
Total	**0.0206**	**0.1744**	**0.1550**	**8.0000e-004**	**0.0505**	**6.2000e-004**	**0.0511**	**0.0137**	**5.8000e-004**	**0.0143**	**0.0000**	**74.6106**	**74.6106**	**2.7600e-003**	**0.0000**	**74.6796**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

3.6 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1636	0.0408	4.2000e-004	0.0103	3.6000e-004	0.0106	2.9700e-003	3.4000e-004	3.3100e-003	0.0000	40.6133	40.6133	2.0000e-003	0.0000	40.6632
Worker	0.0156	0.0108	0.1142	3.8000e-004	0.0402	2.6000e-004	0.0405	0.0107	2.4000e-004	0.0109	0.0000	33.9974	33.9974	7.6000e-004	0.0000	34.0164
Total	**0.0206**	**0.1744**	**0.1550**	**8.0000e-004**	**0.0505**	**6.2000e-004**	**0.0511**	**0.0137**	**5.8000e-004**	**0.0143**	**0.0000**	**74.6106**	**74.6106**	**2.7600e-003**	**0.0000**	**74.6796**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.6481	0.6791	1.1200e-003		0.0336	0.0336		0.0316	0.0316	0.0000	96.1660	96.1660	0.0230	0.0000	96.7419
Total	**0.0708**	**0.6481**	**0.6791**	**1.1200e-003**		**0.0336**	**0.0336**		**0.0316**	**0.0316**	**0.0000**	**96.1660**	**96.1660**	**0.0230**	**0.0000**	**96.7419**

3.6 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0493	0.0122	1.3000e-004	3.2700e-003	1.0000e-004	3.3600e-003	9.4000e-004	9.0000e-005	1.0400e-003	0.0000	12.7887	12.7887	6.1000e-004	0.0000	12.8039
Worker	4.6300e-003	3.0700e-003	0.0334	1.2000e-004	0.0128	8.0000e-005	0.0129	3.4000e-003	8.0000e-005	3.4800e-003	0.0000	10.4151	10.4151	2.2000e-004	0.0000	10.4205
Total	**6.1000e-003**	**0.0523**	**0.0456**	**2.5000e-004**	**0.0161**	**1.8000e-004**	**0.0162**	**4.3400e-003**	**1.7000e-004**	**4.5200e-003**	**0.0000**	**23.2038**	**23.2038**	**8.3000e-004**	**0.0000**	**23.2244**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.6481	0.6791	1.1200e-003		0.0336	0.0336		0.0316	0.0316	0.0000	96.1659	96.1659	0.0230	0.0000	96.7418
Total	**0.0708**	**0.6481**	**0.6791**	**1.1200e-003**		**0.0336**	**0.0336**		**0.0316**	**0.0316**	**0.0000**	**96.1659**	**96.1659**	**0.0230**	**0.0000**	**96.7418**

3.6 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0493	0.0122	1.3000e-004	3.2700e-003	1.0000e-004	3.3600e-003	9.4000e-004	9.0000e-005	1.0400e-003	0.0000	12.7887	12.7887	6.1000e-004	0.0000	12.8039
Worker	4.6300e-003	3.0700e-003	0.0334	1.2000e-004	0.0128	8.0000e-005	0.0129	3.4000e-003	8.0000e-005	3.4800e-003	0.0000	10.4151	10.4151	2.2000e-004	0.0000	10.4205
Total	**6.1000e-003**	**0.0523**	**0.0456**	**2.5000e-004**	**0.0161**	**1.8000e-004**	**0.0162**	**4.3400e-003**	**1.7000e-004**	**4.5200e-003**	**0.0000**	**23.2038**	**23.2038**	**8.3000e-004**	**0.0000**	**23.2244**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1423	0.1548	2.5000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	21.5750	21.5750	1.6700e-003	0.0000	21.6168
Total	**0.4627**	**0.1423**	**0.1548**	**2.5000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**21.5750**	**21.5750**	**1.6700e-003**	**0.0000**	**21.6168**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2400e-003	1.6000e-003	0.0166	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.6798	4.6798	1.1000e-004	0.0000	4.6827
Total	**2.2400e-003**	**1.6000e-003**	**0.0166**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**3.0000e-005**	**1.4500e-003**	**0.0000**	**4.6798**	**4.6798**	**1.1000e-004**	**0.0000**	**4.6827**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1423	0.1548	2.5000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	21.5750	21.5750	1.6700e-003	0.0000	21.6167
Total	**0.4627**	**0.1423**	**0.1548**	**2.5000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**21.5750**	**21.5750**	**1.6700e-003**	**0.0000**	**21.6167**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2400e-003	1.6000e-003	0.0166	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.6798	4.6798	1.1000e-004	0.0000	4.6827
Total	**2.2400e-003**	**1.6000e-003**	**0.0166**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**3.0000e-005**	**1.4500e-003**	**0.0000**	**4.6798**	**4.6798**	**1.1000e-004**	**0.0000**	**4.6827**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6829					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3200	33.3200	2.2900e-003	0.0000	33.3771
Total	**0.7115**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3200**	**33.3200**	**2.2900e-003**	**0.0000**	**33.3771**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2100e-003	0.0234	8.0000e-005	8.2500e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.9738	6.9738	1.6000e-004	0.0000	6.9777
Total	**3.2000e-003**	**2.2100e-003**	**0.0234**	**8.0000e-005**	**8.2500e-003**	**5.0000e-005**	**8.3000e-003**	**2.1900e-003**	**5.0000e-005**	**2.2400e-003**	**0.0000**	**6.9738**	**6.9738**	**1.6000e-004**	**0.0000**	**6.9777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6829					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3199	33.3199	2.2900e-003	0.0000	33.3771
Total	**0.7115**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3199**	**33.3199**	**2.2900e-003**	**0.0000**	**33.3771**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2100e-003	0.0234	8.0000e-005	8.2500e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.9738	6.9738	1.6000e-004	0.0000	6.9777
Total	**3.2000e-003**	**2.2100e-003**	**0.0234**	**8.0000e-005**	**8.2500e-003**	**5.0000e-005**	**8.3000e-003**	**2.1900e-003**	**5.0000e-005**	**2.2400e-003**	**0.0000**	**6.9738**	**6.9738**	**1.6000e-004**	**0.0000**	**6.9777**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0655	0.0843	1.4000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	11.8726	11.8726	7.7000e-004	0.0000	11.8920
Total	**0.2529**	**0.0655**	**0.0843**	**1.4000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**11.8726**	**11.8726**	**7.7000e-004**	**0.0000**	**11.8920**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.6700e-003	3.0000e-005	2.9400e-003	2.0000e-005	2.9600e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.3938	2.3938	5.0000e-005	0.0000	2.3951
Total	**1.0600e-003**	**7.1000e-004**	**7.6700e-003**	**3.0000e-005**	**2.9400e-003**	**2.0000e-005**	**2.9600e-003**	**7.8000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3938**	**2.3938**	**5.0000e-005**	**0.0000**	**2.3951**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0655	0.0843	1.4000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	11.8726	11.8726	7.7000e-004	0.0000	11.8919
Total	**0.2529**	**0.0655**	**0.0843**	**1.4000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**11.8726**	**11.8726**	**7.7000e-004**	**0.0000**	**11.8919**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.6700e-003	3.0000e-005	2.9400e-003	2.0000e-005	2.9600e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.3938	2.3938	5.0000e-005	0.0000	2.3951
Total	**1.0600e-003**	**7.1000e-004**	**7.6700e-003**	**3.0000e-005**	**2.9400e-003**	**2.0000e-005**	**2.9600e-003**	**7.8000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3938**	**2.3938**	**5.0000e-005**	**0.0000**	**2.3951**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2222	0.9678	2.4063	8.7300e-003	0.7729	7.2000e-003	0.7801	0.2074	6.7200e-003	0.2142	0.0000	801.8843	801.8843	0.0286	0.0000	802.5989
Unmitigated	0.2319	1.0268	2.6340	9.8000e-003	0.8763	8.0200e-003	0.8843	0.2352	7.4900e-003	0.2427	0.0000	900.1057	900.1057	0.0313	0.0000	900.8871

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	102.1330	102.1330	0.0115	2.3800e-003	103.1290
NaturalGas Mitigated	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
NaturalGas Unmitigated	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.13903e+006	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Total		**0.0169**	**0.1446**	**0.0616**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.5106**	**167.5106**	**3.2100e-003**	**3.0700e-003**	**168.5060**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.13903e+006	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Total		**0.0169**	**0.1446**	**0.0616**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.5106**	**167.5106**	**3.2100e-003**	**3.0700e-003**	**168.5060**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	873782	102.1330	0.0115	2.3800e-003	103.1290
Total		**102.1330**	**0.0115**	**2.3800e-003**	**103.1290**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9481	0.0134	1.0555	8.7000e-004		0.0458	0.0458		0.0458	0.0458	5.5346	1.3099	6.8445	0.0271	0.0000	7.5228
Unmitigated	0.9481	0.0134	1.0555	8.7000e-004		0.0458	0.0458		0.0458	0.0458	5.5346	1.3099	6.8445	0.0271	0.0000	7.5228

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0279	4.1300e-003	0.2534	8.3000e-004		0.0413	0.0413		0.0413	0.0413	5.5346	0.0000	5.5346	0.0259	0.0000	6.1814
Landscaping	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**0.9481**	**0.0134**	**1.0555**	**8.7000e-004**		**0.0458**	**0.0458**		**0.0458**	**0.0458**	**5.5346**	**1.3099**	**6.8445**	**0.0271**	**0.0000**	**7.5228**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0279	4.1300e-003	0.2534	8.3000e-004		0.0413	0.0413		0.0413	0.0413	5.5346	0.0000	5.5346	0.0259	0.0000	6.1814
Landscaping	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**0.9481**	**0.0134**	**1.0555**	**8.7000e-004**		**0.0458**	**0.0458**		**0.0458**	**0.0458**	**5.5346**	**1.3099**	**6.8445**	**0.0271**	**0.0000**	**7.5228**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.3870	0.2300	5.5600e-003	15.7926
Unmitigated	8.4977	0.2300	5.5600e-003	15.9044

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.43614	8.4977	0.2300	5.5600e-003	15.9044
Total		**8.4977**	**0.2300**	**5.5600e-003**	**15.9044**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.16553	8.3870	0.2300	5.5600e-003	15.7926
Total		**8.3870**	**0.2300**	**5.5600e-003**	**15.7926**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.3442	1.5569	0.0000	65.2666
Unmitigated	26.3442	1.5569	0.0000	65.2666

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	129.78	26.3442	1.5569	0.0000	65.2666
Total		**26.3442**	**1.5569**	**0.0000**	**65.2666**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	129.78	26.3442	1.5569	0.0000	65.2666
Total		**26.3442**	**1.5569**	**0.0000**	**65.2666**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Acacia Project

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - per applicant

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	27.00	0.00
tblFireplaces	NumberNoFireplace	8.64	0.00
tblFireplaces	NumberWood	46.44	0.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.8040	89.6258	40.3226	0.1730	18.2279	2.3037	20.4270	9.9736	2.1241	11.9968	0.0000	17,868.2943	17,868.2943	2.5316	0.0000	17,931.5839
2021	7.5413	20.2874	19.8396	0.0369	0.4673	1.0578	1.5252	0.1258	1.0002	1.1260	0.0000	3,553.7832	3,553.7832	0.6599	0.0000	3,570.2813
2022	7.3193	18.2786	19.5158	0.0367	0.4673	0.8954	1.3628	0.1258	0.8473	0.9731	0.0000	3,537.7159	3,537.7159	0.6533	0.0000	3,554.0484
Maximum	**7.8040**	**89.6258**	**40.3226**	**0.1730**	**18.2279**	**2.3037**	**20.4270**	**9.9736**	**2.1241**	**11.9968**	**0.0000**	**17,868.2943**	**17,868.2943**	**2.5316**	**0.0000**	**17,931.5839**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.8040	89.6258	40.3226	0.1730	18.2279	2.3037	20.4270	9.9736	2.1241	11.9968	0.0000	17,868.2943	17,868.2943	2.5316	0.0000	17,931.5839
2021	7.5413	20.2874	19.8396	0.0369	0.4673	1.0578	1.5252	0.1258	1.0002	1.1260	0.0000	3,553.7832	3,553.7832	0.6599	0.0000	3,570.2813
2022	7.3193	18.2786	19.5158	0.0367	0.4673	0.8954	1.3628	0.1258	0.8473	0.9731	0.0000	3,537.7159	3,537.7159	0.6533	0.0000	3,554.0484
Maximum	**7.8040**	**89.6258**	**40.3226**	**0.1730**	**18.2279**	**2.3037**	**20.4270**	**9.9736**	**2.1241**	**11.9968**	**0.0000**	**17,868.2943**	**17,868.2943**	**2.5316**	**0.0000**	**17,931.5839**

Acacia Project - Bay Area AQMD Air District, Summer

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.4659	5.4701	15.0716	0.0570	5.0022	0.0441	5.0463	1.3382	0.0411	1.3794		5,766.1345	5,766.1345	0.1905		5,770.8968
Total	**9.3867**	**6.7579**	**48.3833**	**0.1410**	**5.0022**	**4.0828**	**9.0850**	**1.3382**	**4.0799**	**5.4181**	**579.3792**	**6,793.9524**	**7,373.3316**	**2.9338**	**0.0186**	**7,452.2041**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.4115	5.1663	13.6600	0.0507	4.4120	0.0395	4.4515	1.1803	0.0369	1.2172		5,136.0611	5,136.0611	0.1736		5,140.4006
Total	**9.3323**	**6.4541**	**46.9716**	**0.1348**	**4.4120**	**4.0782**	**8.4902**	**1.1803**	**4.0756**	**5.2559**	**579.3792**	**6,163.8790**	**6,743.2582**	**2.9169**	**0.0186**	**6,821.7079**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.58**	**4.50**	**2.92**	**4.42**	**11.80**	**0.11**	**6.55**	**11.80**	**0.10**	**2.99**	**0.00**	**9.27**	**8.55**	**0.58**	**0.00**	**8.46**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	12.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.5000e-003	0.2604	0.0518	7.2000e-004	0.0159	8.5000e-004	0.0167	4.3500e-003	8.1000e-004	5.1700e-003		77.3440	77.3440	3.8700e-003		77.4407
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0596**	**0.2920**	**0.4542**	**1.9600e-003**	**0.1391**	**1.6500e-003**	**0.1408**	**0.0370**	**1.5500e-003**	**0.0386**		**200.4604**	**200.4604**	**6.8400e-003**		**200.6313**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.5000e-003	0.2604	0.0518	7.2000e-004	0.0159	8.5000e-004	0.0167	4.3500e-003	8.1000e-004	5.1700e-003		77.3440	77.3440	3.8700e-003		77.4407
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0596**	**0.2920**	**0.4542**	**1.9600e-003**	**0.1391**	**1.6500e-003**	**0.1408**	**0.0370**	**1.5500e-003**	**0.0386**		**200.4604**	**200.4604**	**6.8400e-003**		**200.6313**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.1900e-003	0.2148	0.0427	6.0000e-004	0.0131	7.0000e-004	0.0138	3.5900e-003	6.7000e-004	4.2600e-003		63.8088	63.8088	3.1900e-003		63.8886
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0688**	**0.2527**	**0.5257**	**2.0800e-003**	**0.1610**	**1.6600e-003**	**0.1626**	**0.0428**	**1.5500e-003**	**0.0444**		**211.5486**	**211.5486**	**6.7500e-003**		**211.7174**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.1900e-003	0.2148	0.0427	6.0000e-004	0.0131	7.0000e-004	0.0138	3.5900e-003	6.7000e-004	4.2600e-003		63.8088	63.8088	3.1900e-003		63.8886
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0688**	**0.2527**	**0.5257**	**2.0800e-003**	**0.1610**	**1.6600e-003**	**0.1626**	**0.0428**	**1.5500e-003**	**0.0444**		**211.5486**	**211.5486**	**6.7500e-003**		**211.7174**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1346	39.3862	7.8278	0.1094	2.4021	0.1288	2.5308	0.6583	0.1232	0.7814		11,698.2738	11,698.2738	0.5852		11,712.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		164.1553	164.1553	3.9600e-003		164.2542
Total	**1.2041**	**39.4282**	**8.3644**	**0.1110**	**2.5664**	**0.1298**	**2.6962**	**0.7018**	**0.1242**	**0.8260**		**11,862.4291**	**11,862.4291**	**0.5892**		**11,877.1582**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1346	39.3862	7.8278	0.1094	2.4021	0.1288	2.5308	0.6583	0.1232	0.7814		11,698.2738	11,698.2738	0.5852		11,712.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		164.1553	164.1553	3.9600e-003		164.2542
Total	**1.2041**	**39.4282**	**8.3644**	**0.1110**	**2.5664**	**0.1298**	**2.6962**	**0.7018**	**0.1242**	**0.8260**		**11,862.4291**	**11,862.4291**	**0.5892**		**11,877.1582**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0455	1.3676	0.3262	3.3100e-003	0.0812	6.7000e-003	0.0879	0.0234	6.4100e-003	0.0298		350.0497	350.0497	0.0172		350.4806
Worker	0.1356	0.0821	1.0464	3.2100e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		320.1029	320.1029	7.7100e-003		320.2957
Total	**0.1811**	**1.4496**	**1.3726**	**6.5200e-003**	**0.4016**	**8.7700e-003**	**0.4104**	**0.1084**	**8.3200e-003**	**0.1167**		**670.1525**	**670.1525**	**0.0250**		**670.7763**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0455	1.3676	0.3262	3.3100e-003	0.0812	6.7000e-003	0.0879	0.0234	6.4100e-003	0.0298		350.0497	350.0497	0.0172		350.4806
Worker	0.1356	0.0821	1.0464	3.2100e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		320.1029	320.1029	7.7100e-003		320.2957
Total	**0.1811**	**1.4496**	**1.3726**	**6.5200e-003**	**0.4016**	**8.7700e-003**	**0.4104**	**0.1084**	**8.3200e-003**	**0.1167**		**670.1525**	**670.1525**	**0.0250**		**670.7763**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.2401	0.2924	3.2700e-003	0.0812	2.6900e-003	0.0839	0.0234	2.5700e-003	0.0260		346.7503	346.7503	0.0163		347.1571
Worker	0.1254	0.0733	0.9580	3.1000e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		308.8642	308.8642	6.9000e-003		309.0368
Total	**0.1626**	**1.3134**	**1.2504**	**6.3700e-003**	**0.4016**	**4.7100e-003**	**0.4063**	**0.1084**	**4.4300e-003**	**0.1128**		**655.6145**	**655.6145**	**0.0232**		**656.1939**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.2401	0.2924	3.2700e-003	0.0812	2.6900e-003	0.0839	0.0234	2.5700e-003	0.0260		346.7503	346.7503	0.0163		347.1571
Worker	0.1254	0.0733	0.9580	3.1000e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		308.8642	308.8642	6.9000e-003		309.0368
Total	**0.1626**	**1.3134**	**1.2504**	**6.3700e-003**	**0.4016**	**4.7100e-003**	**0.4063**	**0.1084**	**4.4300e-003**	**0.1128**		**655.6145**	**655.6145**	**0.0232**		**656.1939**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0347	1.1753	0.2750	3.2400e-003	0.0812	2.3300e-003	0.0836	0.0234	2.2300e-003	0.0256		343.3734	343.3734	0.0156		343.7624
Worker	0.1167	0.0657	0.8827	2.9800e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		297.5292	297.5292	6.2000e-003		297.6842
Total	**0.1514**	**1.2410**	**1.1577**	**6.2200e-003**	**0.4016**	**4.3000e-003**	**0.4059**	**0.1084**	**4.0400e-003**	**0.1124**		**640.9026**	**640.9026**	**0.0218**		**641.4466**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0347	1.1753	0.2750	3.2400e-003	0.0812	2.3300e-003	0.0836	0.0234	2.2300e-003	0.0256		343.3734	343.3734	0.0156		343.7624
Worker	0.1167	0.0657	0.8827	2.9800e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		297.5292	297.5292	6.2000e-003		297.6842
Total	**0.1514**	**1.2410**	**1.1577**	**6.2200e-003**	**0.4016**	**4.3000e-003**	**0.4059**	**0.1084**	**4.0400e-003**	**0.1124**		**640.9026**	**640.9026**	**0.0218**		**641.4466**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.0278**	**0.0168**	**0.2146**	**6.6000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**65.6621**	**65.6621**	**1.5800e-003**		**65.7017**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.0278**	**0.0168**	**0.2146**	**6.6000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**65.6621**	**65.6621**	**1.5800e-003**		**65.7017**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0135	0.1811	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		61.0316	61.0316	1.2700e-003		61.0634
Total	**0.0239**	**0.0135**	**0.1811**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**61.0316**	**61.0316**	**1.2700e-003**		**61.0634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0135	0.1811	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		61.0316	61.0316	1.2700e-003		61.0634
Total	**0.0239**	**0.0135**	**0.1811**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**61.0316**	**61.0316**	**1.2700e-003**		**61.0634**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4115	5.1663	13.6600	0.0507	4.4120	0.0395	4.4515	1.1803	0.0369	1.2172		5,136.0611	5,136.0611	0.1736		5,140.4006
Unmitigated	1.4659	5.4701	15.0716	0.0570	5.0022	0.0441	5.0463	1.3382	0.0411	1.3794		5,766.1345	5,766.1345	0.1905		5,770.8968

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
NaturalGas Unmitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	8600.08	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	8.60008	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Unmitigated	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.6496	0.3925	24.0623	0.0785		3.9253	3.9253		3.9253	3.9253	579.3792	0.0000	579.3792	2.7085	0.0000	647.0912
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**7.8281**	**0.4953**	**32.9744**	**0.0790**		**3.9747**	**3.9747**		**3.9747**	**3.9747**	**579.3792**	**16.0437**	**595.4229**	**2.7239**	**0.0000**	**663.5206**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.6496	0.3925	24.0623	0.0785		3.9253	3.9253		3.9253	3.9253	579.3792	0.0000	579.3792	2.7085	0.0000	647.0912
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**7.8281**	**0.4953**	**32.9744**	**0.0790**		**3.9747**	**3.9747**		**3.9747**	**3.9747**	**579.3792**	**16.0437**	**595.4229**	**2.7239**	**0.0000**	**663.5206**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Acacia Project

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Construction Off-road Equipment Mitigation - per applicant

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	27.00	0.00
tblFireplaces	NumberNoFireplace	8.64	0.00
tblFireplaces	NumberWood	46.44	0.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.8158	90.6022	40.8892	0.1711	18.2279	2.3060	20.4270	9.9736	2.1263	11.9968	0.0000	17,658.8650	17,658.8650	2.5608	0.0000	17,722.8836
2021	7.5525	20.3188	19.8090	0.0365	0.4673	1.0579	1.5253	0.1258	1.0003	1.1261	0.0000	3,515.6468	3,515.6468	0.6607	0.0000	3,532.1641
2022	7.3301	18.3061	19.4841	0.0364	0.4673	0.8955	1.3628	0.1258	0.8474	0.9732	0.0000	3,500.7006	3,500.7006	0.6540	0.0000	3,517.0514
Maximum	**7.8158**	**90.6022**	**40.8892**	**0.1711**	**18.2279**	**2.3060**	**20.4270**	**9.9736**	**2.1263**	**11.9968**	**0.0000**	**17,658.8650**	**17,658.8650**	**2.5608**	**0.0000**	**17,722.8836**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.8158	90.6022	40.8892	0.1711	18.2279	2.3060	20.4270	9.9736	2.1263	11.9968	0.0000	17,658.8650	17,658.8650	2.5608	0.0000	17,722.8836
2021	7.5525	20.3188	19.8090	0.0365	0.4673	1.0579	1.5253	0.1258	1.0003	1.1261	0.0000	3,515.6468	3,515.6468	0.6607	0.0000	3,532.1641
2022	7.3301	18.3061	19.4841	0.0364	0.4673	0.8955	1.3628	0.1258	0.8474	0.9732	0.0000	3,500.7006	3,500.7006	0.6540	0.0000	3,517.0514
Maximum	**7.8158**	**90.6022**	**40.8892**	**0.1711**	**18.2279**	**2.3060**	**20.4270**	**9.9736**	**2.1263**	**11.9968**	**0.0000**	**17,658.8650**	**17,658.8650**	**2.5608**	**0.0000**	**17,722.8836**

Acacia Project - Bay Area AQMD Air District, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.2615	5.7507	15.1417	0.0533	5.0022	0.0443	5.0465	1.3382	0.0413	1.3796		5,400.2494	5,400.2494	0.1940		5,405.0993
Total	**9.1823**	**7.0385**	**48.4534**	**0.1374**	**5.0022**	**4.0830**	**9.0852**	**1.3382**	**4.0801**	**5.4183**	**579.3792**	**6,428.0674**	**7,007.4466**	**2.9373**	**0.0186**	**7,086.4066**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.2078	5.4123	13.8857	0.0475	4.4120	0.0397	4.4517	1.1803	0.0371	1.2174		4,808.8919	4,808.8919	0.1778		4,813.3372
Total	**9.1286**	**6.7001**	**47.1974**	**0.1315**	**4.4120**	**4.0785**	**8.4904**	**1.1803**	**4.0758**	**5.2561**	**579.3792**	**5,836.7098**	**6,416.0890**	**2.9211**	**0.0186**	**6,494.6445**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.58**	**4.81**	**2.59**	**4.25**	**11.80**	**0.11**	**6.55**	**11.80**	**0.10**	**2.99**	**0.00**	**9.20**	**8.44**	**0.55**	**0.00**	**8.35**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	12.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7100e-003	0.2668	0.0557	7.1000e-004	0.0159	8.7000e-004	0.0168	4.3500e-003	8.3000e-004	5.1800e-003		76.0449	76.0449	4.0600e-003		76.1465
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0629**	**0.3058**	**0.4337**	**1.8500e-003**	**0.1391**	**1.6700e-003**	**0.1408**	**0.0370**	**1.5700e-003**	**0.0386**		**189.4547**	**189.4547**	**6.8300e-003**		**189.6256**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7100e-003	0.2668	0.0557	7.1000e-004	0.0159	8.7000e-004	0.0168	4.3500e-003	8.3000e-004	5.1800e-003		76.0449	76.0449	4.0600e-003		76.1465
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0629**	**0.3058**	**0.4337**	**1.8500e-003**	**0.1391**	**1.6700e-003**	**0.1408**	**0.0370**	**1.5700e-003**	**0.0386**		**189.4547**	**189.4547**	**6.8300e-003**		**189.6256**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.3600e-003	0.2201	0.0460	5.9000e-004	0.0131	7.1000e-004	0.0138	3.5900e-003	6.8000e-004	4.2700e-003		62.7370	62.7370	3.3500e-003		62.8208
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0725**	**0.2669**	**0.4996**	**1.9600e-003**	**0.1610**	**1.6700e-003**	**0.1626**	**0.0428**	**1.5600e-003**	**0.0444**		**198.8288**	**198.8288**	**6.6800e-003**		**198.9958**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.3600e-003	0.2201	0.0460	5.9000e-004	0.0131	7.1000e-004	0.0138	3.5900e-003	6.8000e-004	4.2700e-003		62.7370	62.7370	3.3500e-003		62.8208
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0725**	**0.2669**	**0.4996**	**1.9600e-003**	**0.1610**	**1.6700e-003**	**0.1626**	**0.0428**	**1.5600e-003**	**0.0444**		**198.8288**	**198.8288**	**6.6800e-003**		**198.9958**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1656	40.3527	8.4270	0.1076	2.4021	0.1310	2.5331	0.6583	0.1253	0.7836		11,501.7867	11,501.7867	0.6146		11,517.1523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.2131	151.2131	3.7000e-003		151.3055
Total	**1.2392**	**40.4047**	**8.9309**	**0.1091**	**2.5664**	**0.1321**	**2.6984**	**0.7018**	**0.1263**	**0.8281**		**11,652.9997**	**11,652.9997**	**0.6183**		**11,668.4578**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1656	40.3527	8.4270	0.1076	2.4021	0.1310	2.5331	0.6583	0.1253	0.7836		11,501.7867	11,501.7867	0.6146		11,517.1523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.2131	151.2131	3.7000e-003		151.3055
Total	**1.2392**	**40.4047**	**8.9309**	**0.1091**	**2.5664**	**0.1321**	**2.6984**	**0.7018**	**0.1263**	**0.8281**		**11,652.9997**	**11,652.9997**	**0.6183**		**11,668.4578**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.3829	0.3732	3.2200e-003	0.0812	6.8200e-003	0.0880	0.0234	6.5200e-003	0.0299		341.1927	341.1927	0.0187		341.6588
Worker	0.1434	0.1014	0.9828	2.9600e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		294.8655	294.8655	7.2100e-003		295.0458
Total	**0.1913**	**1.4843**	**1.3559**	**6.1800e-003**	**0.4016**	**8.8900e-003**	**0.4105**	**0.1084**	**8.4300e-003**	**0.1168**		**636.0582**	**636.0582**	**0.0259**		**636.7046**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.3829	0.3732	3.2200e-003	0.0812	6.8200e-003	0.0880	0.0234	6.5200e-003	0.0299		341.1927	341.1927	0.0187		341.6588
Worker	0.1434	0.1014	0.9828	2.9600e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		294.8655	294.8655	7.2100e-003		295.0458
Total	**0.1913**	**1.4843**	**1.3559**	**6.1800e-003**	**0.4016**	**8.8900e-003**	**0.4105**	**0.1084**	**8.4300e-003**	**0.1168**		**636.0582**	**636.0582**	**0.0259**		**636.7046**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0394	1.2508	0.3361	3.1900e-003	0.0812	2.7800e-003	0.0840	0.0234	2.6600e-003	0.0260		337.9526	337.9526	0.0176		338.3928
Worker	0.1328	0.0905	0.8963	2.8500e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		284.5193	284.5193	6.4400e-003		284.6802
Total	**0.1723**	**1.3413**	**1.2324**	**6.0400e-003**	**0.4016**	**4.8000e-003**	**0.4064**	**0.1084**	**4.5200e-003**	**0.1129**		**622.4719**	**622.4719**	**0.0241**		**623.0730**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0394	1.2508	0.3361	3.1900e-003	0.0812	2.7800e-003	0.0840	0.0234	2.6600e-003	0.0260		337.9526	337.9526	0.0176		338.3928
Worker	0.1328	0.0905	0.8963	2.8500e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		284.5193	284.5193	6.4400e-003		284.6802
Total	**0.1723**	**1.3413**	**1.2324**	**6.0400e-003**	**0.4016**	**4.8000e-003**	**0.4064**	**0.1084**	**4.5200e-003**	**0.1129**		**622.4719**	**622.4719**	**0.0241**		**623.0730**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0368	1.1842	0.3160	3.1600e-003	0.0812	2.4100e-003	0.0837	0.0234	2.3100e-003	0.0257		334.6067	334.6067	0.0168		335.0272
Worker	0.1240	0.0812	0.8225	2.7500e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		274.0889	274.0889	5.7600e-003		274.2330
Total	**0.1608**	**1.2653**	**1.1384**	**5.9100e-003**	**0.4016**	**4.3800e-003**	**0.4060**	**0.1084**	**4.1200e-003**	**0.1125**		**608.6956**	**608.6956**	**0.0226**		**609.2602**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0368	1.1842	0.3160	3.1600e-003	0.0812	2.4100e-003	0.0837	0.0234	2.3100e-003	0.0257		334.6067	334.6067	0.0168		335.0272
Worker	0.1240	0.0812	0.8225	2.7500e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		274.0889	274.0889	5.7600e-003		274.2330
Total	**0.1608**	**1.2653**	**1.1384**	**5.9100e-003**	**0.4016**	**4.3800e-003**	**0.4060**	**0.1084**	**4.1200e-003**	**0.1125**		**608.6956**	**608.6956**	**0.0226**		**609.2602**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.0294**	**0.0208**	**0.2016**	**6.1000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**60.4852**	**60.4852**	**1.4800e-003**		**60.5222**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.0294**	**0.0208**	**0.2016**	**6.1000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**60.4852**	**60.4852**	**1.4800e-003**		**60.5222**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0167	0.1687	5.6000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		56.2234	56.2234	1.1800e-003		56.2529
Total	**0.0254**	**0.0167**	**0.1687**	**5.6000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**56.2234**	**56.2234**	**1.1800e-003**		**56.2529**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0167	0.1687	5.6000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		56.2234	56.2234	1.1800e-003		56.2529
Total	**0.0254**	**0.0167**	**0.1687**	**5.6000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**56.2234**	**56.2234**	**1.1800e-003**		**56.2529**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2078	5.4123	13.8857	0.0475	4.4120	0.0397	4.4517	1.1803	0.0371	1.2174		4,808.8919	4,808.8919	0.1778		4,813.3372
Unmitigated	1.2615	5.7507	15.1417	0.0533	5.0022	0.0443	5.0465	1.3382	0.0413	1.3796		5,400.2494	5,400.2494	0.1940		5,405.0993

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
NaturalGas Unmitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	8600.08	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	8.60008	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206
Unmitigated	7.8281	0.4953	32.9744	0.0790		3.9747	3.9747		3.9747	3.9747	579.3792	16.0437	595.4229	2.7239	0.0000	663.5206

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.6496	0.3925	24.0623	0.0785		3.9253	3.9253		3.9253	3.9253	579.3792	0.0000	579.3792	2.7085	0.0000	647.0912
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**7.8281**	**0.4953**	**32.9744**	**0.0790**		**3.9747**	**3.9747**		**3.9747**	**3.9747**	**579.3792**	**16.0437**	**595.4229**	**2.7239**	**0.0000**	**663.5206**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.6496	0.3925	24.0623	0.0785		3.9253	3.9253		3.9253	3.9253	579.3792	0.0000	579.3792	2.7085	0.0000	647.0912
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**7.8281**	**0.4953**	**32.9744**	**0.0790**		**3.9747**	**3.9747**		**3.9747**	**3.9747**	**579.3792**	**16.0437**	**595.4229**	**2.7239**	**0.0000**	**663.5206**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Acacia Project

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 3	0	1	No Change	0.00
Concrete/Industrial Saws	Diesel	Tier 3	0	1	No Change	0.00
Cranes	Diesel	Tier 3	0	1	No Change	0.00
Excavators	Diesel	Tier 3	0	5	No Change	0.00
Forklifts	Diesel	Tier 3	0	3	No Change	0.00
Generator Sets	Diesel	Tier 3	0	1	No Change	0.00
Graders	Diesel	Tier 3	0	1	No Change	0.00
Pavers	Diesel	Tier 3	0	2	No Change	0.00
Paving Equipment	Diesel	Tier 3	0	2	No Change	0.00
Rollers	Diesel	Tier 3	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 3	0	6	No Change	0.00
Scrapers	Diesel	Tier 3	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	Tier 3	0	9	No Change	0.00
Welders	Diesel	Tier 3	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.85400E-002	4.07030E-001	4.76280E-001	7.80000E-004	2.54500E-002	2.54500E-002	0.00000E+000	6.67676E+001	6.67676E+001	4.73000E-003	0.00000E+000	6.68858E+001
Concrete/Industrial Saws	2.30000E-003	1.81400E-002	2.02800E-002	3.00000E-005	1.09000E-003	1.09000E-003	0.00000E+000	2.95711E+000	2.95711E+000	1.90000E-004	0.00000E+000	2.96179E+000
Cranes	9.62000E-002	1.12790E+000	4.60790E-001	1.32000E-003	4.62000E-002	4.25000E-002	0.00000E+000	1.15987E+002	1.15987E+002	3.75100E-002	0.00000E+000	1.16925E+002
Excavators	1.13900E-002	1.12190E-001	1.51950E-001	2.40000E-004	5.43000E-003	5.00000E-003	0.00000E+000	2.10970E+001	2.10970E+001	6.82000E-003	0.00000E+000	2.12676E+001
Forklifts	1.03440E-001	9.41340E-001	9.17760E-001	1.20000E-003	6.74200E-002	6.20300E-002	0.00000E+000	1.05352E+002	1.05352E+002	3.40700E-002	0.00000E+000	1.06203E+002
Generator Sets	9.60500E-002	8.46040E-001	9.65050E-001	1.72000E-003	4.55500E-002	4.55500E-002	0.00000E+000	1.47802E+002	1.47802E+002	7.73000E-003	0.00000E+000	1.47995E+002
Graders	7.14000E-003	9.48800E-002	2.72200E-002	1.00000E-004	3.03000E-003	2.79000E-003	0.00000E+000	8.74597E+000	8.74597E+000	2.83000E-003	0.00000E+000	8.81668E+000
Pavers	7.90000E-004	8.43000E-003	8.69000E-003	1.00000E-005	4.10000E-004	3.80000E-004	0.00000E+000	1.23905E+000	1.23905E+000	4.00000E-004	0.00000E+000	1.24907E+000
Paving Equipment	6.20000E-004	6.42000E-003	7.60000E-003	1.00000E-005	3.20000E-004	3.00000E-004	0.00000E+000	1.07373E+000	1.07373E+000	3.50000E-004	0.00000E+000	1.08241E+000
Rollers	6.20000E-004	6.24000E-003	5.68000E-003	1.00000E-005	4.00000E-004	3.70000E-004	0.00000E+000	6.91460E-001	6.91460E-001	2.20000E-004	0.00000E+000	6.97050E-001
Rubber Tired Dozers	5.39700E-002	5.66610E-001	2.06580E-001	4.30000E-004	2.77500E-002	2.55300E-002	0.00000E+000	3.75276E+001	3.75276E+001	1.21400E-002	0.00000E+000	3.78311E+001
Scrapers	2.97900E-002	3.52560E-001	2.23760E-001	4.50000E-004	1.37500E-002	1.26500E-002	0.00000E+000	3.99256E+001	3.99256E+001	1.29100E-002	0.00000E+000	4.02484E+001
Tractors/Loaders/Backhoes	1.44300E-001	1.45707E+000	1.69500E+000	2.33000E-003	8.76400E-002	8.06200E-002	0.00000E+000	2.04301E+002	2.04301E+002	6.60700E-002	0.00000E+000	2.05952E+002
Welders	8.16000E-002	3.98260E-001	4.52830E-001	6.70000E-004	2.01000E-002	2.01000E-002	0.00000E+000	4.92197E+001	4.92197E+001	6.62000E-003	0.00000E+000	4.93853E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	5.85400E-002	4.07030E-001	4.76280E-001	7.80000E-004	2.54500E-002	2.54500E-002	0.00000E+000	6.67675E+001	6.67675E+001	4.73000E-003	0.00000E+000	6.68858E+001
Concrete/Industrial Saws	2.30000E-003	1.81400E-002	2.02800E-002	3.00000E-005	1.09000E-003	1.09000E-003	0.00000E+000	2.95711E+000	2.95711E+000	1.90000E-004	0.00000E+000	2.96179E+000
Cranes	9.62000E-002	1.12790E+000	4.60790E-001	1.32000E-003	4.62000E-002	4.25000E-002	0.00000E+000	1.15987E+002	1.15987E+002	3.75100E-002	0.00000E+000	1.16925E+002
Excavators	1.13900E-002	1.12190E-001	1.51950E-001	2.40000E-004	5.43000E-003	5.00000E-003	0.00000E+000	2.10970E+001	2.10970E+001	6.82000E-003	0.00000E+000	2.12676E+001
Forklifts	1.03440E-001	9.41340E-001	9.17750E-001	1.20000E-003	6.74200E-002	6.20300E-002	0.00000E+000	1.05351E+002	1.05351E+002	3.40700E-002	0.00000E+000	1.06203E+002
Generator Sets	9.60500E-002	8.46040E-001	9.65050E-001	1.72000E-003	4.55500E-002	4.55500E-002	0.00000E+000	1.47802E+002	1.47802E+002	7.73000E-003	0.00000E+000	1.47995E+002
Graders	7.14000E-003	9.48800E-002	2.72200E-002	1.00000E-004	3.03000E-003	2.79000E-003	0.00000E+000	8.74596E+000	8.74596E+000	2.83000E-003	0.00000E+000	8.81667E+000
Pavers	7.90000E-004	8.43000E-003	8.69000E-003	1.00000E-005	4.10000E-004	3.80000E-004	0.00000E+000	1.23905E+000	1.23905E+000	4.00000E-004	0.00000E+000	1.24906E+000
Paving Equipment	6.20000E-004	6.42000E-003	7.60000E-003	1.00000E-005	3.20000E-004	3.00000E-004	0.00000E+000	1.07373E+000	1.07373E+000	3.50000E-004	0.00000E+000	1.08241E+000
Rollers	6.20000E-004	6.24000E-003	5.68000E-003	1.00000E-005	4.00000E-004	3.70000E-004	0.00000E+000	6.91450E-001	6.91450E-001	2.20000E-004	0.00000E+000	6.97050E-001
Rubber Tired Dozers	5.39700E-002	5.66610E-001	2.06580E-001	4.30000E-004	2.77500E-002	2.55300E-002	0.00000E+000	3.75276E+001	3.75276E+001	1.21400E-002	0.00000E+000	3.78310E+001
Scrapers	2.97900E-002	3.52560E-001	2.23760E-001	4.50000E-004	1.37500E-002	1.26500E-002	0.00000E+000	3.99256E+001	3.99256E+001	1.29100E-002	0.00000E+000	4.02484E+001
Tractors/Loaders/Backhoes	1.44300E-001	1.45707E+000	1.69499E+000	2.33000E-003	8.76400E-002	8.06200E-002	0.00000E+000	2.04300E+002	2.04300E+002	6.60700E-002	0.00000E+000	2.05952E+002
Welders	8.16000E-002	3.98250E-001	4.52830E-001	6.70000E-004	2.01000E-002	2.01000E-002	0.00000E+000	4.92196E+001	4.92196E+001	6.62000E-003	0.00000E+000	4.93852E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19819E-006	1.19819E-006	0.00000E+000	0.00000E+000	1.19607E-006
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20703E-006	1.20703E-006	0.00000E+000	0.00000E+000	1.19735E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.48000E-007	9.48000E-007	0.00000E+000	0.00000E+000	9.40397E-007
Forklifts	0.00000E+000	0.00000E+000	1.08961E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13904E-006	1.13904E-006	0.00000E+000	0.00000E+000	1.12991E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21785E-006	1.21785E-006	0.00000E+000	0.00000E+000	1.21626E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.14338E-006	1.14338E-006	0.00000E+000	0.00000E+000	1.13421E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	8.00596E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.44622E-005	1.44622E-005	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.06588E-006	1.06588E-006	0.00000E+000	0.00000E+000	1.05733E-006
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.25233E-006	1.25233E-006	0.00000E+000	0.00000E+000	1.24228E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	5.89971E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22369E-006	1.22369E-006	0.00000E+000	0.00000E+000	1.21387E-006
Welders	0.00000E+000	2.51092E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.01585E-006	1.01585E-006	0.00000E+000	0.00000E+000	1.21494E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Water Exposed Area	PM10 Reduction	0.00	PM2.5 Reduction	0.00	Frequency (per day)	

No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.02	0.00	0.02	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.10	0.03	0.10	0.03	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.10	0.05	0.10	0.05	0.00	0.00
Grading	Roads	0.04	0.01	0.04	0.01	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.14	0.08	0.14	0.08	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	100.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	4.18	5.75	8.64	10.92	10.22	10.28	0.00	10.91	10.91	8.57	0.00	10.91
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77	1.30	0.00	0.00	0.70
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.15	0.30		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.10			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
Yes	Neighborhood Enhancements	Provide Traffic Calming Measures		50.00		
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.12			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.12			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
Yes	On-site Renewable		100.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

CalEEMod Mitigated Output Results

Acacia Project - Mitigated

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Acacia Project - Mitigated - Bay Area AQMD Air District, Annual

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Trips and VMT - mitigation

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.8091	3.8969	2.7246	6.4300e-003	0.3243	0.1726	0.4969	0.1519	0.1618	0.3137	0.0000	578.7501	578.7501	0.1040	0.0000	581.3500
2021	0.9834	2.6507	2.5787	4.7800e-003	0.0587	0.1381	0.1968	0.0159	0.1305	0.1464	0.0000	417.1910	417.1910	0.0781	0.0000	419.1443
2022	0.3308	0.7666	0.8167	1.5300e-003	0.0190	0.0376	0.0566	5.1300e-003	0.0356	0.0407	0.0000	133.6362	133.6362	0.0247	0.0000	134.2533
Maximum	**0.9834**	**3.8969**	**2.7246**	**6.4300e-003**	**0.3243**	**0.1726**	**0.4969**	**0.1519**	**0.1618**	**0.3137**	**0.0000**	**578.7501**	**578.7501**	**0.1040**	**0.0000**	**581.3500**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.7330	2.9642	2.7511	6.4300e-003	0.3243	0.1288	0.4531	0.1519	0.1215	0.2734	0.0000	578.7496	578.7496	0.1040	0.0000	581.3496
2021	0.9721	2.5202	2.5848	4.7800e-003	0.0587	0.1300	0.1887	0.0159	0.1232	0.1390	0.0000	417.1906	417.1906	0.0781	0.0000	419.1439
2022	0.3278	0.7304	0.8191	1.5300e-003	0.0190	0.0355	0.0545	5.1300e-003	0.0337	0.0388	0.0000	133.6360	133.6360	0.0247	0.0000	134.2532
Maximum	**0.9721**	**2.9642**	**2.7511**	**6.4300e-003**	**0.3243**	**0.1300**	**0.4531**	**0.1519**	**0.1232**	**0.2734**	**0.0000**	**578.7496**	**578.7496**	**0.1040**	**0.0000**	**581.3496**

Acacia Project - Mitigated - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.26**	**15.03**	**-0.57**	**0.00**	**0.00**	**15.49**	**7.19**	**0.00**	**15.10**	**9.89**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**2-3-2020**	**5-2-2020**	2.0683	1.1720
2	**5-3-2020**	**8-2-2020**	0.9697	0.9297
3	**8-3-2020**	**11-2-2020**	0.9909	0.9508
4	**11-3-2020**	**2-2-2021**	0.9646	0.9261
5	**2-3-2021**	**5-2-2021**	0.8854	0.8509
6	**5-3-2021**	**8-2-2021**	0.9144	0.8787
7	**8-3-2021**	**11-2-2021**	0.9149	0.8792
8	**11-3-2021**	**2-2-2022**	0.8894	0.8554
9	**2-3-2022**	**5-2-2022**	0.7810	0.7526
10	**5-3-2022**	**8-2-2022**	0.0221	0.0221
		Highest	2.0683	1.1720

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5568	0.0232	1.7277	1.9500e-003		0.1379	0.1379		0.1379	0.1379	13.7280	4.6806	18.4086	0.0272	7.8000e-004	19.3223
Energy	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	269.6436	269.6436	0.0147	5.4500e-003	271.6350
Mobile	0.2319	1.0268	2.6340	9.8000e-003	0.8763	8.0200e-003	0.8843	0.2352	7.4900e-003	0.2427	0.0000	900.1057	900.1057	0.0313	0.0000	900.8871
Waste						0.0000	0.0000		0.0000	0.0000	26.3442	0.0000	26.3442	1.5569	0.0000	65.2666
Water						0.0000	0.0000		0.0000	0.0000	2.2324	6.2653	8.4977	0.2300	5.5600e-003	15.9044
Total	**1.8056**	**1.1947**	**4.4233**	**0.0127**	**0.8763**	**0.1576**	**1.0339**	**0.2352**	**0.1571**	**0.3923**	**42.3046**	**1,180.6951**	**1,222.9997**	**1.8601**	**0.0118**	**1,273.0154**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9202	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Energy	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Mobile	0.2222	0.9678	2.4063	8.7300e-003	0.7729	7.2000e-003	0.7801	0.2074	6.7200e-003	0.2142	0.0000	801.8843	801.8843	0.0286	0.0000	802.5989
Waste						0.0000	0.0000		0.0000	0.0000	26.3442	0.0000	26.3442	1.5569	0.0000	65.2666
Water						0.0000	0.0000		0.0000	0.0000	2.2324	6.1546	8.3870	0.2300	5.5600e-003	15.7926
Total	**1.1594**	**1.1217**	**3.2700**	**9.6900e-003**	**0.7729**	**0.0233**	**0.7962**	**0.2074**	**0.0229**	**0.2303**	**28.5766**	**976.8594**	**1,005.4360**	**1.8199**	**8.6300e-003**	**1,053.5055**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**35.79**	**6.11**	**26.07**	**23.52**	**11.80**	**85.20**	**22.99**	**11.80**	**85.46**	**41.30**	**32.45**	**17.26**	**17.79**	**2.16**	**26.80**	**17.24**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0800e-003	0.0000	1.0800e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0182	0.1826	0.1196	2.1000e-004		9.1200e-003	9.1200e-003		8.4800e-003	8.4800e-003	0.0000	18.6992	18.6992	5.2800e-003	0.0000	18.8312
Total	**0.0182**	**0.1826**	**0.1196**	**2.1000e-004**	**1.0800e-003**	**9.1200e-003**	**0.0102**	**1.6000e-004**	**8.4800e-003**	**8.6400e-003**	**0.0000**	**18.6992**	**18.6992**	**5.2800e-003**	**0.0000**	**18.8312**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4600e-003	2.9000e-004	0.0000	8.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5711	0.5711	1.0000e-005	0.0000	0.5715
Total	**3.1000e-004**	**1.6600e-003**	**2.3200e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.5000e-004**	**1.9000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.9543**	**0.9543**	**3.0000e-005**	**0.0000**	**0.9552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0800e-003	0.0000	1.0800e-003	1.6000e-004	0.0000	1.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9000e-003	0.0709	0.1297	2.1000e-004		3.3100e-003	3.3100e-003		3.0700e-003	3.0700e-003	0.0000	18.6992	18.6992	5.2800e-003	0.0000	18.8312
Total	**7.9000e-003**	**0.0709**	**0.1297**	**2.1000e-004**	**1.0800e-003**	**3.3100e-003**	**4.3900e-003**	**1.6000e-004**	**3.0700e-003**	**3.2300e-003**	**0.0000**	**18.6992**	**18.6992**	**5.2800e-003**	**0.0000**	**18.8312**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4600e-003	2.9000e-004	0.0000	8.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3832	0.3832	2.0000e-005	0.0000	0.3837
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5711	0.5711	1.0000e-005	0.0000	0.5715
Total	**3.1000e-004**	**1.6600e-003**	**2.3200e-003**	**1.0000e-005**	**7.3000e-004**	**0.0000**	**7.5000e-004**	**1.9000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.9543**	**0.9543**	**3.0000e-005**	**0.0000**	**0.9552**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.3393	0.1721	3.0000e-004		0.0176	0.0176		0.0162	0.0162	0.0000	26.7445	26.7445	8.6500e-003	0.0000	26.9608
Total	**0.0326**	**0.3393**	**0.1721**	**3.0000e-004**	**0.1445**	**0.0176**	**0.1621**	**0.0795**	**0.0162**	**0.0956**	**0.0000**	**26.7445**	**26.7445**	**8.6500e-003**	**0.0000**	**26.9608**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9000e-003	3.8000e-004	1.0000e-005	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4981	0.4981	3.0000e-005	0.0000	0.4988
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.4000e-004	3.5400e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9969	0.9969	2.0000e-005	0.0000	0.9975
Total	**5.3000e-004**	**2.2400e-003**	**3.9200e-003**	**2.0000e-005**	**1.2500e-003**	**2.0000e-005**	**1.2700e-003**	**3.3000e-004**	**2.0000e-005**	**3.5000e-004**	**0.0000**	**1.4950**	**1.4950**	**5.0000e-005**	**0.0000**	**1.4963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1445	0.0000	0.1445	0.0795	0.0000	0.0795	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.1951	0.1690	3.0000e-004		0.0102	0.0102		9.3900e-003	9.3900e-003	0.0000	26.7445	26.7445	8.6500e-003	0.0000	26.9608
Total	**0.0197**	**0.1951**	**0.1690**	**3.0000e-004**	**0.1445**	**0.0102**	**0.1547**	**0.0795**	**9.3900e-003**	**0.0888**	**0.0000**	**26.7445**	**26.7445**	**8.6500e-003**	**0.0000**	**26.9608**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.9000e-003	3.8000e-004	1.0000e-005	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4981	0.4981	3.0000e-005	0.0000	0.4988
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.4000e-004	3.5400e-003	1.0000e-005	1.1400e-003	1.0000e-005	1.1500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9969	0.9969	2.0000e-005	0.0000	0.9975
Total	**5.3000e-004**	**2.2400e-003**	**3.9200e-003**	**2.0000e-005**	**1.2500e-003**	**2.0000e-005**	**1.2700e-003**	**3.3000e-004**	**2.0000e-005**	**3.5000e-004**	**0.0000**	**1.4950**	**1.4950**	**5.0000e-005**	**0.0000**	**1.4963**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0994	0.0000	0.0994	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.0994**	**0.0326**	**0.1320**	**0.0507**	**0.0300**	**0.0807**	**0.0000**	**81.7264**	**81.7264**	**0.0264**	**0.0000**	**82.3872**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0172	0.6030	0.1212	1.6300e-003	0.0348	1.9500e-003	0.0368	9.5800e-003	1.8600e-003	0.0114	0.0000	158.0645	158.0645	8.1400e-003	0.0000	158.2679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	7.1000e-004	7.3700e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.0768	2.0768	5.0000e-005	0.0000	2.0781
Total	**0.0182**	**0.6037**	**0.1286**	**1.6500e-003**	**0.0372**	**1.9700e-003**	**0.0392**	**0.0102**	**1.8700e-003**	**0.0121**	**0.0000**	**160.1413**	**160.1413**	**8.1900e-003**	**0.0000**	**160.3460**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0994	0.0000	0.0994	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.1765	0.4958	9.3000e-004		8.5800e-003	8.5800e-003		8.0000e-003	8.0000e-003	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	**0.0228**	**0.1765**	**0.4958**	**9.3000e-004**	**0.0994**	**8.5800e-003**	**0.1079**	**0.0507**	**8.0000e-003**	**0.0587**	**0.0000**	**81.7263**	**81.7263**	**0.0264**	**0.0000**	**82.3871**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0172	0.6030	0.1212	1.6300e-003	0.0348	1.9500e-003	0.0368	9.5800e-003	1.8600e-003	0.0114	0.0000	158.0645	158.0645	8.1400e-003	0.0000	158.2679
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	7.1000e-004	7.3700e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.0768	2.0768	5.0000e-005	0.0000	2.0781
Total	**0.0182**	**0.6037**	**0.1286**	**1.6500e-003**	**0.0372**	**1.9700e-003**	**0.0392**	**0.0102**	**1.8700e-003**	**0.0121**	**0.0000**	**160.1413**	**160.1413**	**8.1900e-003**	**0.0000**	**160.3460**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0300e-003**	**0.0211**	**0.0220**	**3.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**3.0042**	**3.0042**	**9.7000e-004**	**0.0000**	**3.0285**

3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	**7.0000e-005**	**5.0000e-005**	**5.5000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.0000**	**0.1559**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0300e-003**	**0.0211**	**0.0220**	**3.0000e-005**		**1.1300e-003**	**1.1300e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**3.0042**	**3.0042**	**9.7000e-004**	**0.0000**	**3.0285**

3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	**7.0000e-005**	**5.0000e-005**	**5.5000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1558**	**0.1558**	**0.0000**	**0.0000**	**0.1559**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1897	1.7172	1.5079	2.4100e-003		0.1000	0.1000		0.0940	0.0940	0.0000	207.2909	207.2909	0.0506	0.0000	208.5552
Total	**0.1897**	**1.7172**	**1.5079**	**2.4100e-003**		**0.1000**	**0.1000**		**0.0940**	**0.0940**	**0.0000**	**207.2909**	**207.2909**	**0.0506**	**0.0000**	**208.5552**

3.6 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1600e-003	0.1239	0.0312	2.9000e-004	7.0400e-003	6.0000e-004	7.6500e-003	2.0400e-003	5.8000e-004	2.6100e-003	0.0000	28.1194	28.1194	1.4500e-003	0.0000	28.1557
Worker	0.0116	8.2800e-003	0.0857	2.7000e-004	0.0276	1.9000e-004	0.0278	7.3400e-003	1.7000e-004	7.5100e-003	0.0000	24.1641	24.1641	5.8000e-004	0.0000	24.1787
Total	**0.0157**	**0.1322**	**0.1169**	**5.6000e-004**	**0.0346**	**7.9000e-004**	**0.0354**	**9.3800e-003**	**7.5000e-004**	**0.0101**	**0.0000**	**52.2835**	**52.2835**	**2.0300e-003**	**0.0000**	**52.3343**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1809	1.6169	1.5112	2.4100e-003		0.0934	0.0934		0.0879	0.0879	0.0000	207.2907	207.2907	0.0506	0.0000	208.5550
Total	**0.1809**	**1.6169**	**1.5112**	**2.4100e-003**		**0.0934**	**0.0934**		**0.0879**	**0.0879**	**0.0000**	**207.2907**	**207.2907**	**0.0506**	**0.0000**	**208.5550**

3.6 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1600e-003	0.1239	0.0312	2.9000e-004	7.0400e-003	6.0000e-004	7.6500e-003	2.0400e-003	5.8000e-004	2.6100e-003	0.0000	28.1194	28.1194	1.4500e-003	0.0000	28.1557
Worker	0.0116	8.2800e-003	0.0857	2.7000e-004	0.0276	1.9000e-004	0.0278	7.3400e-003	1.7000e-004	7.5100e-003	0.0000	24.1641	24.1641	5.8000e-004	0.0000	24.1787
Total	**0.0157**	**0.1322**	**0.1169**	**5.6000e-004**	**0.0346**	**7.9000e-004**	**0.0354**	**9.3800e-003**	**7.5000e-004**	**0.0101**	**0.0000**	**52.2835**	**52.2835**	**2.0300e-003**	**0.0000**	**52.3343**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	**0.2481**	**2.2749**	**2.1631**	**3.5100e-003**		**0.1251**	**0.1251**		**0.1176**	**0.1176**	**0.0000**	**302.2867**	**302.2867**	**0.0729**	**0.0000**	**304.1099**

3.6 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1636	0.0408	4.2000e-004	0.0103	3.6000e-004	0.0106	2.9700e-003	3.4000e-004	3.3100e-003	0.0000	40.6133	40.6133	2.0000e-003	0.0000	40.6632
Worker	0.0156	0.0108	0.1142	3.8000e-004	0.0402	2.6000e-004	0.0405	0.0107	2.4000e-004	0.0109	0.0000	33.9974	33.9974	7.6000e-004	0.0000	34.0164
Total	**0.0206**	**0.1744**	**0.1550**	**8.0000e-004**	**0.0505**	**6.2000e-004**	**0.0511**	**0.0137**	**5.8000e-004**	**0.0143**	**0.0000**	**74.6106**	**74.6106**	**2.7600e-003**	**0.0000**	**74.6796**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2368	2.1444	2.1692	3.5100e-003		0.1171	0.1171		0.1103	0.1103	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	**0.2368**	**2.1444**	**2.1692**	**3.5100e-003**		**0.1171**	**0.1171**		**0.1103**	**0.1103**	**0.0000**	**302.2863**	**302.2863**	**0.0729**	**0.0000**	**304.1095**

3.6 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9700e-003	0.1636	0.0408	4.2000e-004	0.0103	3.6000e-004	0.0106	2.9700e-003	3.4000e-004	3.3100e-003	0.0000	40.6133	40.6133	2.0000e-003	0.0000	40.6632
Worker	0.0156	0.0108	0.1142	3.8000e-004	0.0402	2.6000e-004	0.0405	0.0107	2.4000e-004	0.0109	0.0000	33.9974	33.9974	7.6000e-004	0.0000	34.0164
Total	**0.0206**	**0.1744**	**0.1550**	**8.0000e-004**	**0.0505**	**6.2000e-004**	**0.0511**	**0.0137**	**5.8000e-004**	**0.0143**	**0.0000**	**74.6106**	**74.6106**	**2.7600e-003**	**0.0000**	**74.6796**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.6481	0.6791	1.1200e-003		0.0336	0.0336		0.0316	0.0316	0.0000	96.1660	96.1660	0.0230	0.0000	96.7419
Total	**0.0708**	**0.6481**	**0.6791**	**1.1200e-003**		**0.0336**	**0.0336**		**0.0316**	**0.0316**	**0.0000**	**96.1660**	**96.1660**	**0.0230**	**0.0000**	**96.7419**

3.6 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0493	0.0122	1.3000e-004	3.2700e-003	1.0000e-004	3.3600e-003	9.4000e-004	9.0000e-005	1.0400e-003	0.0000	12.7887	12.7887	6.1000e-004	0.0000	12.8039
Worker	4.6300e-003	3.0700e-003	0.0334	1.2000e-004	0.0128	8.0000e-005	0.0129	3.4000e-003	8.0000e-005	3.4800e-003	0.0000	10.4151	10.4151	2.2000e-004	0.0000	10.4205
Total	**6.1000e-003**	**0.0523**	**0.0456**	**2.5000e-004**	**0.0161**	**1.8000e-004**	**0.0162**	**4.3400e-003**	**1.7000e-004**	**4.5200e-003**	**0.0000**	**23.2038**	**23.2038**	**8.3000e-004**	**0.0000**	**23.2244**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0678	0.6118	0.6816	1.1200e-003		0.0315	0.0315		0.0297	0.0297	0.0000	96.1659	96.1659	0.0230	0.0000	96.7418
Total	**0.0678**	**0.6118**	**0.6816**	**1.1200e-003**		**0.0315**	**0.0315**		**0.0297**	**0.0297**	**0.0000**	**96.1659**	**96.1659**	**0.0230**	**0.0000**	**96.7418**

3.6 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4700e-003	0.0493	0.0122	1.3000e-004	3.2700e-003	1.0000e-004	3.3600e-003	9.4000e-004	9.0000e-005	1.0400e-003	0.0000	12.7887	12.7887	6.1000e-004	0.0000	12.8039
Worker	4.6300e-003	3.0700e-003	0.0334	1.2000e-004	0.0128	8.0000e-005	0.0129	3.4000e-003	8.0000e-005	3.4800e-003	0.0000	10.4151	10.4151	2.2000e-004	0.0000	10.4205
Total	**6.1000e-003**	**0.0523**	**0.0456**	**2.5000e-004**	**0.0161**	**1.8000e-004**	**0.0162**	**4.3400e-003**	**1.7000e-004**	**4.5200e-003**	**0.0000**	**23.2038**	**23.2038**	**8.3000e-004**	**0.0000**	**23.2244**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1423	0.1548	2.5000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	21.5750	21.5750	1.6700e-003	0.0000	21.6168
Total	**0.4627**	**0.1423**	**0.1548**	**2.5000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**21.5750**	**21.5750**	**1.6700e-003**	**0.0000**	**21.6168**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2400e-003	1.6000e-003	0.0166	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.6798	4.6798	1.1000e-004	0.0000	4.6827
Total	**2.2400e-003**	**1.6000e-003**	**0.0166**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**3.0000e-005**	**1.4500e-003**	**0.0000**	**4.6798**	**4.6798**	**1.1000e-004**	**0.0000**	**4.6827**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.1423	0.1548	2.5000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003	0.0000	21.5750	21.5750	1.6700e-003	0.0000	21.6167
Total	**0.4627**	**0.1423**	**0.1548**	**2.5000e-004**		**9.3700e-003**	**9.3700e-003**		**9.3700e-003**	**9.3700e-003**	**0.0000**	**21.5750**	**21.5750**	**1.6700e-003**	**0.0000**	**21.6167**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2400e-003	1.6000e-003	0.0166	5.0000e-005	5.3400e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.6798	4.6798	1.1000e-004	0.0000	4.6827
Total	**2.2400e-003**	**1.6000e-003**	**0.0166**	**5.0000e-005**	**5.3400e-003**	**4.0000e-005**	**5.3800e-003**	**1.4200e-003**	**3.0000e-005**	**1.4500e-003**	**0.0000**	**4.6798**	**4.6798**	**1.1000e-004**	**0.0000**	**4.6827**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6829					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3200	33.3200	2.2900e-003	0.0000	33.3771
Total	**0.7115**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3200**	**33.3200**	**2.2900e-003**	**0.0000**	**33.3771**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2100e-003	0.0234	8.0000e-005	8.2500e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.9738	6.9738	1.6000e-004	0.0000	6.9777
Total	**3.2000e-003**	**2.2100e-003**	**0.0234**	**8.0000e-005**	**8.2500e-003**	**5.0000e-005**	**8.3000e-003**	**2.1900e-003**	**5.0000e-005**	**2.2400e-003**	**0.0000**	**6.9738**	**6.9738**	**1.6000e-004**	**0.0000**	**6.9777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6829					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0286	0.1993	0.2372	3.9000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	33.3199	33.3199	2.2900e-003	0.0000	33.3771
Total	**0.7115**	**0.1993**	**0.2372**	**3.9000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**33.3199**	**33.3199**	**2.2900e-003**	**0.0000**	**33.3771**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-003	2.2100e-003	0.0234	8.0000e-005	8.2500e-003	5.0000e-005	8.3000e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.9738	6.9738	1.6000e-004	0.0000	6.9777
Total	**3.2000e-003**	**2.2100e-003**	**0.0234**	**8.0000e-005**	**8.2500e-003**	**5.0000e-005**	**8.3000e-003**	**2.1900e-003**	**5.0000e-005**	**2.2400e-003**	**0.0000**	**6.9738**	**6.9738**	**1.6000e-004**	**0.0000**	**6.9777**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0655	0.0843	1.4000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	11.8726	11.8726	7.7000e-004	0.0000	11.8920
Total	**0.2529**	**0.0655**	**0.0843**	**1.4000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**11.8726**	**11.8726**	**7.7000e-004**	**0.0000**	**11.8920**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.6700e-003	3.0000e-005	2.9400e-003	2.0000e-005	2.9600e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.3938	2.3938	5.0000e-005	0.0000	2.3951
Total	**1.0600e-003**	**7.1000e-004**	**7.6700e-003**	**3.0000e-005**	**2.9400e-003**	**2.0000e-005**	**2.9600e-003**	**7.8000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3938**	**2.3938**	**5.0000e-005**	**0.0000**	**2.3951**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2433					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.0655	0.0843	1.4000e-004		3.8000e-003	3.8000e-003		3.8000e-003	3.8000e-003	0.0000	11.8726	11.8726	7.7000e-004	0.0000	11.8919
Total	**0.2529**	**0.0655**	**0.0843**	**1.4000e-004**		**3.8000e-003**	**3.8000e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**11.8726**	**11.8726**	**7.7000e-004**	**0.0000**	**11.8919**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	7.1000e-004	7.6700e-003	3.0000e-005	2.9400e-003	2.0000e-005	2.9600e-003	7.8000e-004	2.0000e-005	8.0000e-004	0.0000	2.3938	2.3938	5.0000e-005	0.0000	2.3951
Total	**1.0600e-003**	**7.1000e-004**	**7.6700e-003**	**3.0000e-005**	**2.9400e-003**	**2.0000e-005**	**2.9600e-003**	**7.8000e-004**	**2.0000e-005**	**8.0000e-004**	**0.0000**	**2.3938**	**2.3938**	**5.0000e-005**	**0.0000**	**2.3951**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2222	0.9678	2.4063	8.7300e-003	0.7729	7.2000e-003	0.7801	0.2074	6.7200e-003	0.2142	0.0000	801.8843	801.8843	0.0286	0.0000	802.5989
Unmitigated	0.2319	1.0268	2.6340	9.8000e-003	0.8763	8.0200e-003	0.8843	0.2352	7.4900e-003	0.2427	0.0000	900.1057	900.1057	0.0313	0.0000	900.8871

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	102.1330	102.1330	0.0115	2.3800e-003	103.1290
NaturalGas Mitigated	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
NaturalGas Unmitigated	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.13903e+006	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Total		**0.0169**	**0.1446**	**0.0616**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.5106**	**167.5106**	**3.2100e-003**	**3.0700e-003**	**168.5060**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.13903e+006	0.0169	0.1446	0.0616	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	167.5106	167.5106	3.2100e-003	3.0700e-003	168.5060
Total		**0.0169**	**0.1446**	**0.0616**	**9.2000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**167.5106**	**167.5106**	**3.2100e-003**	**3.0700e-003**	**168.5060**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	873782	102.1330	0.0115	2.3800e-003	103.1290
Total		**102.1330**	**0.0115**	**2.3800e-003**	**103.1290**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9202	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Unmitigated	1.5568	0.0232	1.7277	1.9500e-003		0.1379	0.1379		0.1379	0.1379	13.7280	4.6806	18.4086	0.0272	7.8000e-004	19.3223

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6366	0.0140	0.9256	1.9100e-003		0.1335	0.1335		0.1335	0.1335	13.7280	3.3707	17.0987	0.0259	7.8000e-004	17.9809
Landscaping	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**1.5568**	**0.0232**	**1.7277**	**1.9500e-003**		**0.1379**	**0.1379**		**0.1379**	**0.1379**	**13.7280**	**4.6806**	**18.4086**	**0.0272**	**7.8000e-004**	**19.3223**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0242	9.2500e-003	0.8021	4.0000e-005		4.4400e-003	4.4400e-003		4.4400e-003	4.4400e-003	0.0000	1.3099	1.3099	1.2600e-003	0.0000	1.3414
Total	**0.9202**	**9.2500e-003**	**0.8021**	**4.0000e-005**		**4.4400e-003**	**4.4400e-003**		**4.4400e-003**	**4.4400e-003**	**0.0000**	**1.3099**	**1.3099**	**1.2600e-003**	**0.0000**	**1.3414**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.3870	0.2300	5.5600e-003	15.7926
Unmitigated	8.4977	0.2300	5.5600e-003	15.9044

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.43614	8.4977	0.2300	5.5600e-003	15.9044
Total		**8.4977**	**0.2300**	**5.5600e-003**	**15.9044**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	7.03663 / 4.16553	8.3870	0.2300	5.5600e-003	15.7926
Total		**8.3870**	**0.2300**	**5.5600e-003**	**15.7926**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.3442	1.5569	0.0000	65.2666
Unmitigated	26.3442	1.5569	0.0000	65.2666

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	129.78	26.3442	1.5569	0.0000	65.2666
Total		**26.3442**	**1.5569**	**0.0000**	**65.2666**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	129.78	26.3442	1.5569	0.0000	65.2666
Total		**26.3442**	**1.5569**	**0.0000**	**65.2666**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Acacia Project - Mitigated

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Trips and VMT - mitigation

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	523.00
tblConstructionPhase	NumDays	300.00	523.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	3.00
tblConstructionPhase	NumDays	10.00	16.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.8040	89.6258	40.3226	0.1730	18.2290	2.3037	20.4282	9.9739	2.1241	11.9971	0.0000	17,868.2943	17,868.2943	2.5316	0.0000	17,931.5839
2021	7.5413	20.2874	19.8396	0.0369	0.4673	1.0578	1.5252	0.1258	1.0002	1.1260	0.0000	3,553.7832	3,553.7832	0.6599	0.0000	3,570.2813
2022	7.3193	18.2786	19.5158	0.0367	0.4673	0.8954	1.3628	0.1258	0.8473	0.9731	0.0000	3,537.7159	3,537.7159	0.6533	0.0000	3,554.0484
Maximum	**7.8040**	**89.6258**	**40.3226**	**0.1730**	**18.2290**	**2.3037**	**20.4282**	**9.9739**	**2.1241**	**11.9971**	**0.0000**	**17,868.2943**	**17,868.2943**	**2.5316**	**0.0000**	**17,931.5839**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.7050	51.1952	41.4152	0.1730	18.2290	1.2749	19.5039	9.9739	1.1750	11.1489	0.0000	17,868.2943	17,868.2943	2.5316	0.0000	17,931.5839
2021	7.4551	19.2876	19.8869	0.0369	0.4673	0.9962	1.4635	0.1258	0.9437	1.0695	0.0000	3,553.7832	3,553.7832	0.6599	0.0000	3,570.2813
2022	7.2461	17.4060	19.5759	0.0367	0.4673	0.8463	1.3136	0.1258	0.8023	0.9281	0.0000	3,537.7159	3,537.7159	0.6533	0.0000	3,554.0484
Maximum	**7.7050**	**51.1952**	**41.4152**	**0.1730**	**18.2290**	**1.2749**	**19.5039**	**9.9739**	**1.1750**	**11.1489**	**0.0000**	**17,868.2943**	**17,868.2943**	**2.5316**	**0.0000**	**17,931.5839**

Acacia Project - Mitigated - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.14**	**31.44**	**-1.51**	**0.00**	**0.00**	**26.77**	**4.44**	**0.00**	**26.45**	**6.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	117.1008	2.2578	153.6633	0.2731		20.5179	20.5179		20.5179	20.5179	2,200.8606	683.1025	2,883.9630	2.7367	0.1553	2,998.6602
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.4659	5.4701	15.0716	0.0570	5.0022	0.0441	5.0463	1.3382	0.0411	1.3794		5,766.1345	5,766.1345	0.1905		5,770.8968
Total	**118.6594**	**8.5204**	**169.0722**	**0.3351**	**5.0022**	**20.6260**	**25.6282**	**1.3382**	**20.6231**	**21.9613**	**2,200.8606**	**7,461.0112**	**9,661.8718**	**2.9466**	**0.1739**	**9,787.3437**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.1785	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493	0.0000	16.0437	16.0437	0.0154	0.0000	16.4294
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.4115	5.1663	13.6600	0.0507	4.4120	0.0395	4.4515	1.1803	0.0369	1.2172		5,136.0611	5,136.0611	0.1736		5,140.4006
Total	**6.6827**	**6.0616**	**22.9093**	**0.0563**	**4.4120**	**0.1529**	**4.5649**	**1.1803**	**0.1503**	**1.3306**	**0.0000**	**6,163.8790**	**6,163.8790**	**0.2084**	**0.0186**	**6,174.6167**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**94.37**	**28.86**	**86.45**	**83.21**	**11.80**	**99.26**	**82.19**	**11.80**	**99.27**	**93.94**	**100.00**	**17.39**	**36.20**	**92.93**	**89.33**	**36.91**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.5000e-003	0.2604	0.0518	7.2000e-004	0.0159	8.5000e-004	0.0167	4.3500e-003	8.1000e-004	5.1700e-003		77.3440	77.3440	3.8700e-003		77.4407
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0596**	**0.2920**	**0.4542**	**1.9600e-003**	**0.1391**	**1.6500e-003**	**0.1408**	**0.0370**	**1.5500e-003**	**0.0386**		**200.4604**	**200.4604**	**6.8400e-003**		**200.6313**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.4372	12.8824	23.5779	0.0388		0.6027	0.6027		0.5583	0.5583	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**1.4372**	**12.8824**	**23.5779**	**0.0388**	**0.1969**	**0.6027**	**0.7995**	**0.0298**	**0.5583**	**0.5881**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.5000e-003	0.2604	0.0518	7.2000e-004	0.0159	8.5000e-004	0.0167	4.3500e-003	8.1000e-004	5.1700e-003		77.3440	77.3440	3.8700e-003		77.4407
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0596**	**0.2920**	**0.4542**	**1.9600e-003**	**0.1391**	**1.6500e-003**	**0.1408**	**0.0370**	**1.5500e-003**	**0.0386**		**200.4604**	**200.4604**	**6.8400e-003**		**200.6313**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.7000e-003	0.2327	0.0463	6.5000e-004	0.0142	7.6000e-004	0.0150	3.8900e-003	7.3000e-004	4.6200e-003		69.1262	69.1262	3.4600e-003		69.2126
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0693**	**0.2706**	**0.5292**	**2.1300e-003**	**0.1621**	**1.7200e-003**	**0.1638**	**0.0431**	**1.6100e-003**	**0.0447**		**216.8659**	**216.8659**	**7.0200e-003**		**217.0414**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	2.4631	24.3908	21.1215	0.0380		1.2732	1.2732		1.1733	1.1733	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**2.4631**	**24.3908**	**21.1215**	**0.0380**	**18.0670**	**1.2732**	**19.3401**	**9.9308**	**1.1733**	**11.1041**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.7000e-003	0.2327	0.0463	6.5000e-004	0.0142	7.6000e-004	0.0150	3.8900e-003	7.3000e-004	4.6200e-003		69.1262	69.1262	3.4600e-003		69.2126
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	**0.0693**	**0.2706**	**0.5292**	**2.1300e-003**	**0.1621**	**1.7200e-003**	**0.1638**	**0.0431**	**1.6100e-003**	**0.0447**		**216.8659**	**216.8659**	**7.0200e-003**		**217.0414**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1346	39.3862	7.8278	0.1094	2.4021	0.1288	2.5308	0.6583	0.1232	0.7814		11,698.2738	11,698.2738	0.5852		11,712.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		164.1553	164.1553	3.9600e-003		164.2542
Total	**1.2041**	**39.4282**	**8.3644**	**0.1110**	**2.5664**	**0.1298**	**2.6962**	**0.7018**	**0.1242**	**0.8260**		**11,862.4291**	**11,862.4291**	**0.5892**		**11,877.1582**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	1.5166	11.7669	33.0509	0.0620		0.5718	0.5718		0.5330	0.5330	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**1.5166**	**11.7669**	**33.0509**	**0.0620**	**6.6237**	**0.5718**	**7.1955**	**3.3806**	**0.5330**	**3.9136**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1346	39.3862	7.8278	0.1094	2.4021	0.1288	2.5308	0.6583	0.1232	0.7814		11,698.2738	11,698.2738	0.5852		11,712.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		164.1553	164.1553	3.9600e-003		164.2542
Total	**1.2041**	**39.4282**	**8.3644**	**0.1110**	**2.5664**	**0.1298**	**2.6962**	**0.7018**	**0.1242**	**0.8260**		**11,862.4291**	**11,862.4291**	**0.5892**		**11,877.1582**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0455	1.3676	0.3262	3.3100e-003	0.0812	6.7000e-003	0.0879	0.0234	6.4100e-003	0.0298		350.0497	350.0497	0.0172		350.4806
Worker	0.1356	0.0821	1.0464	3.2100e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		320.1029	320.1029	7.7100e-003		320.2957
Total	**0.1811**	**1.4496**	**1.3726**	**6.5200e-003**	**0.4016**	**8.7700e-003**	**0.4104**	**0.1084**	**8.3200e-003**	**0.1167**		**670.1525**	**670.1525**	**0.0250**		**670.7763**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0208	18.0654	16.8845	0.0269		1.0431	1.0431		0.9825	0.9825	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.0208**	**18.0654**	**16.8845**	**0.0269**		**1.0431**	**1.0431**		**0.9825**	**0.9825**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0455	1.3676	0.3262	3.3100e-003	0.0812	6.7000e-003	0.0879	0.0234	6.4100e-003	0.0298		350.0497	350.0497	0.0172		350.4806
Worker	0.1356	0.0821	1.0464	3.2100e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		320.1029	320.1029	7.7100e-003		320.2957
Total	**0.1811**	**1.4496**	**1.3726**	**6.5200e-003**	**0.4016**	**8.7700e-003**	**0.4104**	**0.1084**	**8.3200e-003**	**0.1167**		**670.1525**	**670.1525**	**0.0250**		**670.7763**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.2401	0.2924	3.2700e-003	0.0812	2.6900e-003	0.0839	0.0234	2.5700e-003	0.0260		346.7503	346.7503	0.0163		347.1571
Worker	0.1254	0.0733	0.9580	3.1000e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		308.8642	308.8642	6.9000e-003		309.0368
Total	**0.1626**	**1.3134**	**1.2504**	**6.3700e-003**	**0.4016**	**4.7100e-003**	**0.4063**	**0.1084**	**4.4300e-003**	**0.1128**		**655.6145**	**655.6145**	**0.0232**		**656.1939**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8147	16.4323	16.6225	0.0269		0.8970	0.8970		0.8448	0.8448	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.8147**	**16.4323**	**16.6225**	**0.0269**		**0.8970**	**0.8970**		**0.8448**	**0.8448**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0372	1.2401	0.2924	3.2700e-003	0.0812	2.6900e-003	0.0839	0.0234	2.5700e-003	0.0260		346.7503	346.7503	0.0163		347.1571
Worker	0.1254	0.0733	0.9580	3.1000e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		308.8642	308.8642	6.9000e-003		309.0368
Total	**0.1626**	**1.3134**	**1.2504**	**6.3700e-003**	**0.4016**	**4.7100e-003**	**0.4063**	**0.1084**	**4.4300e-003**	**0.1128**		**655.6145**	**655.6145**	**0.0232**		**656.1939**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0347	1.1753	0.2750	3.2400e-003	0.0812	2.3300e-003	0.0836	0.0234	2.2300e-003	0.0256		343.3734	343.3734	0.0156		343.7624
Worker	0.1167	0.0657	0.8827	2.9800e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		297.5292	297.5292	6.2000e-003		297.6842
Total	**0.1514**	**1.2410**	**1.1577**	**6.2200e-003**	**0.4016**	**4.3000e-003**	**0.4059**	**0.1084**	**4.0400e-003**	**0.1124**		**640.9026**	**640.9026**	**0.0218**		**641.4466**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6331	14.7430	16.4235	0.0269		0.7599	0.7599		0.7162	0.7162	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.6331**	**14.7430**	**16.4235**	**0.0269**		**0.7599**	**0.7599**		**0.7162**	**0.7162**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0347	1.1753	0.2750	3.2400e-003	0.0812	2.3300e-003	0.0836	0.0234	2.2300e-003	0.0256		343.3734	343.3734	0.0156		343.7624
Worker	0.1167	0.0657	0.8827	2.9800e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		297.5292	297.5292	6.2000e-003		297.6842
Total	**0.1514**	**1.2410**	**1.1577**	**6.2200e-003**	**0.4016**	**4.3000e-003**	**0.4059**	**0.1084**	**4.0400e-003**	**0.1124**		**640.9026**	**640.9026**	**0.0218**		**641.4466**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.0278**	**0.0168**	**0.2146**	**6.6000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**65.6621**	**65.6621**	**1.5800e-003**		**65.7017**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.0278**	**0.0168**	**0.2146**	**6.6000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**65.6621**	**65.6621**	**1.5800e-003**		**65.7017**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0135	0.1811	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		61.0316	61.0316	1.2700e-003		61.0634
Total	**0.0239**	**0.0135**	**0.1811**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**61.0316**	**61.0316**	**1.2700e-003**		**61.0634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0239	0.0135	0.1811	6.1000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		61.0316	61.0316	1.2700e-003		61.0634
Total	**0.0239**	**0.0135**	**0.1811**	**6.1000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**61.0316**	**61.0316**	**1.2700e-003**		**61.0634**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4115	5.1663	13.6600	0.0507	4.4120	0.0395	4.4515	1.1803	0.0369	1.2172		5,136.0611	5,136.0611	0.1736		5,140.4006
Unmitigated	1.4659	5.4701	15.0716	0.0570	5.0022	0.0441	5.0463	1.3382	0.0411	1.3794		5,766.1345	5,766.1345	0.1905		5,770.8968

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
NaturalGas Unmitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	8600.08	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	8.60008	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.1785	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493	0.0000	16.0437	16.0437	0.0154	0.0000	16.4294
Unmitigated	117.1008	2.2578	153.6633	0.2731		20.5179	20.5179		20.5179	20.5179	2,200.8606	683.1025	2,883.9630	2.7367	0.1553	2,998.6602

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	111.9223	2.1550	144.7512	0.2726		20.4685	20.4685		20.4685	20.4685	2,200.8606	667.0588	2,867.9194	2.7213	0.1553	2,982.2308
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**117.1008**	**2.2578**	**153.6633**	**0.2731**		**20.5179**	**20.5179**		**20.5179**	**20.5179**	**2,200.8606**	**683.1025**	**2,883.9630**	**2.7367**	**0.1553**	**2,998.6602**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**5.1785**	**0.1027**	**8.9121**	**4.7000e-004**		**0.0493**	**0.0493**		**0.0493**	**0.0493**	**0.0000**	**16.0437**	**16.0437**	**0.0154**	**0.0000**	**16.4294**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Acacia Project - Mitigated

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	108.00	Dwelling Unit	13.40	194,400.00	309

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	257.69	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E RPS

Land Use - applicant provided

Construction Phase - applicant provided

Trips and VMT - mitigation

Demolition -

Grading - applicant provided

Vehicle Trips - TIS by TJKM

Woodstoves - per applicant: no fireplaces

Energy Use -

Construction Off-road Equipment Mitigation - mitigation

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	10.00	16.00
tblGrading	AcresOfGrading	75.00	13.50
tblGrading	MaterialExported	0.00	33,000.00
tblGrading	MaterialExported	0.00	100.00
tblLandUse	LotAcreage	35.06	13.40
tblProjectCharacteristics	CO2IntensityFactor	641.35	257.69
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.8158	90.6022	40.8892	0.1711	18.2290	2.3060	20.4282	9.9739	2.1263	11.9971	0.0000	17,658.8650	17,658.8650	2.5608	0.0000	17,722.8836
2021	7.5525	20.3188	19.8090	0.0365	0.4673	1.0579	1.5253	0.1258	1.0003	1.1261	0.0000	3,515.6468	3,515.6468	0.6607	0.0000	3,532.1641
2022	7.3301	18.3061	19.4841	0.0364	0.4673	0.8955	1.3628	0.1258	0.8474	0.9732	0.0000	3,500.7006	3,500.7006	0.6540	0.0000	3,517.0514
Maximum	**7.8158**	**90.6022**	**40.8892**	**0.1711**	**18.2290**	**2.3060**	**20.4282**	**9.9739**	**2.1263**	**11.9971**	**0.0000**	**17,658.8650**	**17,658.8650**	**2.5608**	**0.0000**	**17,722.8836**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.7168	52.1716	41.9818	0.1711	18.2290	1.2749	19.5039	9.9739	1.1750	11.1489	0.0000	17,658.8650	17,658.8650	2.5608	0.0000	17,722.8836
2021	7.4662	19.3190	19.8562	0.0365	0.4673	0.9963	1.4636	0.1258	0.9438	1.0696	0.0000	3,515.6468	3,515.6468	0.6607	0.0000	3,532.1641
2022	7.2569	17.4334	19.5443	0.0364	0.4673	0.8464	1.3137	0.1258	0.8024	0.9282	0.0000	3,500.7006	3,500.7006	0.6540	0.0000	3,517.0514
Maximum	**7.7168**	**52.1716**	**41.9818**	**0.1711**	**18.2290**	**1.2749**	**19.5039**	**9.9739**	**1.1750**	**11.1489**	**0.0000**	**17,658.8650**	**17,658.8650**	**2.5608**	**0.0000**	**17,722.8836**

Acacia Project - Mitigated - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.14**	**31.19**	**-1.50**	**0.00**	**0.00**	**26.81**	**4.44**	**0.00**	**26.49**	**6.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	117.1008	2.2578	153.6633	0.2731		20.5179	20.5179		20.5179	20.5179	2,200.8606	683.1025	2,883.9630	2.7367	0.1553	2,998.6602
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.2615	5.7507	15.1417	0.0533	5.0022	0.0443	5.0465	1.3382	0.0413	1.3796		5,400.2494	5,400.2494	0.1940		5,405.0993
Total	**118.4550**	**8.8010**	**169.1423**	**0.3315**	**5.0022**	**20.6262**	**25.6284**	**1.3382**	**20.6233**	**21.9615**	**2,200.8606**	**7,095.1262**	**9,295.9868**	**2.9501**	**0.1739**	**9,421.5462**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.1785	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493	0.0000	16.0437	16.0437	0.0154	0.0000	16.4294
Energy	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Mobile	1.2078	5.4123	13.8857	0.0475	4.4120	0.0397	4.4517	1.1803	0.0371	1.2174		4,808.8919	4,808.8919	0.1778		4,813.3372
Total	**6.4790**	**6.3076**	**23.1351**	**0.0530**	**4.4120**	**0.1531**	**4.5651**	**1.1803**	**0.1505**	**1.3308**	**0.0000**	**5,836.7098**	**5,836.7098**	**0.2126**	**0.0186**	**5,847.5533**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**94.53**	**28.33**	**86.32**	**84.00**	**11.80**	**99.26**	**82.19**	**11.80**	**99.27**	**93.94**	**100.00**	**17.74**	**37.21**	**92.79**	**89.33**	**37.93**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/3/2020	2/17/2020	5	11	
2	Site Preparation	Site Preparation	2/18/2020	3/10/2020	5	16	
3	Grading	Grading	3/11/2020	4/21/2020	5	30	
4	Paving	Paving	4/22/2020	4/24/2020	5	3	
5	Building Construction	Building Construction	4/27/2020	4/27/2022	5	523	
6	Architectural Coating	Architectural Coating	5/11/2020	5/11/2022	5	523	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.5

Acres of Paving: 0

Residential Indoor: 393,660; Residential Outdoor: 131,220; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	4,125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	39.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.1969**	**1.6587**	**1.8556**	**0.0298**	**1.5419**	**1.5717**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7100e-003	0.2668	0.0557	7.1000e-004	0.0159	8.7000e-004	0.0168	4.3500e-003	8.3000e-004	5.1800e-003		76.0449	76.0449	4.0600e-003		76.1465
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0629**	**0.3058**	**0.4337**	**1.8500e-003**	**0.1391**	**1.6700e-003**	**0.1408**	**0.0370**	**1.5700e-003**	**0.0386**		**189.4547**	**189.4547**	**6.8300e-003**		**189.6256**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.4372	12.8824	23.5779	0.0388		0.6027	0.6027		0.5583	0.5583	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**1.4372**	**12.8824**	**23.5779**	**0.0388**	**0.1969**	**0.6027**	**0.7995**	**0.0298**	**0.5583**	**0.5881**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7100e-003	0.2668	0.0557	7.1000e-004	0.0159	8.7000e-004	0.0168	4.3500e-003	8.3000e-004	5.1800e-003		76.0449	76.0449	4.0600e-003		76.1465
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0629**	**0.3058**	**0.4337**	**1.8500e-003**	**0.1391**	**1.6700e-003**	**0.1408**	**0.0370**	**1.5700e-003**	**0.0386**		**189.4547**	**189.4547**	**6.8300e-003**		**189.6256**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0670**	**2.1974**	**20.2644**	**9.9308**	**2.0216**	**11.9524**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.8900e-003	0.2385	0.0498	6.4000e-004	0.0142	7.7000e-004	0.0150	3.8900e-003	7.4000e-004	4.6300e-003		67.9651	67.9651	3.6300e-003		68.0559
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0731**	**0.2853**	**0.5034**	**2.0100e-003**	**0.1621**	**1.7300e-003**	**0.1638**	**0.0431**	**1.6200e-003**	**0.0447**		**204.0569**	**204.0569**	**6.9600e-003**		**204.2309**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0670	0.0000	18.0670	9.9308	0.0000	9.9308			0.0000			0.0000
Off-Road	2.4631	24.3908	21.1215	0.0380		1.2732	1.2732		1.1733	1.1733	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**2.4631**	**24.3908**	**21.1215**	**0.0380**	**18.0670**	**1.2732**	**19.3401**	**9.9308**	**1.1733**	**11.1041**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.8900e-003	0.2385	0.0498	6.4000e-004	0.0142	7.7000e-004	0.0150	3.8900e-003	7.4000e-004	4.6300e-003		67.9651	67.9651	3.6300e-003		68.0559
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	**0.0731**	**0.2853**	**0.5034**	**2.0100e-003**	**0.1621**	**1.7300e-003**	**0.1638**	**0.0431**	**1.6200e-003**	**0.0447**		**204.0569**	**204.0569**	**6.9600e-003**		**204.2309**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.6237**	**2.1739**	**8.7976**	**3.3806**	**2.0000**	**5.3806**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1656	40.3527	8.4270	0.1076	2.4021	0.1310	2.5331	0.6583	0.1253	0.7836		11,501.7867	11,501.7867	0.6146		11,517.1523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.2131	151.2131	3.7000e-003		151.3055
Total	**1.2392**	**40.4047**	**8.9309**	**0.1091**	**2.5664**	**0.1321**	**2.6984**	**0.7018**	**0.1263**	**0.8281**		**11,652.9997**	**11,652.9997**	**0.6183**		**11,668.4578**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6237	0.0000	6.6237	3.3806	0.0000	3.3806			0.0000			0.0000
Off-Road	1.5166	11.7669	33.0509	0.0620		0.5718	0.5718		0.5330	0.5330	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**1.5166**	**11.7669**	**33.0509**	**0.0620**	**6.6237**	**0.5718**	**7.1955**	**3.3806**	**0.5330**	**3.9136**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1656	40.3527	8.4270	0.1076	2.4021	0.1310	2.5331	0.6583	0.1253	0.7836		11,501.7867	11,501.7867	0.6146		11,517.1523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.2131	151.2131	3.7000e-003		151.3055
Total	**1.2392**	**40.4047**	**8.9309**	**0.1091**	**2.5664**	**0.1321**	**2.6984**	**0.7018**	**0.1263**	**0.8281**		**11,652.9997**	**11,652.9997**	**0.6183**		**11,668.4578**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.5 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

3.6 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.3829	0.3732	3.2200e-003	0.0812	6.8200e-003	0.0880	0.0234	6.5200e-003	0.0299		341.1927	341.1927	0.0187		341.6588
Worker	0.1434	0.1014	0.9828	2.9600e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		294.8655	294.8655	7.2100e-003		295.0458
Total	**0.1913**	**1.4843**	**1.3559**	**6.1800e-003**	**0.4016**	**8.8900e-003**	**0.4105**	**0.1084**	**8.4300e-003**	**0.1168**		**636.0582**	**636.0582**	**0.0259**		**636.7046**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0208	18.0654	16.8845	0.0269		1.0431	1.0431		0.9825	0.9825	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.0208**	**18.0654**	**16.8845**	**0.0269**		**1.0431**	**1.0431**		**0.9825**	**0.9825**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.6 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.3829	0.3732	3.2200e-003	0.0812	6.8200e-003	0.0880	0.0234	6.5200e-003	0.0299		341.1927	341.1927	0.0187		341.6588
Worker	0.1434	0.1014	0.9828	2.9600e-003	0.3204	2.0700e-003	0.3225	0.0850	1.9100e-003	0.0869		294.8655	294.8655	7.2100e-003		295.0458
Total	**0.1913**	**1.4843**	**1.3559**	**6.1800e-003**	**0.4016**	**8.8900e-003**	**0.4105**	**0.1084**	**8.4300e-003**	**0.1168**		**636.0582**	**636.0582**	**0.0259**		**636.7046**

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0394	1.2508	0.3361	3.1900e-003	0.0812	2.7800e-003	0.0840	0.0234	2.6600e-003	0.0260		337.9526	337.9526	0.0176		338.3928
Worker	0.1328	0.0905	0.8963	2.8500e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		284.5193	284.5193	6.4400e-003		284.6802
Total	**0.1723**	**1.3413**	**1.2324**	**6.0400e-003**	**0.4016**	**4.8000e-003**	**0.4064**	**0.1084**	**4.5200e-003**	**0.1129**		**622.4719**	**622.4719**	**0.0241**		**623.0730**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8147	16.4323	16.6225	0.0269		0.8970	0.8970		0.8448	0.8448	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.8147**	**16.4323**	**16.6225**	**0.0269**		**0.8970**	**0.8970**		**0.8448**	**0.8448**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.6 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0394	1.2508	0.3361	3.1900e-003	0.0812	2.7800e-003	0.0840	0.0234	2.6600e-003	0.0260		337.9526	337.9526	0.0176		338.3928
Worker	0.1328	0.0905	0.8963	2.8500e-003	0.3204	2.0200e-003	0.3224	0.0850	1.8600e-003	0.0868		284.5193	284.5193	6.4400e-003		284.6802
Total	**0.1723**	**1.3413**	**1.2324**	**6.0400e-003**	**0.4016**	**4.8000e-003**	**0.4064**	**0.1084**	**4.5200e-003**	**0.1129**		**622.4719**	**622.4719**	**0.0241**		**623.0730**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0368	1.1842	0.3160	3.1600e-003	0.0812	2.4100e-003	0.0837	0.0234	2.3100e-003	0.0257		334.6067	334.6067	0.0168		335.0272
Worker	0.1240	0.0812	0.8225	2.7500e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		274.0889	274.0889	5.7600e-003		274.2330
Total	**0.1608**	**1.2653**	**1.1384**	**5.9100e-003**	**0.4016**	**4.3800e-003**	**0.4060**	**0.1084**	**4.1200e-003**	**0.1125**		**608.6956**	**608.6956**	**0.0226**		**609.2602**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6331	14.7430	16.4235	0.0269		0.7599	0.7599		0.7162	0.7162	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.6331**	**14.7430**	**16.4235**	**0.0269**		**0.7599**	**0.7599**		**0.7162**	**0.7162**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.6 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0368	1.1842	0.3160	3.1600e-003	0.0812	2.4100e-003	0.0837	0.0234	2.3100e-003	0.0257		334.6067	334.6067	0.0168		335.0272
Worker	0.1240	0.0812	0.8225	2.7500e-003	0.3204	1.9700e-003	0.3223	0.0850	1.8100e-003	0.0868		274.0889	274.0889	5.7600e-003		274.2330
Total	**0.1608**	**1.2653**	**1.1384**	**5.9100e-003**	**0.4016**	**4.3800e-003**	**0.4060**	**0.1084**	**4.1200e-003**	**0.1125**		**608.6956**	**608.6956**	**0.0226**		**609.2602**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.0294**	**0.0208**	**0.2016**	**6.1000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**60.4852**	**60.4852**	**1.4800e-003**		**60.5222**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**5.4753**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.0294**	**0.0208**	**0.2016**	**6.1000e-004**	**0.0657**	**4.3000e-004**	**0.0661**	**0.0174**	**3.9000e-004**	**0.0178**		**60.4852**	**60.4852**	**1.4800e-003**		**60.5222**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.4520**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0167	0.1687	5.6000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		56.2234	56.2234	1.1800e-003		56.2529
Total	**0.0254**	**0.0167**	**0.1687**	**5.6000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**56.2234**	**56.2234**	**1.1800e-003**		**56.2529**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2331					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.4377**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0254	0.0167	0.1687	5.6000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		56.2234	56.2234	1.1800e-003		56.2529
Total	**0.0254**	**0.0167**	**0.1687**	**5.6000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**56.2234**	**56.2234**	**1.1800e-003**		**56.2529**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2078	5.4123	13.8857	0.0475	4.4120	0.0397	4.4517	1.1803	0.0371	1.2174		4,808.8919	4,808.8919	0.1778		4,813.3372
Unmitigated	1.2615	5.7507	15.1417	0.0533	5.0022	0.0443	5.0465	1.3382	0.0413	1.3796		5,400.2494	5,400.2494	0.1940		5,405.0993

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,019.52	1,019.52	1019.52	2,354,691	2,076,837
Total	1,019.52	1,019.52	1,019.52	2,354,691	2,076,837

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
NaturalGas Unmitigated	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	8600.08	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	8.60008	0.0928	0.7926	0.3373	5.0600e-003		0.0641	0.0641		0.0641	0.0641		1,011.7743	1,011.7743	0.0194	0.0186	1,017.7868
Total		**0.0928**	**0.7926**	**0.3373**	**5.0600e-003**		**0.0641**	**0.0641**		**0.0641**	**0.0641**		**1,011.7743**	**1,011.7743**	**0.0194**	**0.0186**	**1,017.7868**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.1785	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493	0.0000	16.0437	16.0437	0.0154	0.0000	16.4294
Unmitigated	117.1008	2.2578	153.6633	0.2731		20.5179	20.5179		20.5179	20.5179	2,200.8606	683.1025	2,883.9630	2.7367	0.1553	2,998.6602

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	111.9223	2.1550	144.7512	0.2726		20.4685	20.4685		20.4685	20.4685	2,200.8606	667.0588	2,867.9194	2.7213	0.1553	2,982.2308
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**117.1008**	**2.2578**	**153.6633**	**0.2731**		**20.5179**	**20.5179**		**20.5179**	**20.5179**	**2,200.8606**	**683.1025**	**2,883.9630**	**2.7367**	**0.1553**	**2,998.6602**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7498					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2685	0.1027	8.9121	4.7000e-004		0.0493	0.0493		0.0493	0.0493		16.0437	16.0437	0.0154		16.4294
Total	**5.1785**	**0.1027**	**8.9121**	**4.7000e-004**		**0.0493**	**0.0493**		**0.0493**	**0.0493**	**0.0000**	**16.0437**	**16.0437**	**0.0154**	**0.0000**	**16.4294**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Acacia Project - Mitigated

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.04	0.05	0.00	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.56	0.61	-0.08	0.00	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.52	0.42	-0.03	0.00	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.39	0.42	0.02	0.00	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Final	0	1	No Change	0.00
Concrete/Industrial Saws	Diesel	Tier 4 Final	1	1	No Change	0.00
Cranes	Diesel	Tier 4 Final	0	1	No Change	0.00
Excavators	Diesel	Tier 4 Final	5	5	No Change	0.00
Forklifts	Diesel	Tier 4 Final	0	3	No Change	0.00
Generator Sets	Diesel	Tier 4 Final	0	1	No Change	0.00
Graders	Diesel	Tier 4 Final	1	1	No Change	0.00
Pavers	Diesel	Tier 4 Final	0	2	No Change	0.00
Paving Equipment	Diesel	Tier 4 Final	0	2	No Change	0.00
Rollers	Diesel	Tier 4 Final	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 4 Final	3	6	No Change	0.00
Scrapers	Diesel	Tier 4 Final	2	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2	9	No Change	0.00
Welders	Diesel	Tier 4 Final	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.85400E-002	4.07030E-001	4.76280E-001	7.80000E-004	2.54500E-002	2.54500E-002	0.00000E+000	6.67676E+001	6.67676E+001	4.73000E-003	0.00000E+000	6.68858E+001
Concrete/Industrial Saws	2.30000E-003	1.81400E-002	2.02800E-002	3.00000E-005	1.09000E-003	1.09000E-003	0.00000E+000	2.95711E+000	2.95711E+000	1.90000E-004	0.00000E+000	2.96179E+000
Cranes	9.62000E-002	1.12790E+000	4.60790E-001	1.32000E-003	4.62000E-002	4.25000E-002	0.00000E+000	1.15987E+002	1.15987E+002	3.75100E-002	0.00000E+000	1.16925E+002
Excavators	1.13900E-002	1.12190E-001	1.51950E-001	2.40000E-004	5.43000E-003	5.00000E-003	0.00000E+000	2.10970E+001	2.10970E+001	6.82000E-003	0.00000E+000	2.12676E+001
Forklifts	1.03440E-001	9.41340E-001	9.17760E-001	1.20000E-003	6.74200E-002	6.20300E-002	0.00000E+000	1.05352E+002	1.05352E+002	3.40700E-002	0.00000E+000	1.06203E+002
Generator Sets	9.60500E-002	8.46040E-001	9.65050E-001	1.72000E-003	4.55500E-002	4.55500E-002	0.00000E+000	1.47802E+002	1.47802E+002	7.73000E-003	0.00000E+000	1.47995E+002
Graders	7.14000E-003	9.48800E-002	2.72200E-002	1.00000E-004	3.03000E-003	2.79000E-003	0.00000E+000	8.74597E+000	8.74597E+000	2.83000E-003	0.00000E+000	8.81668E+000
Pavers	7.90000E-004	8.43000E-003	8.69000E-003	1.00000E-005	4.10000E-004	3.80000E-004	0.00000E+000	1.23905E+000	1.23905E+000	4.00000E-004	0.00000E+000	1.24907E+000
Paving Equipment	6.20000E-004	6.42000E-003	7.60000E-003	1.00000E-005	3.20000E-004	3.00000E-004	0.00000E+000	1.07373E+000	1.07373E+000	3.50000E-004	0.00000E+000	1.08241E+000
Rollers	6.20000E-004	6.24000E-003	5.68000E-003	1.00000E-005	4.00000E-004	3.70000E-004	0.00000E+000	6.91460E-001	6.91460E-001	2.20000E-004	0.00000E+000	6.97050E-001
Rubber Tired Dozers	5.39700E-002	5.66610E-001	2.06580E-001	4.30000E-004	2.77500E-002	2.55300E-002	0.00000E+000	3.75276E+001	3.75276E+001	1.21400E-002	0.00000E+000	3.78311E+001
Scrapers	2.97900E-002	3.52560E-001	2.23760E-001	4.50000E-004	1.37500E-002	1.26500E-002	0.00000E+000	3.99256E+001	3.99256E+001	1.29100E-002	0.00000E+000	4.02484E+001
Tractors/Loaders/Backhoes	1.44300E-001	1.45707E+000	1.69500E+000	2.33000E-003	8.76400E-002	8.06200E-002	0.00000E+000	2.04301E+002	2.04301E+002	6.60700E-002	0.00000E+000	2.05952E+002
Welders	8.16000E-002	3.98260E-001	4.52830E-001	6.70000E-004	2.01000E-002	2.01000E-002	0.00000E+000	4.92197E+001	4.92197E+001	6.62000E-003	0.00000E+000	4.93853E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	5.85400E-002	4.07030E-001	4.76280E-001	7.80000E-004	2.54500E-002	2.54500E-002	0.00000E+000	6.67675E+001	6.67675E+001	4.73000E-003	0.00000E+000	6.68858E+001
Concrete/Industrial Saws	3.40000E-004	1.49000E-003	2.12200E-002	3.00000E-005	5.00000E-005	5.00000E-005	0.00000E+000	2.95711E+000	2.95711E+000	1.90000E-004	0.00000E+000	2.96179E+000
Cranes	9.62000E-002	1.12790E+000	4.60790E-001	1.32000E-003	4.62000E-002	4.25000E-002	0.00000E+000	1.15987E+002	1.15987E+002	3.75100E-002	0.00000E+000	1.16925E+002
Excavators	2.95000E-003	1.28000E-002	1.82190E-001	2.40000E-004	3.90000E-004	3.90000E-004	0.00000E+000	2.10970E+001	2.10970E+001	6.82000E-003	0.00000E+000	2.12676E+001
Forklifts	1.03440E-001	9.41340E-001	9.17750E-001	1.20000E-003	6.74200E-002	6.20300E-002	0.00000E+000	1.05351E+002	1.05351E+002	3.40700E-002	0.00000E+000	1.06203E+002
Generator Sets	9.60500E-002	8.46040E-001	9.65050E-001	1.72000E-003	4.55500E-002	4.55500E-002	0.00000E+000	1.47802E+002	1.47802E+002	7.73000E-003	0.00000E+000	1.47995E+002
Graders	1.22000E-003	5.27000E-003	4.46200E-002	1.00000E-004	1.60000E-004	1.60000E-004	0.00000E+000	8.74596E+000	8.74596E+000	2.83000E-003	0.00000E+000	8.81667E+000
Pavers	7.90000E-004	8.43000E-003	8.69000E-003	1.00000E-005	4.10000E-004	3.80000E-004	0.00000E+000	1.23905E+000	1.23905E+000	4.00000E-004	0.00000E+000	1.24906E+000
Paving Equipment	6.20000E-004	6.42000E-003	7.60000E-003	1.00000E-005	3.20000E-004	3.00000E-004	0.00000E+000	1.07373E+000	1.07373E+000	3.50000E-004	0.00000E+000	1.08241E+000
Rollers	6.20000E-004	6.24000E-003	5.68000E-003	1.00000E-005	4.00000E-004	3.70000E-004	0.00000E+000	6.91450E-001	6.91450E-001	2.20000E-004	0.00000E+000	6.97050E-001
Rubber Tired Dozers	2.96000E-002	2.94630E-001	1.99130E-001	4.30000E-004	1.42200E-002	1.31100E-002	0.00000E+000	3.75276E+001	3.75276E+001	1.21400E-002	0.00000E+000	3.78310E+001
Scrapers	5.59000E-003	2.42300E-002	2.05060E-001	4.50000E-004	7.50000E-004	7.50000E-004	0.00000E+000	3.99256E+001	3.99256E+001	1.29100E-002	0.00000E+000	4.02484E+001
Tractors/Loaders/Backhoes	1.18810E-001	1.16361E+000	1.70773E+000	2.33000E-003	6.91900E-002	6.37200E-002	0.00000E+000	2.04300E+002	2.04300E+002	6.60700E-002	0.00000E+000	2.05952E+002
Welders	8.16000E-002	3.98250E-001	4.52830E-001	6.70000E-004	2.01000E-002	2.01000E-002	0.00000E+000	4.92196E+001	4.92196E+001	6.62000E-003	0.00000E+000	4.93852E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19819E-006	1.19819E-006	0.00000E+000	0.00000E+000	1.19607E-006
Concrete/Industrial Saws	8.52174E-001	9.17861E-001	-4.63511E-002	0.00000E+000	9.54128E-001	9.54128E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20703E-006	1.20703E-006	0.00000E+000	0.00000E+000	1.19735E-006
Excavators	7.41001E-001	8.85908E-001	-1.99013E-001	0.00000E+000	9.28177E-001	9.22000E-001	0.00000E+000	9.48000E-007	9.48000E-007	0.00000E+000	0.00000E+000	9.40397E-007
Forklifts	0.00000E+000	0.00000E+000	1.08961E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13904E-006	1.13904E-006	0.00000E+000	0.00000E+000	1.12991E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21785E-006	1.21785E-006	0.00000E+000	0.00000E+000	1.21626E-006
Graders	8.29132E-001	9.44456E-001	-6.39236E-001	0.00000E+000	9.47195E-001	9.42652E-001	0.00000E+000	1.14338E-006	1.14338E-006	0.00000E+000	0.00000E+000	1.13421E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	8.00596E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.44622E-005	1.44622E-005	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	4.51547E-001	4.80013E-001	3.60635E-002	0.00000E+000	4.87568E-001	4.86486E-001	0.00000E+000	1.06588E-006	1.06588E-006	0.00000E+000	0.00000E+000	1.05733E-006
Scrapers	8.12353E-001	9.31274E-001	8.35717E-002	0.00000E+000	9.45455E-001	9.40711E-001	0.00000E+000	1.25233E-006	1.25233E-006	0.00000E+000	0.00000E+000	1.24228E-006
Tractors/Loaders/Backhoes	1.76646E-001	2.01404E-001	-7.51032E-003	0.00000E+000	2.10520E-001	2.09625E-001	0.00000E+000	1.22369E-006	1.22369E-006	0.00000E+000	0.00000E+000	1.21387E-006
Welders	0.00000E+000	2.51092E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.01585E-006	1.01585E-006	0.00000E+000	0.00000E+000	1.21494E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Water Exposed Area	PM10 Reduction	0.00	PM2.5 Reduction	0.00	Frequency (per day)	

No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.02	0.00	0.02	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.10	0.03	0.10	0.03	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.10	0.05	0.10	0.05	0.00	0.00
Grading	Roads	0.04	0.01	0.04	0.01	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.14	0.08	0.14	0.08	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	100.00
Hearth	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	4.18	5.75	8.64	10.92	10.22	10.28	0.00	10.91	10.91	8.57	0.00	10.91
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77	1.30	0.00	0.00	0.70
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00	0.00	0.00	
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00	0.00		
No	Land Use	Improve Destination Accessibility	0.00	0.00		
Yes	Land Use	Increase Transit Accessibility	0.15	0.30		
No	Land Use	Integrate Below Market Rate Housing	0.00	0.00		
	Land Use	Land Use SubTotal	0.10			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
Yes	Neighborhood Enhancements	Provide Traffic Calming Measures		50.00		
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
No	Parking Policy Pricing	Limit Parking Supply	0.00	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00	0.00		
No	Transit Improvements	Expand Transit Network	0.00	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		0.00	
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.12			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge		0.00		
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.12			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
Yes	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
Yes	On-site Renewable		100.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	