City of Brentwood
Community Development Department

Rotten Robbie Project

Initial Study/Mitigated Negative Declaration

June 2019

Prepared by

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

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APPENDIX:

INITIAL STUDY

June 2019

A. BACKGROUND

1. Project Title: Rotten Robbie Project

2. Lead Agency Name and Address: City of Brentwood
Community Development Department
Planning Division
150 City Park Way
Brentwood, CA 94513

3. Contact Person and Phone Number: Debbie Hill
Senior Planner
(925) 516-5135

4. Project Location: 6860 Lone Tree Way
Brentwood, CA 94513
APNs 019-010-043, and -044

5. Project Sponsor's Name and Address: Robinson Oil Corporation
955 Martin Avenue
Santa Clara, CA 95050

6. Existing General Plan Designation: General Commercial (GC)

7. Existing Zoning Designation: Planned Development (PD-38), Subarea A

8. Required Approvals from Other Public Agencies: BAAQMD Permit to Operate

9. Surrounding Land Uses and Setting:

The project site consists of a vacant, 2.46-acre property located at the northwest corner of Lone Tree Way and Fairview Avenue in the City of Brentwood, California. The site is identified by Assessor's Parcel Numbers (APNs) 019-010-043 and -044. The project site contains ruderal vegetation and assorted shrubs. Existing land uses adjacent to the project site include residential housing across Lone Tree Way to the south, a self-storage facility to the east, a commercial center with a Chevron gas station at the southeast corner of the intersection of Lone Tree Way and Fairview Avenue, and a vacant commercial lot to the west.

10. Project Description Summary:

    The proposed project would include development of a service station center with a 4,800-square-foot (sf) convenience store, a 1,767-sf car wash, and a 7,968-sf fueling canopy consisting of 20 gas pumps. The proposed service station center would also include 26 parking spaces to the south and west of the convenience store. The project would include construction of a sidewalk and frontage improvements along Lone Tree Way. The project would require approval of a Conditional Use Permit and Design and Site Development Review by the City of Brentwood.

11. 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), a project notification letter was distributed to the chairpersons of the following tribes: Wilton Rancheria, The Ohlone Indian Tribe, North Valley Yokuts Tribe, Muwekma Ohlone Indian Tribe of the SF Bay Area, Ione Band of Miwok Indians, Indian Canyon Mutsun Band of Costanoan, Amah Mutsun Tribal Band of Mission, San Juan Bautista. The letters were mailed on March 25, 2019. One letter was received from the Wilton Rancheria within the consultation period and requested proper handling of any cultural resources discovered on the project site. The mitigation provided throughout this Initial Study would be sufficient to reduce any impacts related to the discovery of cultural resources during construction.

B. SOURCES

All of the technical reports and modeling results used for the project analysis are available upon request at the City of Brentwood Community Development Department, located at 150 City Park Way, Brentwood. Office hours are Monday through Friday, 8:00 AM to 5:00 PM. The following documents are referenced information sources used for the purposes of this Initial Study:

1. Abrams Associates Traffic Engineering, Inc. *Transportation Impact Analysis Rotten Robbie Project City of Brentwood*. March 1, 2019.
2. Contra Costa Clean Water Program. *Stormwater C.3 Guidebook.* May 17, 2017.
3. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.
4. California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.
5. California Department of Conservation. *California Geologic Survey*. Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed March 19, 2019.
6. California Department of Conservation. *Contra Costa County Important Farmland 2016.*August 2018.
7. California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.
8. California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Keller Canyon Landfill (07-AA-0032)*. Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/07-AA-0032/. Accessed March 2019.

9. California Department of Toxic Substances Control. *Cortese List: Section 65962.5(a)*. Available at https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/. Accessed March 26, 2019.
10. California Department of Transportation. *California Scenic Highway Mapping System*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed March 2019.
11. California Environmental Protection Agency California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective.* April 2005.
12. City of Brentwood. *2014 Brentwood General Plan Draft Environmental Impact Report.* April 2014.
13. City of Brentwood. *City of Brentwood General Plan.* Adopted July 2014.
14. City of Brentwood. *Commercial and Industrial Design Guidelines.* Adopted March 13, 2001.
15. City of Brentwood. *Final 2015 Urban Water Management Plan*. June 2016.
16. Contra Costa County Flood Control District. *Contra Costa County Formed Drainage Areas.* February 7, 2008.
17. Environmental Investigation Services, Inc. *Phase I Environmental Site Assessment 6860 Lone Tree Way, Brentwood, CA*. February 5, 2018.
18. Federal Emergency Management Agency. *Flood Insurance Rate Map 06013C0353F*. Effective June 16, 2009.
19. Korbmacher Engineering, Inc. *Geotechnical Study Rotten Robbie Brentwood.* December 18, 2018.
20. Moore Biological Consultants. *Application Form and Planning Survey Report Rotten Robbie Brentwood*. January 2019.
21. Solano Archaeological Services. *Cultural Resources Study-Rotten Robbie Project, Contra Costa County, California.* October 25, 2018.
22. United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed March 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 Impact" 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**
☐ **Utilities and Service Systems**	☐ **Wildfire**	☐ **Mandatory Findings of Significance**

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	Date
Debbie Hill, Senior Planner	City of Brentwood
Printed Name	For

E. BACKGROUND AND INTRODUCTION

This Initial Study identifies and analyzes the potential environmental impacts of the Rotten Robbie Project (proposed project). The information and analysis presented in this document is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures are prescribed.

The mitigation measures prescribed for environmental effects described in this Initial Study/Mitigated Negative Declaration (IS/MND) would be implemented in conjunction with the project, as required by CEQA. The mitigation measures would be incorporated into the project through conditions of approval. The City would adopt findings and a Mitigation Monitoring/Reporting Program for the project in conjunction with approval of the project.

An Environmental Impact Report (EIR) was prepared for the General Plan in April 2014, and addressed the potential impacts associated with full buildout of the General Plan Land Use Diagram.[1] On July 22, 2014, the City of Brentwood City Council certified the General Plan EIR and adopted a comprehensive update to the City's General Plan,[2] which was last updated in 1993 (a partial update involving the Growth Management, Land Use, and Circulation Elements was completed in 2001).

Per Section 15152 of the CEQA Guidelines, a project that is consistent with the General Plan and zoning designations of the City may tier from the analysis contained in the General Plan EIR, incorporating by reference the general discussions from the broader EIR. The proposed project would be consistent with the General Plan and zoning designations for the project site; therefore, in accordance with Section 15152 of the CEQA Guidelines, the analysis within this IS/MND will rely on analysis previously prepared in the General Plan EIR, as applicable.

F. PROJECT DESCRIPTION

The following provides a description of the project site's current location and setting, as well as the proposed project components and the discretionary actions required for the project.

Project Location and Setting

The project site consists of approximately 2.46 acres, located at the northwest corner of the intersection of Lone Tree Way and Fairview Avenue, in the City of Brentwood, California (APNs 019-010-043, and -044) (see Figure 1 and Figure 2). The site is designated GC per the City's General Plan and is zoned PD-38 within Subarea A. The project site is vacant and undeveloped. Vegetation on site is ruderal and scattered, with dry grasses and shrubs present throughout. The site appears to be disked and mowed in some portions, but mostly unmaintained. Shrubs and grasses, as well as an existing dirt pathway, are present along the project site's frontage on Lone Tree Way.

[1] City of Brentwood. *Environmental Impact Report for the 2014 Brentwood General Plan Update, SCH# 2014022058. July 2014.*

[2] City of Brentwood. *City of Brentwood General Plan.* Adopted July 2014.

Figure 1
Regional Project Location

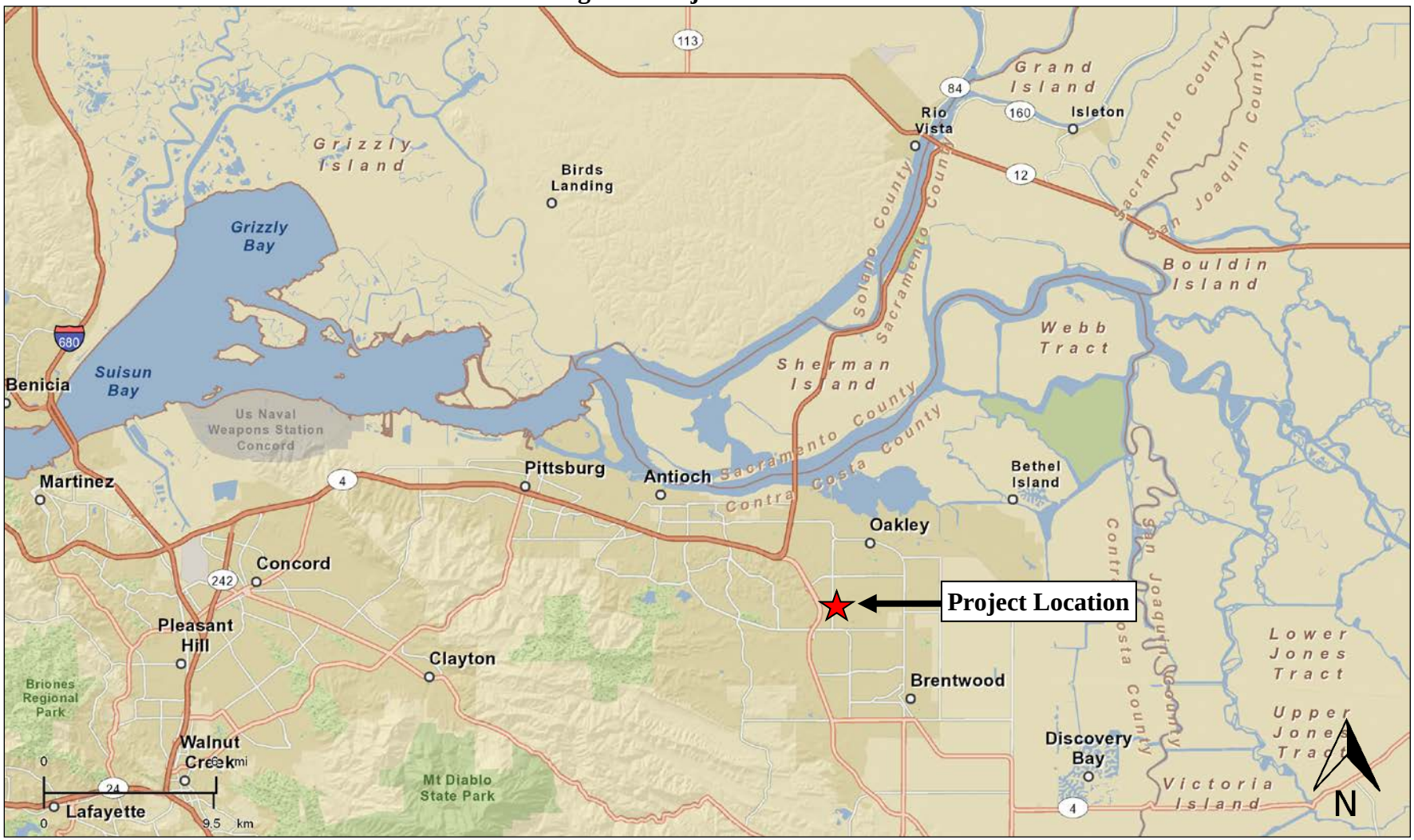


Figure 2
Project Site Boundaries

Lone Tree Way borders the project site to the south and Fairview Avenue borders the site to the east. Surrounding land uses include single-family residences to the south, across Lone Tree Way, a commercial center including a Chevron gas station on the southeast corner of Lone Tree Way and Fairview Avenue, and a self-storage facility to the east. Directly to the west of the project site is a vacant parcel, which is part of a partially developed commercial center. Beyond the center to the west is a developed commercial center containing restaurants and commercial businesses.

Project Components

The proposed project would include development of the project site with a 7,968-sf fueling canopy, consisting of 20 gas pumps, a 4,800-sf convenience store, and a 1,767-sf car wash. The site plan is shown as Figure 3 below.

The proposed 7,968-sf fueling canopy would include 20 gas pumps and have throughput of approximately two million gallons of gasoline and 100,000 gallons of diesel. The pumps would be distributed over ten stations and would provide two fueling pumps per station. Three underground tanks would supply gasoline and diesel to the pump stations. The tanks would be sized from 15,000- to 25,000-gallon storage capacity. A canopy would cover the gas pumps and would be sized to a maximum height of 21 feet and four inches. The roof would be constructed of concrete tile roofing.

The 4,800-sf convenience store would be located north of the gas pumps. The building would include a sales floor, beverage bar, two restrooms, walk-in cooler, dry storage, freezer, and office. The building would be 21 feet high at the top of the roof parapet. The façade of the structure would be constructed of stucco stone and concrete tile roofing, with glass windows and a glass door system on the face of the building.

The proposed project would include a 1,767-sf car wash to the west of the convenience store. A 92-foot long queuing lane would lead up to the car wash entrance. East of the car wash tunnel, the project would include approximately four vacuum stalls.

Landscaping

Landscaping would be included along the perimeter of the project site. In addition, planters would be placed within the interior of the project site. The proposed project would include a vegetation screen around the convenience store as well as associated landscaping. A total of 38 trees would be planted in boxes or planters to provide shaded parking. Ground covers and shrub areas would be placed at each driveway entrance. Additionally, a six-foot landscaping screen would be constructed at the north end of the project site, separating the car wash and Fairview Avenue. The Landscaping Plan is shown in Figure 4 below.

Figure 3
Site Plan

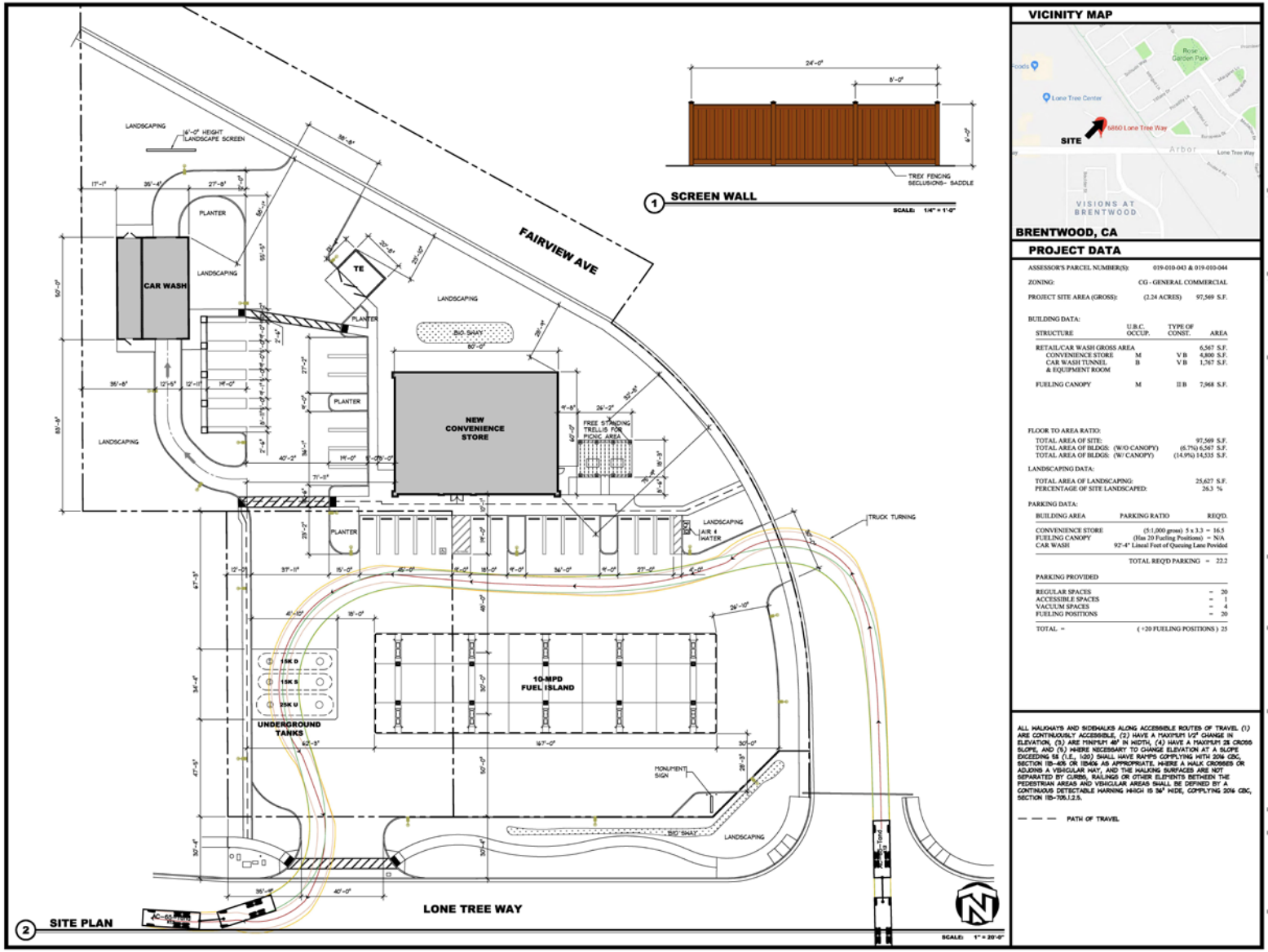
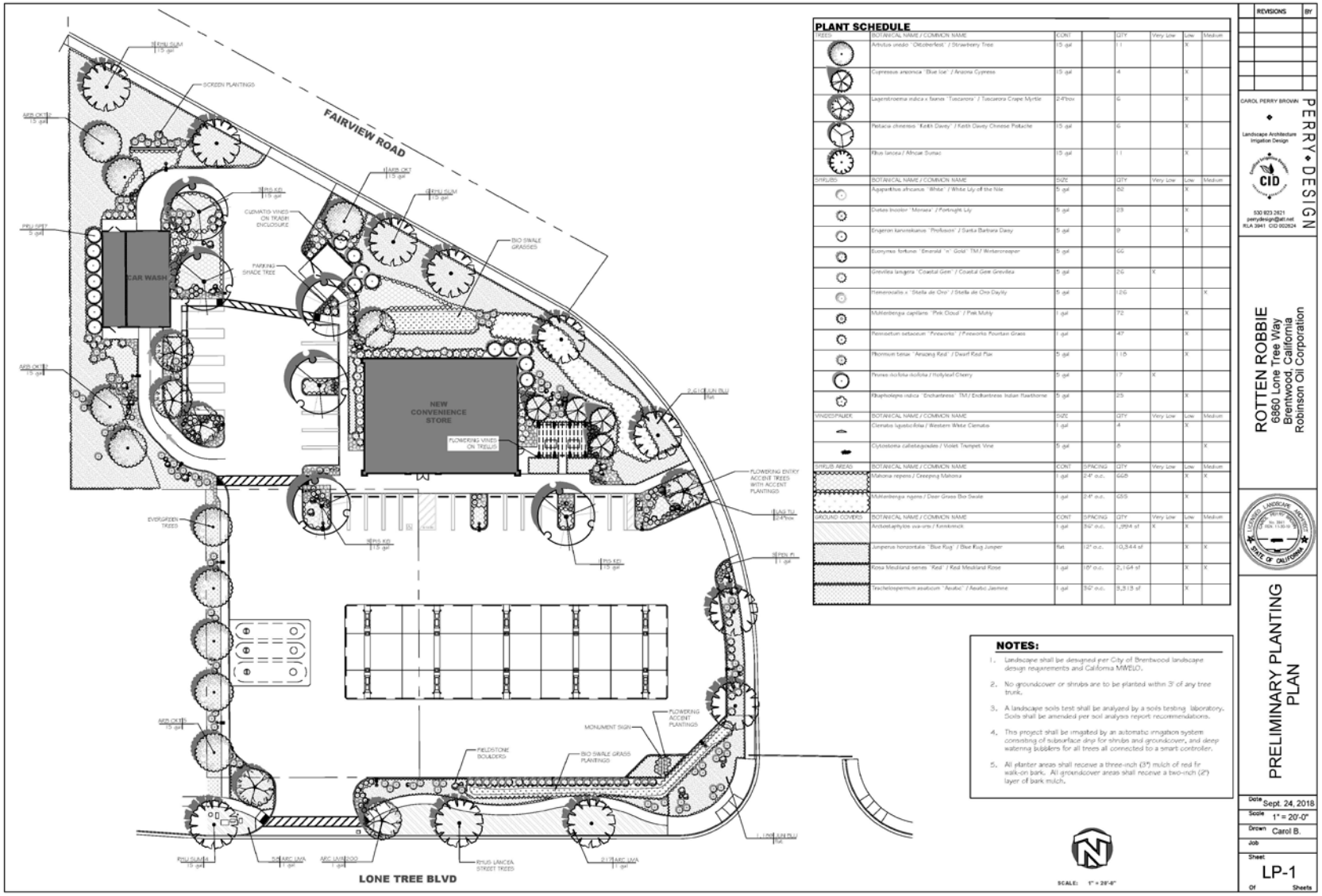


Figure 4
Landscaping Plan



Monument Sign

At the southeast corner of the lot, the proposed project would include construction of a monument sign which would display the gas station logo and fuel prices. The design of the sign would be in accordance with requirements of the Sign Ordinance in the City's Municipal Code and subject to Design and Site Development Review.

Access and Circulation

Primary access to the site would be provided by a new driveway from Lone Tree Way and two new driveways from Fairview Avenue. Each driveway would be at least 30 feet wide, and the southernmost driveway on Fairview Avenue would facilitate truck turning. Internal circulation would be facilitated by drive aisles between fueling pumps, as well as internal connections between the gas pumps, convenience store, and car wash.

Improvements would be made along the project site's frontage of Lone Tree Way, including extension of an existing sidewalk from the west. As part of construction of the proposed project, a new walkway would be installed along Lone Tree Way at the project frontage. The walkway would connect to an existing sidewalk running along Lone Tree Way from the west.

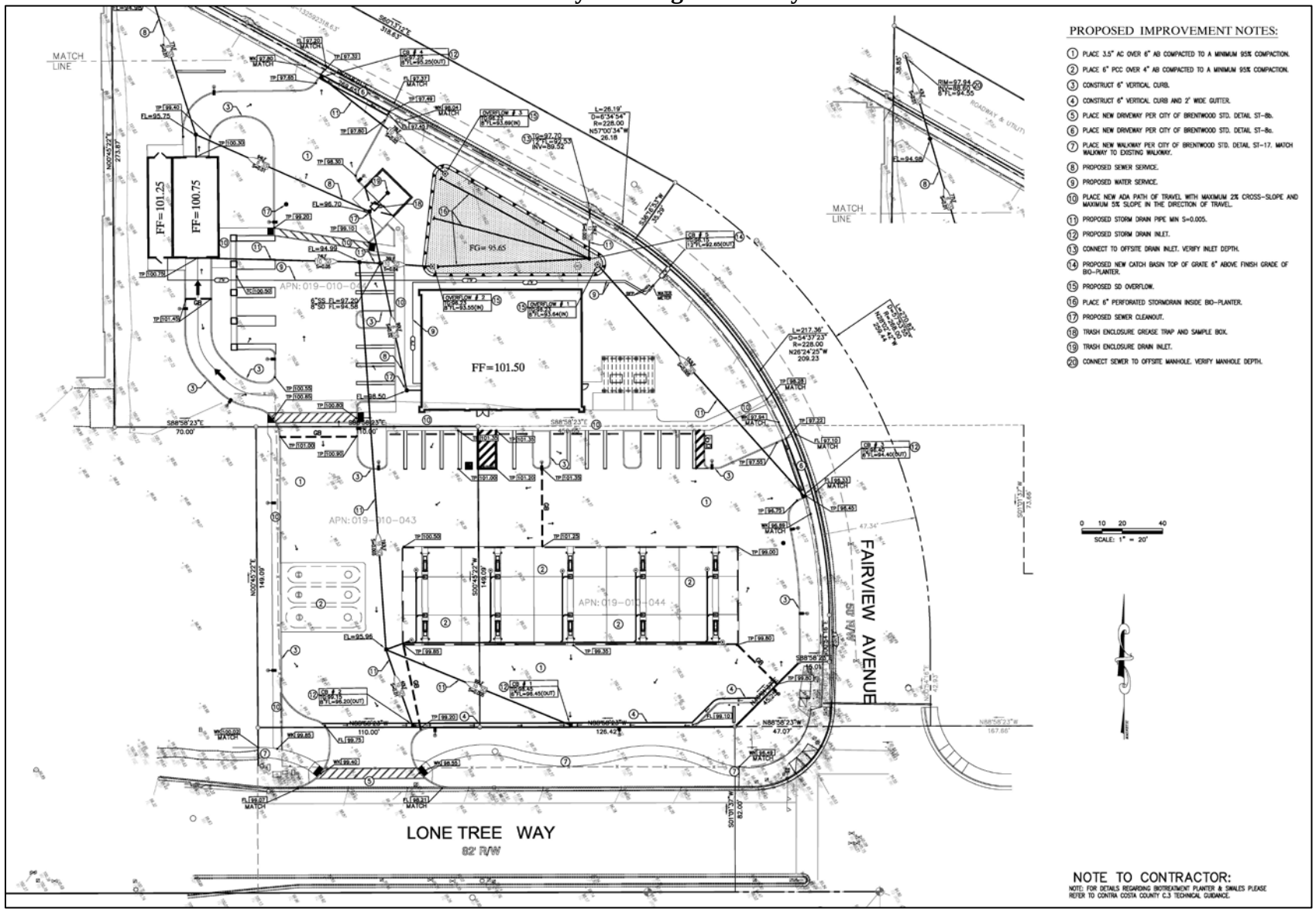
Utilities

The proposed project would connect to an existing sewer manhole through a new six-inch sanitary sewer line from the convenience store and car wash. The sewer system would include a sewer cleanout, located north of the proposed convenience store, prior to connection to the public manhole on Fairview Avenue. Sewer cleanouts are used for the purpose of making clogs and leaks easier to fix. Additionally, gases can build up in piping, and a sewer cleanout caps the gases, preventing them from leaking in the air.

Water would be provided to the convenience store and the car wash through a two-inch water line connecting to an existing public water main in Fairview Avenue. A water meter would be included with connection to the main line.

Stormwater draining off impervious surfaces such as roofs, parking areas, and streets within the project site would be transported through storm drains to an on-site bio-retention basin north of the convenience store. The bio-retention basin would be constructed of layers of cobbles, soil mix, gravel, and plants, to maintain water below specified elevations. Stormwater would flow from the project site through a series of 10-inch storm drain pipes to the bio-retention basin. The bio-retention basin would be underlain with a six-inch perforated storm drain that would connect to the existing 12-inch public storm drain in Fairview Avenue. The bio-retention basin would also have three overflow points from drain pipes on the project site. Additionally, the site would have three overland release points at each driveway. All utilities are shown in Figure 5 below.

Figure 5
Preliminary Grading and Utility Plan



Design and Site Development Review and Conditional Use Permit

Per Chapter 17.820 of the City's Municipal Code, the proposed project would be subject to Design and Site Development Review by the City. The proposed project would be reviewed based on the standards set forth in Section 17.820. Specifically, the site plans would be analyzed based on elements of design, development location, arrangement of all structures, and design in harmony with surrounding facilities. The purpose of the regulations is to allow design and site development review of all developments, signs, buildings, structures, and other facilities in order to further enhance the City's appearance, and the livability and usefulness of properties.

Additionally, the proposed project would be required to obtain a conditional use permit, which would be processed pursuant to Chapter 17.800.010 of the City's Municipal Code. Per Chapter 17.488.033 of the Municipal Code, drive-in establishments, including gas stations, are considered a conditionally permitted use in Subarea A.

Discretionary Actions

The proposed project would require the following approvals from the City of Brentwood:

- Adoption of the IS/MND;
- Approval of a Mitigation Monitoring and Reporting Program;
- Approval of a Conditional Use Permit; and
- Design and Site Development Review.

Additionally, the proposed project would require approval from the Bay Area Air Quality Management District (BAAQMD) for a permit to operate.

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 identified in the checklist. For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has 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.

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

Discussion

a,b. Examples of typical scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. The topography of the City's Planning Area is characterized by the relatively flat terrain of the Central Valley, with gently sloping hills in the western and southwestern portion of the area approaching the foothills of the Diablo Range. The City of Brentwood has recognized views of Mount Diablo as an important visual resource to be preserved (see Policy COS 7-3 of the Conservation and Open Space Element of the Brentwood General Plan). Public spaces and/or public viewing or sightseeing areas do not exist within the vicinity of the proposed project site, and, thus, the project would not change or remove a scenic vista or affect views from such areas. Thus, because the proposed project would not change or remove a scenic vista, the project would not adversely affect any scenic views from such areas in the project vicinity.

The proposed project would adhere to Section 17.488.017, Development Standards, of the Municipal Code, and would not develop the proposed structures to a height which would obstruct views of Mt. Diablo and the foothills from Lone Tree Way and the SR 4 Bypass. Additionally, the proposed project would include a landscape screen that would help block views of the car wash area from Fairview Avenue.

According to the California Scenic Highway Mapping System, the project site is located approximately one mile from State Route (SR) 4, which is listed as an eligible State Scenic Highway.[3] The project site is not visible from SR 4, and the proposed project would be

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

visually consistent with existing commercial and industrial development in the project vicinity. Thus, the proposed project would not have the potential to alter the scenic nature of SR 4.

Based on the above, development of the proposed project would not have a substantial adverse effect on a scenic vista and would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. Thus, a ***less-than-significant*** impact would occur.

c. The project site is located within an urbanized area of the City of Brentwood, with existing commercial and industrial developments to the east and west, as well as commercial developments to the southeast and residential developments to the south. As such, the project site is lacking in scenic character or quality, as is the surrounding vicinity. The project site is visible from the public right-of-way along Lone Tree Way and Fairview Avenue. Following implementation of the proposed project, public views of the project site would change from an empty, disturbed lot, to a developed service station, with associated landscaping.

Views from the single-family homes south of Lone Tree Way would be shielded by an existing sound wall, as well as existing trees and vegetation of varying heights. Additionally, the proposed project would include landscaping along the site's frontage on Lone Tree Way. Landscaping would be designed with shrubs and groundcovers of varying types. All landscaping and screening would be designed according to Chapter 17.630 of the City's Municipal Code. Thus, the proposed project would not be visible from the residences.

The proposed project would be consistent with the existing General Plan land use and zoning designations for the project site. Given that the proposed project would be consistent with the General Plan land use and zoning designations of the site, buildout of the proposed project and associated changes to the visual character and quality of the site have been anticipated by the City, analyzed in the General Plan EIR, and would not conflict with zoning designations for the project site. Additionally, the proposed project would require a Design and Site Development Review pursuant to Chapter 17.820 of the City's Municipal Code. As part of the design review process, the project would be reviewed for conformance with the City's design guidelines, which include provisions related to architectural design, landscaping, exterior materials, and compatibility with existing uses. The Design and Site Development Review process would ensure that the proposed project would not result in conflict with any applicable regulations governing scenic quality and would be visually consistent with the industrial and commercial developments and structures that exist in the vicinity of the project site.

Given that the proposed project is currently lacking in visual character and scenic quality, and would not conflict with applicable zoning and other regulations governing scenic quality, the proposed project would not degrade the existing visual character or quality of public views of the site and surrounding vicinity and, thus, a ***less-than-significant*** impact would occur.

d. Due to the undeveloped nature of the project site, existing sources of light and glare currently do not exist within the site. However, street lights exist along Lone Tree Way in proximity to the project site. In addition, the surrounding developments feature outdoor and indoor lighting fixtures.

Development of the project site with a service station and parking areas would involve potential sources of light and glare associated with interior light spilling through windows, exterior lighting at the convenience store, and surrounding the gas pumps, and light reflected off windows. However, such sources of light and glare would not be substantially more intensive than what currently occurs in the vicinity of the project site, and would be consistent with the type of lighting anticipated for the project site per the City's General Plan land use and zoning designations for the site. Furthermore, through the City's Design and Site Development Review process, the proposed project would be reviewed for consistency with the City's Design Guidelines.[4] The guidelines require the project use non-glare fixtures, pedestrian-scale lighting, and visually-attractive fixtures. Compliance with the City's Design Guidelines would ensure that lighting from the proposed project would not adversely affect the visual resources of the surrounding area.

Given the consistency of the proposed project with the General Plan and zoning designations as well as with the surrounding commercial and industrial development, and that the Design and Site Development Review process would include plan checks to ensure that proposed lighting features are properly designed to avoid light spillage onto nearby commercial, industrial, or residential developments, or into the night sky, implementation of the project would result in a ***less-than-significant*** impact with respect to creating a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

[4] City of Brentwood. *Commercial and Industrial Design Guidelines [pg. 8]*. Adopted March 13, 2001.

II. AGRICULTURE AND FOREST RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	✖
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	✖
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	✖
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	✖
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	✖

Discussion

a,b,e. Currently, the site is vacant and undeveloped. While the project site was historically used for agricultural purposes, the site has not been used recently for agricultural production and is currently designated as "Urban and Built-Up Land" per the California Department of Conservation Farmland Mapping and Monitoring Program.[5] Furthermore, the site is not zoned or designated in the General Plan for agriculture uses. Given the Urban and Built-Up Land designation of the site, development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, or otherwise result in the loss of Farmland to non-agricultural use.

Currently, the project site is designated GC per the City's General Plan and is zoned PD-38. Thus, the City has anticipated development of the site with commercial uses. The site is not under a Williamson Act contract and is not zoned for agricultural uses. Therefore, buildout of the proposed project would not convert Prime Farmland, conflict with existing zoning for agricultural use or a Williamson Act contract, or involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, 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]).

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

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.

III. AIR QUALITY. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	✖	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	✖	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	✖	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	✖	☐

a,b. The City of Brentwood is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the BAAQMD. The SFBAAB area is currently designated as a nonattainment area for the 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 emissions of 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

	Construction	Operational	
Pollutant	**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, trip generation rates, 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 March 2020;
- Construction would occur over an approximately eight-month period;
- The CO_2 intensity factor was adjusted to reflect PG&E's progress towards the State renewable portfolio standards goal by the operational year (anticipated to be 2021);
- A total of 2.24 acres of land would be disturbed;
- A total of 60 cubic yards of material would be exported during construction;
- The project-specific trip generation rate provided in the Traffic Impact Analysis prepared for the proposed project was applied; and
- The proposed project's required compliance with the 2016 Building Energy Efficiency Standards listed in the California Building Standards Code was assumed.

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 an appendix 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, NO_X, PM_{10}, and $PM_{2.5}$.

Table 2
Maximum Unmitigated Construction Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	2.18	54	**NO**
NO_X	11.0	54	**NO**
PM_{10} (exhaust)	0.64	82	**NO**
PM_{10} (fugitive)	1.05	None	**N/A**
$PM_{2.5}$ (exhaust)	0.59	54	**NO**
$PM_{2.5}$ (fugitive)	0.46	None	**N/A**

Source: CalEEMod, March 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.

Even without consideration of BAAQMD's Basic Construction Mitigation Measures, as shown in Table 2, construction of the proposed project would result in emissions of criteria air pollutants below BAAQMD's thresholds of significance. Consequently, the proposed project would not conflict with air quality plans during project 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	2.67	0.42	54	10	**NO**
NO_X	7.51	1.36	54	10	**NO**
PM_{10} (exhaust)	0.03	0.00	82	15	**NO**
PM_{10} (fugitive)	2.07	0.36	None	None	**N/A**
$PM_{2.5}$ (exhaust)	0.03	0.00	54	10	**NO**
$PM_{2.5}$ (fugitive)	0.5	0.10	None	None	**N/A**

Source: CalEEMod, March 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. Because the proposed project would not result in emissions above the applicable thresholds of significance for ROG, NO_X, PM_{10}, or $PM_{2.5,}$ the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state AAQS.

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 not result in construction-related or operational emissions of criteria air pollutants in excess of BAAQMD's thresholds of significance, conflicts with or obstruction of the implementation of the applicable regional air quality plans would not occur. In addition, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state AAQS. Thus, a ***less-than-significant*** impact would result.

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 receptors would be the single-family residences located south of the project site, across Lone Tree Way.

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, the 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 proposed project's increase in net daily vehicle trips and peak hour trips would not cause a reduction in the level of service of any intersection or roadway in the area covered by Contra Costa Transportation Authority (CCTA) or City of Brentwood standards. Additionally, the proposed project would be consistent with the General Plan land use and zoning designation for the site, which both serve to provide traffic forecasts to the CCTA. Thus, traffic associated with development of the site has been anticipated, and the project would be consistent with the applicable CMP, regional transportation plan, and local congestion management agency plans.

According to the Traffic Impact Analysis (TIA) prepared by Abrams Associates for the proposed project, the nearby intersection of Lone Tree Way and Fairview Avenue experiences a PM peak hourly traffic volume of 1,101 trips. The proposed project would result in an increase of a maximum of 176 new AM peak hour trips and 147 new PM peak hour trips, which would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.[6] Furthermore, intersections where air mixing is inhibited do not exist in proximity to the project site. Thus, the proposed project would not increase traffic volumes at an affected intersection to more than 44,000 vehicles per hour, or 24,000 per hour where vertical and/or horizontal mixing is limited. 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,

[6] Abrams Associates. *Transportation Impact Analysis Rotten Robbie Project.* March 1, 2019.

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 proposed project would introduce a new gasoline service station that would have associated TAC emissions. The CARB Handbook recommends a setback of 300 feet from a sensitive receptor to a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater) or a setback of 50 feet from a typical dispensing facility (defined as a facility with a throughput of less than 3.6 million gallons per year).[7] The proposed gas station is anticipated to involve a throughput of two million gallons per year of gasoline and 100,000 gallons per year of diesel, and would, thus, be considered a typical gas dispensing facility. The nearest sensitive receptor would be located approximately 175 feet south of the project site (as measured from the closest corner of the project site to the fence line of the nearest residence). The distance between the gas pumps, which would be the source of emissions, and the nearest receptor would be greater. Therefore, the proposed gas station would be located outside of the CARB-recommended setback of 50 feet for typical gas dispensing facilities and would not be expected to expose sensitive receptors to substantial pollutant concentrations. Furthermore, CARB regulations require vapor-recovery boots be applied on dispensing nozzles, which limits the release of gas vapors while vehicles are being refueled. In addition, the proposed project would be required to obtain a BAAQMD Permit to Operate. Compliance with the Permit to Operate would help to ensure emissions are minimized and comply with all relevant BAAQMD rules and regulations.

The proposed project does not include any other operations or activities 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. 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 one year. 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. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources.

[7] California Environmental Protection Agency California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective [pg. 32]*. April 2005.

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 NAAQS and CAAQS, and are designed to aid the district in achieving attainment of the NAAQS and CAAQS. [8] The BAAQMD's thresholds of significance are intended to aid achievement of the NAAQS and CAAQS 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. Accordingly, the proposed project would not expose sensitive receptors to excess concentrations of criteria pollutants.

Conclusion

Based on the above discussion, the proposed project would not expose any sensitive receptors to substantial concentrations of criteria pollutants or localized CO or TACs during construction or operation. Therefore, the proposed project would result in a ***less-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, emissions that have the potential to cause dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in sections "a" through "d" 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.[9] 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

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

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.

The proposed project would include a gasoline dispensing facility, which could generate odorous emissions. However, as noted previously, the proposed fueling station would be located over 175 feet away from the nearest sensitive receptors. Emissions in the vicinity would also be highly dispersive and transported by winds. Given the distance to the nearest sensitive receptor, dispersion could dissipate any potential emissions. Additionally, gas pumps are required by CARB to include a government-regulated vapor-recovery boot on the dispensing nozzles, which limits the release of gas vapors while vehicles are being fueled. A similar system is used when the underground tanks are being refilled. Therefore, the gasoline dispensing facility included in the proposed project would be unlikely to result in emissions adversely affecting the nearest receptor.

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 per Action N-1e of the General Plan. 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.

As noted previously, all projects under the jurisdiction of BAAQMD are required to implement the BAAQMD's Basic Construction Mitigation Measures. Such measures would act to reduce construction-related dust by ensuring that haul trucks with loose

material are covered, reducing vehicle dirt track-out, and limiting vehicle speeds within project site, among other methods, 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.

IV. BIOLOGICAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	✖	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	✖
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	✖
d. Interfere substantially with the movement of any 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 discussion is based primarily on a Planning Survey Report (PSR) prepared for the proposed project by Moore Biological Consultants.[10] On October 4, 2018, Moore Biological Consultants conducted a field survey as part of the PSR to assess potentially suitable habitat for special-status plants and animals. Additionally, a search of the California Natural Diversity Data Base (CNDDB) was performed 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), consistent with the California Department of Fish and Wildlife (CDFW) recommended methodology. 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 determine habitats suitable

[10] Moore Biological Consultants. *Application Form and Planning Survey Report Rotten Robbie Brentwood*. January 2019.

for special-status species within the site. The results of the database searches and field survey are discussed below.

Special-status species include the following:

- 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;
- CDFW special-status invertebrates and 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; and
- Sensitive species included in USFWS Recovery Plans.

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.

Currently, the site is vacant and vegetated with ruderal grassland vegetation that has been substantially disturbed by past agricultural use, development on the site and on the surrounding parcels, and other human activities. The grassland is periodically disked and/or mowed. The site does not contain any existing trees on the project site.

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. According to the PSR, 2.11 acres of the project site are classified as ruderal, while 0.35 acres are considered urban (See Figure 6). The project site is located within Zone 1 of the Fee Payment Zones designated in the ECCCHCP/NCCP. As per the Fee Payment Zones, the proposed project would be subject to payment of all applicable fees prior to construction of the project.

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. The grassland habitat within the project site has been disturbed by past agricultural uses of the site, development of areas adjacent to the project site, grading of the project site, and periodic disking of the site. Due to the history of intensive disturbance of the site and the adjacent area, although 48 special-status plant species occur or have been

Figure 6
ECCCHCP/NCP Landcover Map

recorded within the project region, the project site does not provide suitable habitat for any special-status plant species. In addition, special-status plants were not identified during the field survey conducted on the project site as part of the PSR.

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

Based on the results of the CNDDB search, at total of 40 special-status wildlife species have been recorded within the project region. Although 40 special-status species were identified for the project region, the project site does not represent high-quality habitat for any of the identified species. As noted previously, the site has been disturbed through past agricultural uses of the site, development of the project site, and periodic disking. The grassland habitat that exists within the project site lacks open water, rocky outcroppings, marshes or creeks, chaparral vegetation, elderberry shrubs, aquatic vegetation, or other types of high-quality habitat that could provide habitat for special-status species. Additionally, the project site is surrounded by developed land uses. The surrounding development reduces the viability of the project site to provide habitat for any special-status species. As noted above, the project site is within the boundaries of the ECCCHCP/NCCP. According to the ECCCHCP/NCCP, and the PSR, despite the low quality of the existing habitat within the project site, grassland vegetations provide potential habitat for the western burrowing owl (*Athene cunicularia*), as well as foraging habitat for the 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.

The potential for the three species listed above to occur on-site is discussed in further detail below.

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 that is within the range of western burrowing owl. CNDDB contains one occurrence of western burrowing owl within 0.5-mile of the site. The site was inspected for burrowing owls and ground squirrel burrows with evidence of burrowing owl occupancy (i.e. white wash, pellets, feathers). Several ground squirrel

burrows were observed along the north and south edges of the site, but burrowing owls were not observed (See Figure 7).

As such, given the surrounding commercial development, the burrowing owl would not be likely to utilize the grasslands on the project site. However, if a burrowing owl were to use the grassland habitat, construction and operation of the proposed project could result in a potentially significant impact on the species.

Swainson's Hawk

Swainson's hawks are known to breed and forage in grassland habitats similar to the ones found on the project site. However, Swainson's hawks were not observed during the field survey, and due to the location of the site in an urban area, the likelihood of a Swainson's foraging on site is low. Trees that would provide nesting habitat are not present on site, and only a few potential nesting trees are near and visible from the site. The few viable trees off-site were inspected and did not contain any Swainson's hawk nests. Swainson's hawks were not observed during the field survey. Furthermore, the CNDDB does not contain occurrences of Swainson's hawk within 1,000 feet of the site or in the larger area (see Figure 7). Nonetheless, if a Swainson's hawk were to nest in the vicinity or forage on the project site, ground-disturbing activities associated with the proposed project could result in a potentially significant impact to the species.

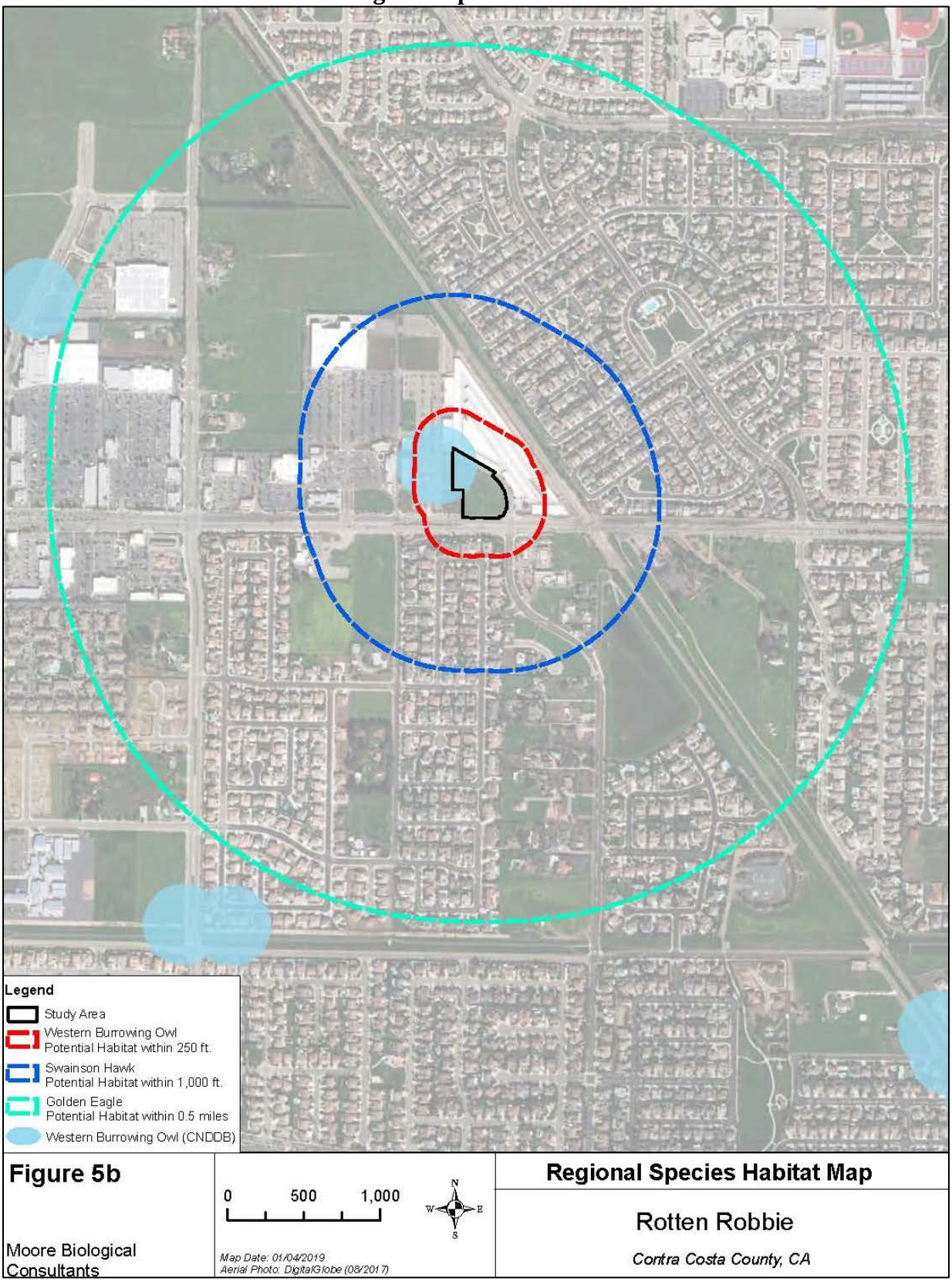
Golden Eagle

Golden eagles are a bird of prey in the Northern Hemisphere, known to forage in valley grassland habitats, where they can feed on a variety of prey, mainly hares, rabbits, and ground squirrels. Their breeding activities take place in the spring. The grassland habitat on the project site could support a diverse and abundant community of rodents that an assemblage of raptors, including golden eagles, could feed on. Additionally, a few trees in the vicinity could provide potential nest sites. However, nests were not found during the off-site tree inspection, and golden eagles more often nest on cliffs in remote natural areas than in trees near urban areas. Furthermore, golden eagles were not observed in or around the project site during the field survey, nor were any identified on CNDDB as having occurred within 0.5-mile of the project site. Given the low probability of golden eagles to occur on site, the proposed project would not have a significant impact on the species.

Nesting Raptors and Migratory Birds

While the project site does not contain any trees, shrubs and grasslands on the site and along the project frontages may be used by other raptors and migratory birds protected by the MBTA for foraging. 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, project-related activities that would occur during the breeding season could result in an adverse effect to species protected under the MBTA, should such species be present.

Figure 7
Regional Species Habitat



Conclusion

Based on the above, although the field survey did not identify any special-status species within the project site, and the site is considered low-quality habitat, implementation of the proposed project could potentially affect western burrowing owl, Swainson's hawk or 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. Therefore, 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 grading or construction permits for the project site, the developer shall pay the applicable HCP/NCCP per-acre fee in effect for the applicable zone in compliance with Section 16.168.070 of the Brentwood Municipal Code.*

Western Burrowing Owl

IV-2. *The project applicant shall retain a qualified 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.*

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 of at least 250 feet around each occupied burrow (nest site) in which no construction activities shall occur. The buffer shall be delineated by highly visible, temporary construction fencing.

If burrowing owls are found 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 of 160 feet around each burrow. The buffer 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. The doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows shall 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 HCP/NCCP, which are conducted during the nesting season (March 15-September 15), a qualified biologist shall conduct a preconstruction survey no more than 30 days 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 Brentwood Community Development Department. If occupied nests occur on-site or within 250 feet of the project site, then Mitigation Measure IV-3(b) shall be implemented. If occupied nests are not found, further mitigation is not necessary.*

IV-3(b). *During the nesting season (March 15-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., dense vegetation, limited activities) indicate that a smaller buffer could be used, the City of Brentwood may coordinate with CDFW/USFWS to determine the appropriate buffer size. If young fledge prior to September 15, covered activities may proceed normally.*

Migratory Birds

IV-4(a). *Prior to any ground disturbance related to covered activities during the nesting season (March 15-September 15), a qualified biologist shall conduct a preconstruction survey no more than 30 days 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 Brentwood Community Development Department. If occupied nests occur on-site or*

within 250 feet of the project site, then Mitigation Measure IV-4(b) shall be implemented. If occupied nests are not found, further mitigation is not necessary.

IV-4(b). *During the nesting season (March 15-September 15), 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 City of Brentwood 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 site was performed as part of the field survey conducted on October 4, 2018 as part of the PSR. According to the PSR, the site is a leveled field vegetated with upland ruderal grasses and weeds that are periodically mowed or disked, and the project site does not contain riparian habitat or other sensitive natural communities, including wetlands. Therefore, the proposed project would not have a substantial adverse effect on riparian habitat, sensitive natural communities, or federally protected wetlands, and ***no impact*** would occur.

d. The project site is located in an urbanized area and is bordered by existing roadways to the south and east, commercial and industrial developments to the north and west, and residential development farther to the south. Thus, the surrounding area does not support any wildlife movement corridors. The project site or surrounding area does not contain streams or other waterways that could be used by migratory fish or as a wildlife corridor for other wildlife species. 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. Thus, a ***less-than-significant*** impact would occur.

e. The project site does not contain any trees and would not involve the removal of any trees in the surrounding area. The site contains ruderal grasses and weeds that are mowed or disked periodically. Thus, because the project would not remove any protected trees, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and a ***less-than-significant*** impact would occur.

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 burrowing owl

and special-status raptors, as adapted from Chapter 6 of the ECCCHCP/NCCP, have been included in Mitigation Measures IV-1 through IV-3 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. The proposed project fees have been calculated and would be required to be paid in the estimated amount of $33,178.63. 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 Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

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

Discussion

a-c. Cultural resources include buildings, sites, structures, objects or districts, each of which may have historical, architectural, archaeological, cultural, or scientific significance. CEQA §5024.1 (Public Resources Code §5024.1) and §15064.5 of the State CEQA Guidelines (14 California Code of Regulations §15064.5) define a historical resource as a resource listed or eligible for listing on the California Register of Historical Resources. A historical resource may be eligible for inclusion in the California Register of Historical Resources if the resource:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2) Is associated with the lives of persons important to our past;
3) Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values; or
4) Has yielded, or may be likely to yield, information important to prehistory or history.

Solano Archaeological Services conducted a Cultural Resources Study for the proposed project to assess the effects of the project on cultural resources.[11] The study included outreach to local tribes to request information on unrecorded cultural resources that may exist in the project area, as well as records searches by the Native American Heritage Commission (NAHC) of the Sacred Lands File database, and of the California Historical Resources Information System (CHRIS). The cultural report also reviewed a series of historic USGS topographic maps and historic aerial photographs to gather information on past land use and historic development on the project site. Following a records search, Solano Archaeological Survey conducted an intensive pedestrian survey of the entire 2.24-acre project site using parallel transects spaced 15 meters apart. Rodent burrows and other ground openings were thoroughly inspected, and the property was documented with digital photographs.

[11] Solano Archaeological Services. *Cultural Resources Study-Rotten Robbie Project, Contra Costa County, California*. October 25, 2018.

The search performed by the NAHC of the Sacred Lands File yielded negative results. In addition, a records search of the CHRIS performed at the Northwest Information Center (NWIC) for cultural resource site records and survey reports within the proposed project area resulted in negative findings. One archaeological resource was discovered within one half mile at 6820 Lone Tree Way. According to historic maps from 1914-2012, a variety of structures were present on the project site, but have long since been removed and the site is now completely void of buildings of any kind. During the survey of the site, cultural resources were not identified.

Based on the above, both the NAHC and NWIC searches were negative for cultural resources in the project area. During the on-site survey, cultural resources were not observed. The general vicinity does not exhibit geomorphic features that could be considered archaeologically sensitive. Therefore, buildout of the proposed project would not be likely to result in the discovery of cultural resources on-site.

While cultural resources have not been discovered on the project site in the past, the proposed project would include ground disturbance across the entire project site, and thus, could have the potential to impact unknown archaeological resources, including human remains, and/or historic resources during ground-disturbing activity related to project construction. Therefore, the proposed project could cause a substantial adverse change in the significance of a historic or archaeological resource pursuant to CEQA Guidelines Section 15064.5, and/or disturb human remains, including those interred outside of formal cemeteries during construction. Therefore, impacts could be considered ***potentially significant***.

Mitigation Measure(s)

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

V-1. *Prior to grading permit issuance, the developer shall submit plans to the Community Development Department for review and approval which indicate (via notation on the improvement plans) that if historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet and the developer shall immediately notify the Community Development Department of the discovery. In such case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Community Development Department 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 shall not be allowed until the preceding work has occurred.*

V-2. *If human remains, or remains that are potentially human, are found during construction, a professional archeologist shall ensure reasonable*

protection measures are taken to protect the discovery from disturbance. The archaeologist shall notify the Contra Costa County Coroner (per §7050.5 of the State Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission (NAHC), which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the applicant does not agree with the recommendations of the MLD, the NAHC can mediate (§5097.94 of the Public Resources Code). If an agreement is not reached, the qualified archaeologist or most likely descendent must rebury the remains where they will not be further disturbed (§5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center, using an open space or conservation zoning designation or easement, or recording a reinternment document with the county in which the property is located (AB 2641). Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

VI. ENERGY. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Result in potentially significant environmental 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 periodic inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 sf to ensure that all are working at their maximum capacity according to their design efficiencies; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

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 five percent reduction in energy consumption from the 2013 standards for commercial 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.

Construction Energy Use

Construction of the proposed project would involve on-site energy demand and consumption related to the use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and material 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 site 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.

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),[12] 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 In-Use Off Road 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.

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

The proposed project is consistent with the General Plan land use designation, and thus, construction of a commercial project has been anticipated by the General Plan. Buildout of the proposed project and associated energy use has been similarly anticipated.

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 service center uses, requiring electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, 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 employee commutes, patrons to the project site, and the movement of goods.

The proposed 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. 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 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.

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 XVIII, Transportation, of this IS/MND, the project site is located within close proximity to existing residences, other industrial uses, bicycle infrastructure, and transit infrastructure. The site is also located on a major arterial in the City, and, thus, would be a stop on an already determined path for several customers. As discussed in the TIA for the proposed project, the trip generation, as determined by the Institute of Transportation Engineers' (ITE) Trip Generation Manual, could be reduced to account for pass-by trips. The reduced number of vehicle trips account for vehicles already in the adjacent traffic stream and are not considered new trips to the area. Additionally, trips made

to the project site could be from patrons of the convenience store walking or biking from the nearby residences or commercial uses.

While the nature of the proposed project involves providing fossil fuels, the project itself would not directly increase the demand for or use of fossil fuels above what already occurs within the community. As the State implements reduction strategies to limit the use of fossil fuels, the proposed project would only supply as much as is demanded by patrons. Additionally, the proposed project would be required to adhere to programs set forth by the CARB to reduce energy emissions. The fuel enforcement program regulates the composition of motor vehicle fuels and ensures compliance with motor vehicle fuel regulations, including reformulated gasoline, diesel fuel, and vapor recovery regulations. Vapor recovery systems typically include a cap on the dispensing nozzle to prevent any emission escape, as well as a pressurized system that prevents any spills or waste of gasoline.

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.

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

Discussion

The following discussion is based on a Geotechnical Study performed for the project site by Korbmacher Engineering, Inc.[13]

ai-ii. According to the Geotechnical Study, the nearest active faults to the project site are the Great Valley Fault and the Greenville Fault, located 7.53 and eight miles from the project site, respectively. Known active or potentially active faults do not exist on the project site. Given that known surface expressions of fault traces do not exist within the site, fault rupture hazard is not a significant geologic hazard at the site.

[13] Korbmacher Engineering, Inc. *Geotechnical Study Rotten Robbie Brentwood.* December 18, 2018.

Additionally, the proposed buildings would be properly engineered in accordance with the CBSC, which includes engineering standards appropriate for the seismic area in which the project site is located. Proper engineering of the proposed project would ensure that seismic-related effects would not cause adverse impacts. Furthermore, the site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone. Therefore, a ***less-than-significant*** impact would occur related to seismic rupture of a known earthquake fault or 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

Liquefaction is a phenomenon in which granular material is transformed from a solid state to a liquefied state as a consequence of increased pore-water pressure and reduced effective stress. Increased pore-water pressure is induced by the tendency of granular materials to densify when subjected to cyclic shear stresses associated with earthquakes.

Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and bedded with poor drainage, such as sand and silt layers bedded with a cohesive cap. Groundwater at the site was not encountered in borings and is expected to fluctuate due to variations in rainfall, groundwater recharge, and site conditions. Korbmacher Engineering, Inc. concluded that the site has a low potential for liquefaction, in general agreement with local mapping for the site by the California Geological Survey (CGS).

Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The project site is a flat surface, and is not located on or near any slopes. Additionally, the project site is not located near any large known landslides and is not in the path of any known or potential landslides. Furthermore, the CGS does not place the project site in a zone at risk of landslides.[14] Thus, landslides are not likely to occur on- or off-site as a result of the proposed project.

Lateral Spreading

Lateral spreading or lurching is a situation in which soil mass deforms laterally toward a free face, such as an excavation, channel, or open body of water, during a seismic event. The failure occurs along a liquefiable or weak subsurface layer. Based on the Geotechnical Study, the potential for lateral spreading to affect the project site is low.

[14] California Department of Conservation. *California Geologic Survey*. Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed March 19, 2019.

Subsidence/Settlement

Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, or desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The General Plan EIR determined that subsidence in Contra Costa County has occurred primarily along the Delta. Subsidence in the City of Brentwood has not been considered a significant issue. As such, issues related to subsidence or settlement on the project site would be less than significant.

Conclusion

While the risk of geotechnical hazards may always exist due to uncertainties of geologic conditions and the unpredictability of seismic activity in the area, the Geotechnical Study found that the site does not indicate the presence of the above-discussed geotechnical hazards that would preclude use of the site for the proposed development. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction or landslides, and would not 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, and a ***less-than-significant*** impact would occur.

b. The project site currently consists primarily of ruderal grassland. 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. Expansive soils can undergo significant volume change with changes in moisture content. Specifically, such soils shrink and harden when dried and expand and soften when wetted. If structures are underlain by expansive soils, foundation systems must be capable of tolerating or resisting any potentially damaging soil movements, and building foundation areas must be properly drained.

During exploratory borings conducted on the project site, Korbmacher Engineering, Inc. found that the near-surface soils consisted of sandy and silty clays. The results indicated that the sandy clay has a low to moderate expansion potential and the silty clay has a moderate to high expansion potential. Additionally, according to the U.S. NRCS Web Soil survey, the soils underlying the project site have a linear extensibility rating of 10 percent.[15] According to the General Plan Draft EIR, the shrink-swell potential is considered very high if the rating is more than nine percent. Therefore, a ***potentially significant*** impact could occur related to being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code, thereby creating substantial direct or indirect risks to life or property.

[15] *Ibid.*

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

VII-1. *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 Investigation are properly incorporated and utilized in the project design.*

e. The proposed project would connect to existing City sewer services. Thus, the construction or operation of septic tanks or other alternative wastewater disposal systems is not included as part of the project. Therefore, ***no impact*** regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.

f. The City's General Plan indicates that known paleontological resources do not exist within the City Planning Area. However, development allowed under the General Plan could result in the discovery and disturbance of previously unknown or undiscovered paleontological resources. Geologic formations, including the Upper Cretaceous marine sedimentary rocks and various Quaternary subunits, that have a moderate to high potential for paleontological resources, are present throughout many areas of the City. The City's General Plan EIR concluded that with implementation of Action COS 6e, which requires all new development projects to comply with procedures upon discovery of unique paleontological resources, impacts related to disturbance of paleontological resources would be less than significant.

As noted in the City's General Plan EIR, the majority of the City is underlain by Quaternary Marine/Alluvium, which contains mostly nonmarine unconsolidated alluvium, lake, playa, and terrace deposits. Such soil types are not considered unique geologic features and are common within the geographic area of the City. Furthermore, the City's General Plan does not note the existence of any unique geologic features within the City. Consequently, implementation of the proposed project would not be anticipated to have the potential to result in direct or indirect destruction of unique geologic features.

Although the proposed project would not have the potential to result in the destruction of unique geologic features, previously unknown paleontological resources could exist within the project site. Thus, ground-disturbing activity, such as grading, trenching, or excavating associated with implementation of the proposed project, would have the potential to disturb or destroy such resources. Therefore, the proposed project could result in the direct or indirect destruction of a unique paleontological resource, and a ***potentially significant*** impact could occur.

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

VII-2. *Should construction or grading activities result in the discovery of unique paleontological resources, all work within 100 feet of the discovery shall cease. The Community Development Director shall be notified, and the resources shall be examined by a qualified archaeologist, paleontologist, or historian, at the developer's expense, for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist, paleontologist, or historian shall submit to the Community Development Department for review and approval a report of the findings and method of curation or protection of the resources. Work may only resume in the area of discovery when the preceding work has occurred.*

VIII. GREENHOUSE GAS EMISSIONS. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	✖	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	✖	☐

a,b. Emissions of greenhouse gases (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. All modeling outputs are included as an appendix to this IS/MND.

Based on the modeling results, construction of the proposed project, which is anticipated to occur over an approximately one-year period, would result in total GHG emissions of 123.8 $MTCO_2e$/yr over the entire construction period. Additionally, operational GHG emissions were determined to equal 518.0 $MTCO_2e$/yr. Consequently, even if project operational and construction emissions were conservatively considered together, the total project GHG emissions of 641.8 $MTCO_2e$/yr would be well below BAAQMD's threshold of 1,100 $MTCO_2e$/yr. Consequently, neither construction nor operation 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, thus, resulting in a ***less-than-significant*** impact.

IX. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	✖	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the 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 the risk of loss, injury or death involving wildland fires?	☐	☐	✖	☐

Discussion

a. A Phase I Environmental Site Assessment (ESA) was prepared for the proposed project by Environmental Investigation Services, Inc. for the purpose of identifying potential recognized environmental conditions (RECs) associated with the project site.[16] The following is a discussion of the existing and future conditions of hazardous materials on the project site.

Existing On-Site Hazardous Materials

The Phase I ESA included a survey of the site and a review of historical documentation, aerial photography, regulatory agency files, and environmental site radius reports. Historical sources reviewed as part of the Phase I ESA indicate that the project site was

[16] Environmental Investigation Services, Inc. *Phase I Environmental Site Assessment 6860 Lone Tree Way, Brentwood, CA*. February 5, 2018.

used for agricultural purposes (hay production) from at least 1940 to 1998. In 2005, the project site was graded, cleared of all agriculture and associated structures, and surrounded by development.

Per the Phase I ESA, features such as septic systems, wells, above-ground storage tanks, underground storage tanks, liquid waste, hazardous substances and petroleum products, and solid waste were not identified on the site.

Although not documented at the subject property, past agricultural activities within the site may have included the use of pesticides, fertilizers, or other chemicals. However, agricultural activities have not been conducted on the site for over 20 years. Agricultural uses could result in concentrations of residual chemicals being present in the near surface soil if use or storage of pesticides, fertilizers, or other chemicals has occurred. However, pesticides, fertilizers, or other chemicals were not known to have been stored, mixed, or disposed of on-site. Consequently, given that the proposed project would not involve the introduction of a sensitive use and the site would be primarily covered by impervious surfaces, the likelihood that organochlorine pesticides and metal compounds related to past agricultural uses would result in a negative impact is low.

Operation-Associated Hazards

The proposed project would be required to obtain a conditional use permit and adhere to all requirements set forth by the City in the permit related to operational use. Fuel would be stored on-site in underground storage tanks (USTs), which would dispense fuels through 20 pumps. The USTs would be equipped with leak detection alarm systems and emergency shut off capabilities.

It should be noted that the underground storage of hazardous materials is subject to the provisions of the California Health and Safety Code and Title 23 of the California Code of Regulations. The Contra Costa Health Services Hazardous Materials Programs (CCHSHM) is the designated local agency assigned to implement the program to protect the public health from exposure to hazardous materials stored in the USTs, including the protection of groundwater from contamination. In order to meet the requirements of the CCHSHM, the project would be subject to annual inspections and the issuance of operating permits, which are also issued for UST system installation, removals, upgrades, and repairs. CCHSHM personnel would witness specified phases of the work being conducted on the UST system to ensure that the work is conforming to plans approved by the CCHSHM. Compliance with the CCHSHM requirements would ensure that the potential impacts related to the release of hazardous materials into the environment would be less than significant.

Transport of any fuels to the project site would be required to adhere to the Hazardous Materials Regulations stipulated in the Code of Federal Regulations, Title 49, Parts 100-185, which regulate the transportation of hazardous material and hazardous waste.

Conclusion

Based on the above, the project site is not subject to existing on-site hazards and 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. The impact would be ***less than significant***.

b. 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, and a ***less-than-significant*** impact would occur.

c. The project site is not located within a quarter mile of any existing or proposed schools. The nearest school is the Golden Hills Christian School, located approximately 0.8-mile west of the site. Therefore, the proposed 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. Per the Phase I ESA, the project site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.[17] However, the project site was identified in the Contra Costa County Site List database as having been previously occupied by AT&T Mobility. Upon reviewing the document, the Phase I ESA determined that the document was filed erroneously for the project site. Detailed maps identified the AT&T Mobility use as being on the property to the east across Fairview Avenue. Thus, the project site has not been included on a list of hazardous materials sites and the project would not create a significant hazard to the public or the environment associated with such, and ***no impact*** would occur.

e. The nearest airport to the site is Byron Airport, which is located approximately 10 miles south of the site. As such, the 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*** would occur related to the project being located within an airport land use plan or within two miles of a public airport or public use airport, and resulting in a safety hazard or excessive noise for people residing or working in the project area.

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

[17] California Department of Toxic Substances Control. *Cortese List: Section 65962.5(a)*. Available at https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/. Accessed March 26, 2019.

emergency response teams. During construction of the proposed project, all construction equipment would be staged on-site so as to prevent obstruction of local and regional travel routes in the City that could be used as evacuation routes during emergency events. 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. The project site is surrounded by urban development, and is located within a developed area within the City. The project site is not located near any wildlands or in an urban wildland interface. Thus, the potential for wildland fires to reach the project site would be limited. 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 nor are Very High Fire Hazard Severity Zones located in close proximity to the project site.[18] 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.

[18] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.

X. HYDROLOGY AND WATER QUALITY. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	✖	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	✖	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	✖	☐	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or 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 more than one acre of land, the proposed construction activities would be subject to applicable SWRCB regulations. Performance Standard NDCC-13 of 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 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 Brentwood 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 topsoil would no longer be exposed. As such, the potential for impacts to water quality would be reduced. Additionally, as discussed below, the proposed project would implement a bio-retention planter which would be sized to provide a sufficient treatment area to accommodate potential flow from the impervious areas within the project site.

Because the proposed project would adhere to all applicable standards and regulations set forth by the NPDES permit and the City of Brentwood, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality, and a ***less-than-significant*** impact would occur.

b,e. Water supplies for the project site are supplied by the City of Brentwood. Per the City's 2015 Urban Water Management Plan (UWMP),[19] 30 percent of the City's water is supplied by groundwater. The City pumps groundwater from the Tracy Subbasin underlying the City. While the project would create 1.96 acres of new impervious surface area on the site, the Tracy Subbasin is 345,000 acres in size; therefore, the groundwater basin within which the project is located would be recharged from many sources over a large area. Except for seasonal variations resulting from recharge and pumping, the General Plan EIR anticipates the City will pump a relatively stable amount of groundwater through the year 2035. In addition, stormwater from all on-site impervious surfaces would drain to an on-site bio-retention basin, allowing for continued recharge of the underlying subbasin. Therefore, any new impervious surfaces associated with the project would not interfere substantially with groundwater recharge within the Tracy Subbasin.

Given that the proposed project would be consistent with the site's current General Plan land use and zoning designations, the project would not result in increased use of groundwater supplies beyond what has been anticipated by the City and accounted for in the UWMP. Additionally, the UWMP imposes specific regulations on water use, which the proposed project would adhere to. Specifically, car wash facilities are required to recycle water and install a recirculating water system.

Therefore, the project would result in a ***less-than-significant*** impact with respect to substantially depleting groundwater supplies or interfering substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

[19] City of Brentwood. *Final 2015 Urban Water Management Plan*. June 2016.

ci-iii. According to the Stormwater Control Plan (SWCP) prepared for the project, implementation of the proposed project would involve the creation of approximately 1.96 acres (64,898 square feet) of new impervious surface area (see Figure 8).

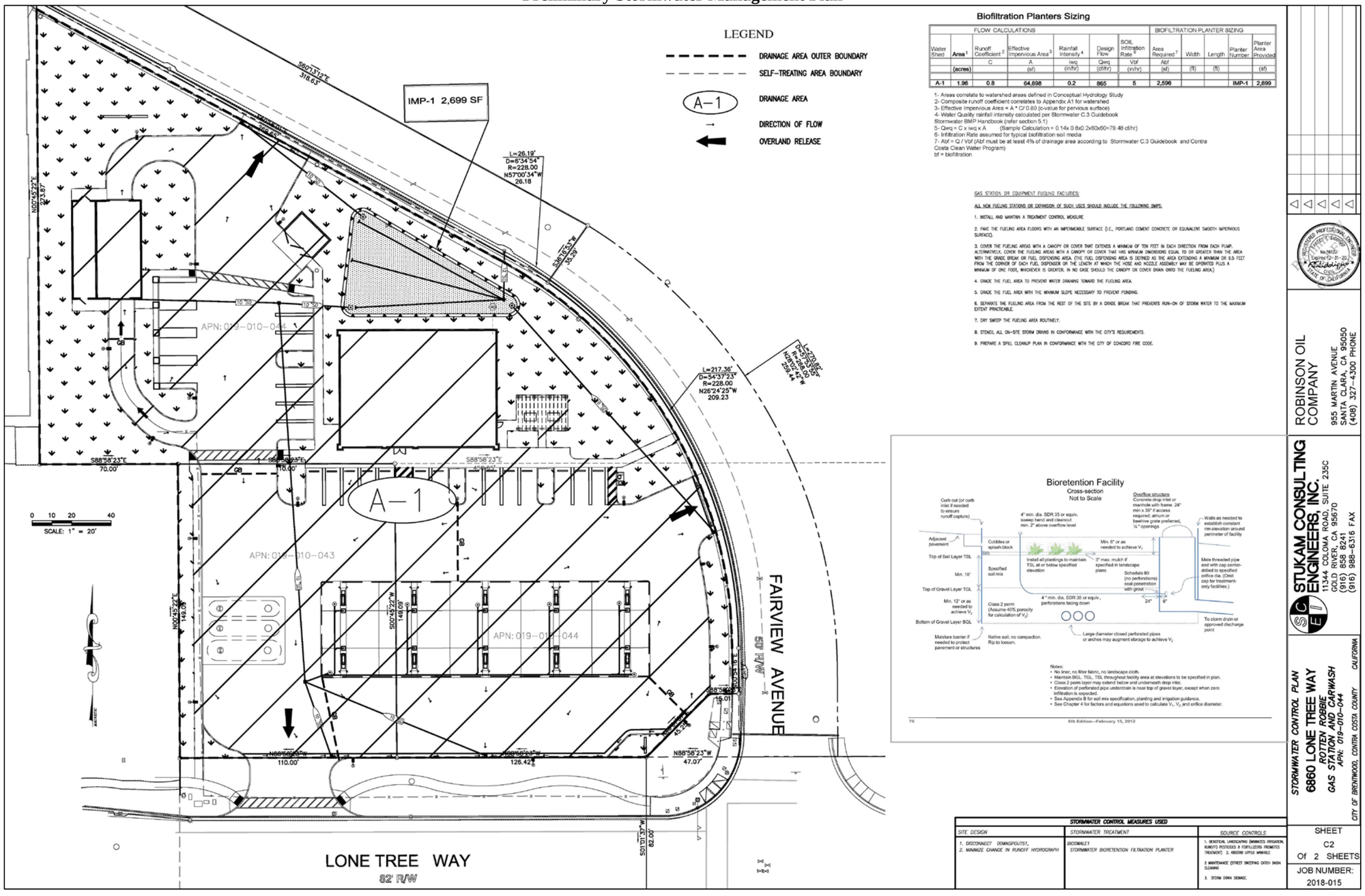
All municipalities within Contra Costa County are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. Known as the "C.3 Standards", new development and redevelopment projects that create or replace 10,000 or more square feet of impervious surface area must contain and treat stormwater runoff from the site. Because the proposed project would create more than 10,000 square feet 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 30c, and would be required to pay the applicable Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) drainage fees.[20]

The SWCP prepared for the proposed project incorporates the most recent Stormwater C.3 Guidebook and Contra Costa Clean Water Program requirements,[21] as well as all applicable City stormwater requirements. Specifically, the proposed project would include an on-site bio-retention planter that would meet the minimum sizing requirement with respect to treatment area. Specifically, the SWCP determined that a total detention surface area of 2,596 square feet would be required and the proposed bio-retention planter would be 2,699 square feet. Treated stormwater would drain to the existing 12-inch stormwater drain at the southeastern corner of the property. Because the proposed project is consistent with the site's current General Plan land use designations, the surrounding infrastructure has been designed and built to accommodate stormwater runoff associated with the proposed project, 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.

The SWCP for the proposed project would adequately manage the stormwater runoff from the project site. However, the bio-retention pond would need to be maintained properly to ensure long-term proper functioning of the on-site stormwater management system. A long-term maintenance plan is needed to ensure that all proposed stormwater treatment BMPs function properly. Should the proposed water quality treatment facility not be maintained properly, a ***potentially significant*** impact could occur with respect to creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems, providing substantial additional sources of polluted runoff, or altering existing drainage in a manner which would result in flooding, erosion, or siltation on- or off-site.

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

Figure 8
Preliminary Stormwater Management Plan



Biofiltration Planters Sizing

Water Shed	Area[1]	Runoff Coefficient[2]	Effective Impervious Area[3]	Rainfall Intensity[4]	Design Flow	SOIL Infiltration Rate[6]	Area Required[7]	Width	Length	Planter Number	Planter Area Provided
		C	A	iwq	Qwq	Vbf	Abf				
	(acres)		(sf)	(in/hr)	(cfs/hr)	(in/hr)	(sf)	(ft)	(ft)		(sf)
A-1	1.96	0.8	64,698	0.2	865	5	2,596			IMP-1	2,699

1- Areas correlate to watershed areas defined in Conceptual Hydrology Study
2- Composite runoff coefficient correlates to Appendix A1 for watershed
3- Effective Impervious Area = A * Cf (0.80 (c-value for pervious surface)
4- Water Quality rainfall intensity calculated per Stormwater C.3 Guidebook
Stormwater BMP Handbook (refer section 5.1)
5- Qwq = C x iwq x A (Sample Calculation = 0.14x 0.8x0.2x60x60=79.48 cf/hr)
6- Infiltration Rate assumed for typical biofiltration soil media
7- Abf = Q / Vbf (Abf must be at least 4% of drainage area according to Stormwater C.3 Guidebook and Contra Costa Clean Water Program)
bf = biofiltration

GAS STATION OR EQUIPMENT FUELING FACILITIES:

ALL NEW FUELING STATIONS OR EXPANSION OF SUCH USES SHOULD INCLUDE THE FOLLOWING BMPS:

1. INSTALL AND MAINTAIN A TREATMENT CONTROL MEASURE
2. PAVE THE FUELING AREA FLOORS WITH AN IMPERMEABLE SURFACE (I.E., PORTLAND CEMENT CONCRETE OR EQUIVALENT SMOOTH IMPERVIOUS SURFACE).
3. COVER THE FUELING AREAS WITH A CANOPY OR COVER THAT EXTENDS A MINIMUM OF TEN FEET IN EACH DIRECTION FROM EACH PUMP. ALTERNATIVELY, COVER THE FUELING AREAS WITH A CANOPY OR COVER THAT HAS MINIMUM DIMENSIONS EQUAL TO OR GREATER THAN THE AREA WITH THE GRADE BREAK OR FUEL DISPENSING AREA. (THE FUEL DISPENSING AREA IS DEFINED AS THE AREA EXTENDING A MINIMUM OR 6.5 FEET FROM THE CORNER OF EACH FUEL DISPENSER OR THE LENGTH AT WHICH THE HOSE AND NOZZLE ASSEMBLY MAY BE OPERATED PLUS A MINIMUM OF ONE FOOT, WHICHEVER IS GREATER. IN NO CASE SHOULD THE CANOPY OR COVER DRAIN ONTO THE FUELING AREA.)
4. GRADE THE FUEL AREA TO PREVENT WATER DRAINING TOWARD THE FUELING AREA.
5. GRADE THE FUEL AREA WITH THE MINIMUM SLOPE NECESSARY TO PREVENT PONDING.
6. SEPARATE THE FUELING AREA FROM THE REST OF THE SITE BY A GRADE BREAK THAT PREVENTS RUN-ON OF STORM WATER TO THE MAXIMUM EXTENT PRACTICABLE.
7. DRY SWEEP THE FUELING AREA ROUTINELY.
8. STENCIL ALL ON-SITE STORM DRAINS IN CONFORMANCE WITH THE CITY'S REQUIREMENTS.
9. PREPARE A SPILL CLEANUP PLAN IN CONFORMANCE WITH THE CITY OF CONCORD FIRE CODE.

STORMWATER CONTROL MEASURES USED		
SITE DESIGN	STORMWATER TREATMENT	SOURCE CONTROLS
1. DISCONNECT DOWNSPOUTS1, 2. MINIMIZE CHANGE IN RUNOFF HYDROGRAPH	BIOSWALE1 STORMWATER BIORETENTION FILTRATION PLANTER	1. REVISION, LANDSCAPING (MINIMIZES IRRIGATION, RUNOFF) PESTICIDES & FERTILIZERS PROMOTES TREATMENT) 2. KNOWE UPTLO MANHOLE 2 MAINTENANCE (STREET SWEEPING CATCH BASIN CLEANING 3. STORM DRAIN SIGNAGE.

ROBINSON OIL COMPANY
955 MARTIN AVENUE
SANTA CLARA, CA 95050
(408) 327-4300 PHONE

STUKAM CONSULTING ENGINEERS, INC.
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STORMWATER CONTROL PLAN
6860 LONE TREE WAY
ROTTEN ROBBIE
GAS STATION AND CARWASH
APN: 019-010-044
CITY OF BRENTWOOD, CONTRA COSTA COUNTY CALIFORNIA

SHEET C2 Of 2 SHEETS
JOB NUMBER: 2018-015

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 the completion of construction, the applicant shall prepare and submit, for the City's review, an acceptable Stormwater Control Operation and Maintenance Plan. In addition, prior to the sale, transfer, or permanent occupancy of the site the applicant shall be responsible for paying for the long-term maintenance of treatment facilities, and executing a Stormwater Management Facilities Operation and Maintenance Agreement and Right of Entry in the form provided by the City of Brentwood. The applicant shall accept the responsibility for maintenance of stormwater management facilities until such responsibility is transferred to another entity.*

The applicant shall submit, with the application of building permits, a draft Stormwater Facilities and Maintenance Plan, including detailed maintenance requirements and a maintenance schedule for the review and approval by the Director of Public Works/City Engineer. Typical routine maintenance consists of the following:

- *Limit the use of fertilizers and/or pesticides. Mosquito larvicides shall be applied only when absolutely necessary.*
- *Replace and amend plants and soils as necessary to insure the planters are effective and attractive. Plants must remain healthy and trimmed if overgrown. Soils must be maintained to efficiently filter the storm water.*
- *Visually inspect for ponding water to ensure that filtration is occurring.*
- *After all major storm events remove trash, inspect drain pipes and bubble-up risers for obstructions and remove if necessary.*
- *Continue general landscape maintenance, including pruning and cleanup throughout the year.*
- *Irrigate throughout the dry season. Irrigation shall be provided with sufficient quantity and frequency to allow plants to thrive.*
- *Excavate, clean and or replace filter media (sand, gravel, topsoil) to ensure adequate infiltration rate (annually or as needed).*

X-2. *Contra Costa County Flood Control & Water Conservation District drainage fees for the Drainage Areas shall be paid by the applicant prior to issuance of building permits.*

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).[22] The site is not classified as a Special Flood Hazard Area or otherwise located

[22] Federal Emergency Management Agency. *Flood Insurance Rate Map 06013C0353F*. Effective June 16, 2009.

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, whereas a seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir. The project site is not located in proximity to a coastline and would not be potentially affected by flooding risks associated with tsunamis. Seiches do not pose a risk to the proposed project, as the project site is not located adjacent to a large closed body of water. 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.

XI. LAND USE AND PLANNING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	✖	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	✖	☐

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. The project site is considered an infill parcel and would not alter the existing general development trends in the area or 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 project site is currently designated GC per the City's General Plan and is zoned PD-38. Land designated for GC and PD-38 uses are intended for concentrations of a variety of mixed commercial uses and service-type businesses to serve specific areas of the City and neighborhoods that are related to SR 4. The proposed project is intended to provide fuel and car wash services to patrons in the vicinity. Thus, the design and intended use of the proposed structures would conform with the type and intensity of uses anticipated for the site in the General Plan and generally analyzed in the General Plan EIR. In addition, the proposed project would not conflict with City policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect, including, but not limited to, the City's noise standards, applicable SWRCB regulations related to stormwater, and ECCCHCP/NCCP standards. As discussed throughout this IS/MND, the proposed project would not result in any significant environmental effects that cannot be mitigated to a less-than-significant level by the mitigation measures provided herein.

Based on the above, the project would not cause a significant environmental impact due to conflicts with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, a ***less-than-significant*** impact would occur.

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

Discussion

a,b. Per the City's General Plan EIR, within the City limits, mineral resources include sand, gravel, coal, oil, and gas.[23] Sediments throughout most of the City consist of young alluvial deposits. Historically, large amounts of sand were mined from the dune sands of the northern portion of the City, but competition from sand and gravel pits in the Tracy and Livermore areas caused a gradual decline in production. As of January 1, 2013, three aggregate mines exist within Contra Costa County: the Byron Plant, Clayton Quarry, and Clayton Mine. None of the three mines are located within the City of Brentwood Planning Area, and, thus, the proposed project would not impact operations of any of the three aggregate mines. The proposed project is consistent with the site's current General Plan land use and zoning designations, and the project site is not designated for mineral resource or production. Therefore, ***no impact*** to mineral resources would occur as a result of development of the project.

[23] City of Brentwood. *2014 Brentwood General Plan Draft Environmental Impact Report.* April 2014.

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

Discussion

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, the nearest existing noise sensitive land uses would be the single-family residences approximately 175 feet south of the project site, across Lone Tree Way.

Standards of Significance

Both the City's Municipal Code and General Plan include regulations related to the generation of noise.

Chapter 9.32 of the Municipal Code limits exterior noise at residential land uses to 60 dB of noise between 7:00 AM and 10:00 PM, and 45 dB between 10:00 PM and 7:00 AM.

The Noise Element of the City's General Plan establishes a land use compatibility criterion of 60 dB L_{dn} or less within outdoor activity areas of new residential land uses impacted by transportation noise sources (e.g. traffic noise, railroad noise). General Plan Policy N I-2 requires that new development and infrastructure projects be consistent with the Land Use Compatibility for Community Noise Environments standards (reproduced in Table 4 below) to ensure acceptable noise levels for existing and future development.

Table 4
Land Use Compatibility for Exterior Noise Environment (L_{dn})

Land Use	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable
Single-Family Residential	≤60	60-75	>75
Multi-Family Residential, Hotels, and Motels	≤65	65-75	>75
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	≤65	65-80	>80
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches	≤65	65-75	>75
Office Buildings, Business Commercial, and Professional	≤67	70-80	>77
Industrial	≤70	70-80	>80

Source: City of Brentwood General Plan [Table N-1], July 2014.

In addition to the exterior and interior noise level standards described above, the City also provides the following criteria to determine the significance of transportation noise impacts:

- Where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a 5.0 dB Ldn increase in roadway noise levels would be considered significant;
- Where existing traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a 3.0 dB Ldn increase in roadway noise levels would be considered significant; and
- Where existing traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a 1.5 dB Ldn increase in roadway noise levels would be considered significant.

Existing Noise Environment

The primary source of existing noise in the vicinity of the project is vehicular traffic on Lone Tree Way and other distant roadways, including SR 4. As part of the analysis in the General Plan EIR, the City conducted a noise prediction study to estimate the noise levels

for all highways and major roadways in the General Plan. The traffic noise levels were predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment. The General Plan measures the existing noise level on Lone Tree Way between Empire Avenue and Fairview Avenue to be 61.4 dB Ldn at sensitive receptors located along the roadway. Additionally, noise in the vicinity could include activities and trips associated with the commercial development to the west of the project site.

Project Analysis

The following discussion presents the potential noise levels associated with construction and operation of the proposed project.

Temporary Project Construction Noise

During construction of the proposed project, heavy equipment would be used for grading, excavation, paving, and building construction, which would increase ambient noise levels when in use. 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 trucks, would be used on-site.

Table 5 shows maximum noise levels associated with typical construction equipment. Based on the table, activities involved in typical construction would generate maximum noise levels up to 85 dB at a distance of 50 feet.

Table 5
Construction Equipment Noise

Type of Equipment	Maximum Level, dB at 50 feet
Backhoe	78
Compactor	83
Compressor (air)	78
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Pneumatic Tools	85

Source: Federal Highway Administration, Roadway Construction Noise Model User's Guide, January 2006.

As distance between equipment increases, dispersion and distance attenuation reduce the effects of combining separate noise sources. The noise levels from a source will decrease at a rate of approximately 6 dB per every doubling of distance from the noise source. Given that the nearest sensitive receptors to the project site would be the single-family residences located south of Lone Tree Way, approximately 175 feet away from the project site, noise levels experienced at the nearest residences would likely be reduced from the levels

depicted in Table 5 by at least 10 dB. Additionally, a sound wall separates the residences from Lone Tree Way, which would also further reduce the construction noise.

Per General Plan Action N-1e, noise generating construction activities, including truck traffic coming to and from the construction site, are limited to the hours of 7:00 AM and 6:00 PM on weekdays, and between 8:00 AM and 5:00 PM on Saturdays. Construction is prohibited on Sundays and City holidays. Should project construction occur during the prohibited time periods listed above, construction activity would be considered to result in a potentially significant impact related to the creation of temporary increases in ambient noise.

Project Operational Noise

Most of the noise generated by project operations would be associated with vehicle traffic on the surrounding network. Sources of non-transportation noise would include industrial dryers associated with the car wash. Each source is discussed in further detail below.

Traffic Noise

Traffic consultants Abrams Associates have estimated that the proposed project would generate approximately 1,768 total daily vehicle trips. Approximately 176 trips would occur during the AM peak hour of 7:30 AM to 8:30 AM, and 147 trips would occur during the PM peak hour between 4:45 PM and 5:45 PM.

The General Plan EIR concluded that traffic noise along the segment of Lone Tree Way between Fairview Avenue and Empire Avenue would be approximately 64.6 dB with buildout of the General Plan. The increase in noise from existing conditions would be 3.2 dB, which constitutes a significant increase. Thus, the General Plan EIR determined that noise impacts associated with buildout of the General Plan would be significant and unavoidable. Given that the proposed project is consistent with the site's current General Plan land use designation, traffic generated by the project has been anticipated and evaluated by the City. Pursuant to Public Resources Code Section 21083.3, if a development project is consistent with the General Plan, the subsequent analysis of the project's environmental impacts would be limited to the effects on the environment which are peculiar to the project and which were not addressed as significant effects in the General Plan EIR. The only peculiar source of noise that may be generated by the project site would be the industrial dryers, which would be a source of non-transportation noise. Additionally, the residences to the south of the project site are currently exposed to relatively high traffic noise levels and are shielded by an existing sound wall. Thus, the traffic noise generated from the proposed project would not be a peculiar effect requiring analysis pursuant to Section 21083.3.

Non-Transportation Noise

The primary noise source peculiar to the proposed project would be the industrial dryers associated with the car wash. The proposed car wash is located at the north end of the project site. Based on a noise study conducted for a similar car wash facility, the primary non-transportation noise source associated with the proposed project would be industrial dryers located at the north end of the car wash tunnel.[24] At a distance of 30 feet from the exit of the car wash, a dryer reference noise level of 80 decibels (dB) was used. The nearest sensitive noise receptor would be located approximately 350 feet from the proposed car wash tunnel. The dryers would be located at the north end of the tunnel, oriented away from the nearest sensitive receptors to the south. Assuming standard spherical spreading loss (-6 dB per doubling of distance), car wash dryer noise levels would be approximately 59 dB at the property line of the nearest residence, which would be below the General Plan noise level threshold of 60 dB for residential outdoor activity areas, as presented in Table 4. Because the residences to the south of Lone Tree Way are shielded by an existing sound wall, operations of the car wash could be expected to be even lower and, thus, below the applicable exterior threshold for noise exposure to residences.

The nearest commercial or industrial development is located approximately 400 feet from the industrial dryers in the car wash. Assuming the same spherical spreading loss as above, car wash dryer noise would be well below the 67 dB threshold for exposure to commercial and industrial land uses.

Conclusion

Based on the above, the proposed project would not result in a substantial permanent increase in noise levels in the vicinity of the project. While construction noise is temporary in nature and the City has applicable standards to regulate construction noise, if construction does not adhere to the regulations, temporary noise could exceed the standards established in the local general plan or noise ordinance, or applicable standards of other agencies, and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

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

XIII-1. Construction activities shall be limited to the hours set forth below:

Monday-Friday 7:00 AM to 6:00 PM
Saturday 8:00 AM to 5:00 PM

[24] Bollard Acoustical Consultants, Inc. Environmental Noise Assessment: Gateway West/Arena Blvd Retail Development [pg. 16]. July 27, 2017.

Construction shall be prohibited on Sundays and City holidays. These criteria shall be included in the grading plan submitted by the applicant/developer for review and approval of the Community Development Director prior to issuance of grading permits. Exceptions to allow expanded construction activities shall be reviewed on a case-by-case basis as determined by the Chief Building Official and/or City Engineer.

XIII-2. *The project contractor shall ensure that the following construction noise BMPs are met on-site during all phases of construction:*

- *All equipment driven by internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc welders, air compressors) shall be equipped with shrouds and noise-control features that are readily available for that type of equipment.*
- *All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.*
- *The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.*
- *At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *Construction staging areas shall be established at locations that would create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.*
- *Construction site and access road speed limits shall be established and enforced during the construction period.*
- *The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.*
- *Project-related public address or music systems shall not be audible at any adjacent receptor.*
- *Neighbors located adjacent to the construction site shall be notified of the construction schedule in writing.*
- *The construction contractor shall designate a "noise disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator*

shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.

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 6, 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.

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. Potential operation of vibratory compactors would occur at a distance of 175 feet or further from the nearest existing structure. Thus, per the vibration levels shown in Table 7, groundborne vibrations would be less than 0.070 in/sec PPV at the nearest existing structure, which would be below the 0.20 in/sec PPV threshold established by Caltrans for annoyance to sensitive receptors located in buildings and subject to vibrations over relatively short periods of time.

Table 6
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.

Table 7
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	0.070

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

The primary vibration-generating activities associated with the proposed project would occur during grading, placement of underground utilities, and construction of foundations. Table 7 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, which would extend along the northern, eastern, and southern sides of the project site.

Based on the above, the proposed project would not expose people to or generate excessive groundborne vibration or groundborne noise levels, and a ***less-than-significant*** impact would occur.

c. The proposed project site is not located near an existing private or public airport and is not located within an area covered by an existing airport land use plan. The nearest airport, Funny Farm Airfield, is a private airfield located approximately 4.5 miles east of the proposed project site. 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.

XIV. POPULATION AND HOUSING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (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 include the development of a service station with a convenience store, car wash, and 20 fuel stations on a site designated for commercial uses. Development of the site for commercial purposes would not result in direct population growth. Furthermore, because the proposed project conforms with the General Plan and zoning designations for the project site, any indirect population growth due to increased demand for employees has been previously anticipated by the City. Therefore, the proposed project would not induce substantial unplanned population growth either directly or indirectly, and a ***less-than-significant*** impact would occur.

b. The project site is currently vacant and does not include existing housing or other habitable structures. As such, the proposed project would not displace a substantial number of existing housing or people and would not necessitate the construction of replacement housing elsewhere. Therefore, ***no impact*** would occur.

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:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	☐	☐	✖	☐
b. Police protection?	☐	☐	✖	☐
c. Schools?	☐	☐	✖	☐
d. Parks?	☐	☐	✖	☐
e. Other Public Facilities?	☐	☐	✖	☐

Discussion

a-e. Fire protection services are currently provided to the site by the East Contra Costa Fire Protection District (ECCFPD). The ECCFPD protects approximately 249 square miles and over 115,000 residents, across three fire stations. The nearest fire station to the project site is Station 53, located at 530 O'Hara Avenue, approximately 2.2 miles from the project site. The City of Brentwood Police Department provides police protection services at the project site. The City's Police Department headquarters is located at 9100 Brentwood Boulevard, approximately 3.7 miles from the project site.

The proposed project is consistent with the site's General Plan land use and zoning designations. As such, buildout of the site, including associated demand for fire and police protection has been anticipated by the City and analyzed in the General Plan EIR. Operation of the proposed project would not be anticipated to involve activities that would lead to significantly greater demands on fire or police protection services than the uses anticipated for the project site in the General Plan. While the proposed project would involve storage of flammable fuels on-site, the ECCFPD Fire prevention Bureau has the responsibility and authority to enter, investigate, and perform routine fire inspections of the property. Additionally, the Fire Prevention Bureau's responsibility include the inspection of all Life Hazard Use Properties, including fueling stations. The ECCFPD would review site plans prior to development of the proposed project to ensure that the project complies with all applicable standards and regulations related to storage and use of hazardous materials. Thus, the project would not require the provision of new or physically altered fire or police protection facilities beyond what was analyzed in the General Plan EIR.

Furthermore, the proposed project would not result in direct population growth, and, consequently, would not increase the demand for schools, parks, or other public facilities. Therefore, the proposed project would have a ***less-than-significant*** impact related to the need for new or physically altered fire protection, police protection, schools, parks, or other public facilities, the construction of which could cause significant environmental impacts.

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

Discussion

a,b. The proposed project would include the development of a service station on a site designated for commercial uses. The proposed project would not result in population growth that could result in increased use of existing recreational facilities, nor would the proposed project include or require construction or expansion of recreational facilities. Thus, a ***less-than-significant*** impact would occur.

XVII. TRANSPORTATION. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	✖	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	✖	☐
c. Substantially increase hazards 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. Abrams Associates prepared a TIA to analyze the potential impacts related to the circulation system and alternative modes of transportation associated with implementation of the proposed project.[25] The results of the TIA are discussed in the following sections.

Project Study Intersections and Scenarios

The project location and the surrounding roadway network consists primarily of SR 4, Lone Tree Way, Brentwood Boulevard, and Fairview Avenue. SR 4 is the primary east-west corridor in Contra Costa County and connects Interstate 80 to SR 160 to the west and the cities of Oakley and Brentwood to the east. The nearest interchange on SR 4 within the project vicinity is at Lone Tree Way. Lone Tree Way is an east-west arterial street that provides access to the project site as well as access to a variety of residential and commercial retail uses in the area of Brentwood. Brentwood Boulevard and Fairview Avenue are two-lane roadways providing north-south circulation through the City.

The TIA included evaluation of the following study intersections based on Contra Costa Transportation Technical Procedures and Caltrans Guidelines for the preparation of traffic impact studies:

1. Giannini Ranch and Lone Tree Way; and
2. Fairview Avenue and Lone Tree Way.

Both intersections above are located on Routes of Regional Significance. The study intersections were evaluated for the following six scenarios:

- Existing Conditions – Level of Service (LOS) based on existing peak hour volumes and existing intersection configurations.

[25] Abrams Associates Traffic Engineering, Inc. *Transportation Impact Analysis Rotten Robbie Project City of Brentwood*. March 1, 2019.

- Existing Plus Project – Existing traffic volumes plus trips from the proposed project.
- Baseline (No Project) Conditions – The Baseline scenario is based on the existing volumes plus growth in background traffic (for three years) and accounts for traffic from all reasonably foreseeable developments that could substantially affect the volumes at the project study intersections.
- Baseline Plus Project Conditions – This scenario is based on the Baseline traffic volumes plus the trips from the proposed project.
- Cumulative Conditions – This scenario includes year 2040 cumulative volumes based on planned and approved projects and the most recent release of the Citywide Travel Demand Model.
- Cumulative Plus Project Conditions – This scenario includes year 2040 cumulative volumes based on the most recent release of the Citywide Travel Demand Model plus the trips from the proposed project.

Existing operational conditions at the two study intersections were evaluated according to the requirements set forth by Contra Costa County and Caltrans. Analysis of traffic operations was conducted using the Sixth Edition of the Highway Capacity manual (HCM) LOS methodology. LOS is a qualitative measure that described the operational conditions of vehicle traffic and the perceptions of motorists and passengers. Operational LOS is given letter designations from A to F, with A representing the best operating conditions (free flow of traffic) and F representing the worst operating conditions (severely congested flow with high delays). Traffic counts at the study intersections were conducted in December of 2018 at times when local schools were in session.

Trip Generation and Distribution

As part of the TIA, Abrams Associates estimated the weekday project trip generation, which is shown in Table 8 below. As shown in the table, implementation of the proposed project would result in an estimated 1,768 total daily vehicle trips, with 176 trips occurring during the AM peak hour and 147 trips occurring during the PM peak hour. The hours identified as peak hours are between 7:30 AM and 8:30 AM and between 4:45 PM and 5:45 PM.

The trip distribution assumptions are based on the project's proximity to regional roadways, the directional split at nearby intersections, and the land use patterns in the area. Trips to the project site would be fairly evenly distributed, with most trips generated from vehicles traveling west on Lone Tree Way.

Table 8
Weekday Project Trip Generation Rates and Estimates

Land Use	Size (1,000 sf)	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
ITE Service Station		837	41.57	41.57	83.14	34.64	34.64	69.28
Service Station Trip Generation	4.8	4,018	200	199	399	166	167	333
Reduction for Pass-By Traffic		*2,250*	*112*	*111*	*223*	*93*	*93*	*186*
Total Trip Generation		**1,768**	**88**	**88**	**176**	**73**	**74**	**147**

Note: Abrams Associates traffic consultants used the Institute of Traffic Engineer's trip rate for service station (960) land uses to estimate anticipated trip generation resulting from project operations.

Source: Abrams Associates, 2019.

Significance Criteria

The goal of the City of Brentwood is to maintain LOS D or better at all intersections. Additionally, the East County Action Plan for Routes of Regional Significance establishes LOS D as the standard for Lone Tree Way Project-related transportation impacts would be considered significant if:

- The addition of project traffic would cause the operations of a study intersection not on a route of regional significance to decline from LOS mid-D (an average delay of 50 seconds for signalized intersections) or better to a high LOS D, LOS E or F, based on the HCM LOS method;
- The project would deteriorate already unacceptable operations at a signalized intersection by adding traffic;
- The project would cause the operations of an unsignalized study intersection to decline from acceptable to unacceptable with the addition of project traffic, and would, based on the MUTCD Peak Hour Signal Warrant (Warrant 3), warrant the installation of a traffic signal;
- Construction traffic from the project would have a significant, though temporary, impact on the environment, or project construction would substantially affect traffic flow and circulation, parking, and pedestrian safety.
- The operations of a study intersection on a route of regional significance would decline from LOS high-D (an average delay of 55 seconds for signalized intersections) or better to LOS E or F, based on the HCM LOS method, with the addition of project traffic; and/or
- The project would result in or worsen unacceptable conditions on SR 4 based on delay index calculations.

Circulation System Analysis Results

Table 9 through Table 11 below presents the operations at both study intersections under each of the six conditions discussed above.

As shown in the tables, the study intersections would operate acceptably under all conditions, with the exception of Fairview Avenue and Lone Tree Way under Existing, Existing Plus Project, Baseline, and Baseline Plus Project conditions, which operate at an unacceptable LOS F during the PM peak hour. Although development of the proposed project would result in the continued unacceptable operation at the intersection under Existing, Existing Plus Project, Baseline, and Baseline Plus Project conditions, the proposed project would not degrade the intersection any further than current conditions, and thus, would not conflict with City standards. Additionally, the CCTA has not set forth a delay threshold for suburban arterial routes. The Fairview Avenue and Lone Tree Way intersection would operate acceptably under Cumulative and Cumulative Plus Project conditions because the model assumes Lone Tree Way will widen to a six-lane roadway under 2040 buildout conditions. As such, the proposed project would not cause any nearby intersection to operate unacceptably.

The Contra Costa Transportation Authority (CCTA) established an intersection delay threshold of 2.5 seconds during the peak hour on freeway segments, which would apply to SR 4 freeway segments. The proposed project is anticipated to increase total traffic on SR 4, but the increase is forecast to be less than one percent and under 50 trips per hour, which would not contribute to intersection delays above 2.5 seconds.

Based on the above, the proposed project would not conflict with any applicable program, plan, ordinance or policy addressing the circulation system.

Alternative Transportation

The following is a discussion of the regional transit, bicycle, and pedestrian access in existing conditions and with development of the proposed project.

Transit Facilities

Regional transit in the vicinity is provided by the Tri-Delta Transit system. Bus lines 385 and 395 make stops at the Empire Avenue/Lone Tree Way bus station, which is approximately 0.25-mile from the project site. Because the proposed project would be located on a bus route and would be accessible by public transit, the City's General Plan Goal CIR 3, would be met. Thus, the proposed project would not conflict with any applicable plans or policies addressing the circulation system.

Table 9
Existing and Existing Plus Project Intersection LOS

ID	Study Intersection	Control	Peak Hour	Existing Conditions		Existing Plus Project Conditions		
				Delay	LOS	Delay	LOS	Change in Delay
1	Giannini Ranch & Lone Tree Way	Signal	AM	15.0	B	15.2	B	0.2
			PM	39.4	D	38.9	D	-0.5
2	Fairview Avenue & Lone Tree Way	Signal	AM	17.5	B	21.3	C	3.8
			PM	**>80.0**	**F**	**>80.0**	**F**	N/A

Note: Bold indicates an unacceptable LOS
Source: Abrams Associates, 2018.

Table 10
Baseline and Baseline Plus Project Intersection LOS

ID	Study Intersection	Control	Peak Hour	Baseline Conditions		Baseline Plus Project Conditions		
				Delay	LOS	Delay	LOS	Change in Delay
1	Giannini Ranch & Lone Tree Way	Signal	AM	15.3	B	15.5	B	0.2
			PM	40.2	D	40.4	D	0.2
2	Fairview Avenue & Lone Tree Way	Signal	AM	15.3	B	18.5	B	3.2
			PM	**>80.0**	**F**	**>80.0**	**F**	N/A

Note: Bold indicates an unacceptable LOS
Source: Abrams Associates, 2018.

Table 11
Cumulative and Cumulative Plus Project Intersection LOS

ID	Study Intersection	Control	Peak Hour	Cumulative Conditions		Cumulative Plus Project Conditions		
				Delay	LOS	Delay	LOS	Change in Delay
1	Giannini Ranch & Lone Tree Way	Signal	AM	17.9	B	18.2	B	0.3
			PM	51.5	D	53.0	D	1.5
2	Fairview Avenue & Lone Tree Way	Signal	AM	16.6	B	19.8	B	3.2
			PM	36.2	D	39.7	D	3.5

Source: Abrams Associates, 2018.

Bicycle and Pedestrian Facilities

The City currently has 16 miles of bike lanes provided throughout the City. A bike lane on Lone Tree Way provides access to the project site's frontage. Additionally, public sidewalks currently extend on either side of Lone Tree Way west of the project site for nearly one mile. Per General Plan Policies CIR 2-1 and 2-2, new development should incorporate sidewalks and enhanced pedestrian crossing facilities, and incorporate bicycle facilities on new collector and arterial streets in order to establish and maintain a system of interconnected bicycle and pedestrian system facilities consistent with the Countywide Bicycle and Pedestrian Plan.

The proposed project would include connection of the project site to the existing sidewalk on Lone Tree Way. Employees and patrons could potentially generate some additional pedestrian and bicycle traffic in the area. Connection to existing bicycle and pedestrian facilities would comply with the General Plan policies to promote alternative transportation and, thus, the proposed project would not conflict with any applicable policies addressing the circulation system.

Conclusion

Based on the above, the proposed project would not conflict with the City's applicable LOS criteria for the study intersections evaluated in the TIA or with the CCTA's SR 4 thresholds for freeway segments. In addition, the project would be consistent with the City's goals and policies related to public transit and bicycle and pedestrian facilities. Thus, the proposed project would not conflict with an applicable plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and a ***less-than-significant*** impact would occur.

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 LOS times 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 proposed project would include access to public transit and bicycle and pedestrian facilities. The inclusion of pedestrian and bicycle infrastructure would encourage employee use of alternative means of transportation to and from the project site. While most patrons would be arriving by vehicle to either use the fueling station or the car wash, the proposed project

would not preclude the use of alternative transportation to the site or in the vicinity. 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. The proposed project includes a primary entrance on Lone Tree Way along with secondary entrances on Fairview Avenue. At the project entrance on Lone Tree Way, the TIA did not identify any sight distance issues or capacity problems associated with the proposed lane configurations. Additionally, the monument sign and landscaping along the frontage of Lone Tree Way would not create any visual obstructions. The inclusion of the proposed project would not alter any current circulation systems, and thus, would not substantially increase hazards due to a design feature or incompatible uses, and a ***less-than significant*** impact would occur.

d. Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The proposed project includes three vehicle access points for emergency vehicles. Additionally, all lane widths within the project meet the minimum width that can accommodate emergency vehicles.

Construction traffic associated with the proposed project would include heavy-duty vehicles which would share the area roadways with normal vehicle traffic, creating potential conflicts with other roadway users, as well as transport of construction material, and daily construction employee trips to and from the site. Although the number of added daily trips would be less than would be generated by the project at completion, the short-term increase in traffic that would occur during the construction phase of the proposed project could temporarily disrupt daily traffic flows on area roadways, including emergency response vehicles in transit. Therefore, the proposed project could result in inadequate emergency access, and a ***potentially significant*** impact would occur.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

XVII-1. Prior to initiation of construction activities, the project applicant shall prepare a Construction Traffic Management Plan for review and approval by the City Engineer. The plan shall include the following:

- *A project staging plan to maximize on-site storage of materials and equipment;*
- *A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak hours; lane closure proceedings; signs, cones and other warning devices for drivers; and designation of construction access routes;*
- *Permitted construction hours;*
- *Designated locations for construction staging areas;*
- *Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations; and*

- *Provisions for street sweeping to remove construction-related debris on public streets.*

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:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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. Solano Archaeological Services conducted a Cultural Resources Study for the proposed project to assess the effects of the project on cultural resources.[26] The study included outreach to local tribes to request information on unrecorded cultural resources that may exist in the project area, as well as records searches of the Sacred Lands File database, and of the CHRIS. The cultural report also reviewed a series of historic USGS topographic maps and historic aerial photographs to gather information on past land use and historic development on the project site. Following a records search, Solano Archaeological Services conducted an intensive pedestrian survey of the entire 2.24-acre project site using parallel transects spaced 15 meters apart. Rodent burrows and other ground openings were thoroughly inspected, and the property was documented with digital photographs. Cultural resources were not identified during the survey.

In compliance with AB 52 (Public Resources Code Section 21080.3.1), the City distributed project notification letters to the following tribes: Wilton Rancheria, The Ohlone Indian Tribe, North Valley Yokuts Tribe, Muwekma Ohlone Indian Tribe of the SF Bay Area, Ione Band of Miwok Indians, Indian Canyon Mutsun Band of Costanoan, Amah Mutsun Tribal Band of Mission, San Juan Bautista. The letters were distributed on March 25, 2019. One letter was received from the Wilton Rancheria within the consultation period and requested proper handling of any cultural resources discovered on the project site. The mitigation provided throughout this IS/MND would be in compliance with standard

[26] Solano Archaeological Services. *Cultural Resources Study-Rotten Robbie Project, Contra Costa County, California*. October 25, 2018.

procedures and would be sufficient to reduce any impacts related to the accidental discovery of cultural resources during construction.

A search of the NAHC Sacred Lands File did not yield any information regarding the presence of Tribal Cultural Resources within the project site or the immediate area. Furthermore, a search of the CHRIS by the NWIC did not identify any known cultural resources within the project site. The project site has been previously graded and disturbed as a result of previous agricultural uses of the site and grading conducted in 2005.

Based on the history of disturbance at the project site and the lack of identified cultural resources at the site, known Tribal Cultural Resources are not expected to occur within the site. Nevertheless, the possibility exists that construction associated with the proposed project could result in a substantial adverse change in the significance of a Tribal Cultural Resource if previously unknown Tribal Cultural Resources are uncovered during grading or other ground-disturbing activities. Thus, a ***potentially significant*** impact to Tribal Cultural Resources could occur.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

XVIII-1. Implement Mitigation Measures V-1 and V-2.

XIX. UTILITIES AND SERVICE SYSTEMS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, 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 supply and sewer utilities for the proposed development would be provided by the City of Brentwood through connections to the existing water and sewer lines within Fairview Avenue. Wastewater from the project site would be routed through a six-inch sanitary sewer line to a proposed sewer cleanout on the project site prior to conveyance to a public sewer line in Fairview Avenue. With regard to water supply infrastructure, the proposed project would include construction of a two-inch water main connecting to the car wash and convenience store to a public main within Fairview Avenue. In addition, the project would include an on-site stormwater collection and treatment system connecting to the City's drain inlet located in Fairview Avenue. Electricity, natural gas, and telecommunications utilities would be provided by way of connections to existing infrastructure located within the immediate project vicinity.

Given that the proposed project is consistent with the site's current General Plan land use and zoning designations, the utility infrastructure within the project vicinity has been designed with adequate capacity to accommodate demand from development of the project site, as well as other existing and planned uses in the project area. 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.

b. Water supplies for the project site are supplied by the City of Brentwood. Per the City's 2015 UWMP, 58 percent of the City's water supply is from treated surface water, 30 percent from groundwater, 10 percent from untreated surface water for landscape irrigation, and 0.5 percent from recycle water.[27] Based on predictions by the 2015 UWMP, the City is projected to have sufficient water supplies to meet projected water needs through 2040 during normal, dry, and multiple dry years. The water demand projections presented in the 2015 UWMP are based on future development anticipated to occur per the City's General Plan, including build-out of the project site.

Given that the project is consistent with the City's General Plan land use designation for the site, water demand associated with buildout of the project site has been anticipated by the City and accounted for in regional planning efforts, including the 2015 UWMP. In addition, the project would comply with the City's UWMP CII restriction, which requires car wash facilities to recycle water.

Considering the above, the City would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years, and a ***less-than-significant*** impact would occur.

d,e. Solid waste, recyclable materials, and compostable material collection within the City of Brentwood is transported to a Solid Waste Transfer Station operated by the City. All solid waste is transferred to the station, where the City disposes and/or processes the waste at the Keller Canyon County Landfill. Keller Canyon Landfill covers 2,600 acres of land; 244 acres are permitted for disposal. The site currently handles 2,500 tons of waste per day, although the permit for the site allows up to 3,500 tons of waste per day to be managed at the facility. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Keller Canyon Landfill has a remaining capacity of 63,408,410 cubic yards out of a total permitted capacity of 75,018,280, or 85 percent remaining capacity.[28]

Because the proposed project is consistent with the project site's current General Plan land use and zoning designations, construction and operation of the proposed project would not result in increased solid waste generation beyond what has been previously anticipated for the site by the City and analyzed in the General Plan EIR. The nature of the proposed project would not be expected to generate substantial amounts of solid waste. Food and beverages purchased at the convenience store may generate waste; however, the amount of solid waste produced by the project site has been anticipated and analyzed in the General Plan. In addition, the project would be required to comply with all applicable provisions of Chapter 8.16, Solid Waste, of the City's Municipal Code. Therefore, the proposed project would not generate solid waste in excess of State or local standards, or in excess of the

[27] City of Brentwood. *Final 2015 Urban Water Management Plan*. June 2016.

[28] California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Keller Canyon Landfill (07-AA-0032)*. Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/07-AA-0032/. Accessed March 2019.

capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, a ***less-than-significant*** impact related to solid waste would occur as a result of the proposed project.

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

Discussion

a-d. According to the CAL FIRE Fire and Resource Assessment Program, the project site is not located within or near a state responsibility area or lands classified as Very High Fire Hazard Severity Zone.[29] Therefore, the proposed project would not be subject to risks related to wildfires and a ***less-than-significant*** impact would occur.

[29] California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. January 7, 2009.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	✖	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	✖	☐
c. Does the project have environmental effects which 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 and Swainson's hawk to occur on-site, Mitigation Measures IV-1 and IV-2 would ensure that any impacts related to special-status species would be reduced to a less-than-significant level. The project site is predominantly undeveloped, has been previously disturbed, and 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 historic or prehistoric resources are discovered within the project site, such resources would be protected in compliance with the requirements of CEQA.

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 Brentwood 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 project would be consistent with the site's existing land use and zoning designations. Accordingly, buildout of the site for commercial use was generally considered in the cumulative analysis of buildout of the General Plan within the General Plan EIR.

As noted in Section 21083.3 of the CEQA Guidelines, where a project is consistent with zoning and general plan designations for the site, and an EIR has been certified with respect to that general plan, the analysis of potential environmental impacts resulting from the individual project should focus on those effects that are peculiar to the proposed project. As demonstrated throughout this IS/MND, the proposed project would not result in any significant environmental impacts peculiar to the project, and, thus, the proposed project would not contribute any new or additional impacts not previously analyzed in the General Plan EIR. 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 Brentwood, 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, and 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's impact would be ***less than significant***.

APPENDIX

AIR QUALITY AND GHG MODELING RESULTS

Rotten Robbie 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
Parking Lot	26.00	Space	0.80	10,400.00	0
Automobile Care Center	1.77	1000sqft	0.04	1,767.00	0
Convenience Market With Gas Pumps	20.00	Pump	0.06	12,768.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	281.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS Calculator

Land Use - applicant provided

Construction Phase - applicant provided

Grading - applicant provided

Vehicle Trips - Traffic Impact Analysis

Energy Use -

Mobile Land Use Mitigation - applicant provided

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	11.00
tblConstructionPhase	NumDays	5.00	11.00
tblConstructionPhase	NumDays	100.00	153.00
tblConstructionPhase	NumDays	5.00	153.00
tblConstructionPhase	PhaseEndDate	3/2/2020	3/3/2020
tblConstructionPhase	PhaseEndDate	3/4/2020	3/18/2020
tblConstructionPhase	PhaseEndDate	7/29/2020	4/2/2020
tblConstructionPhase	PhaseEndDate	7/22/2020	11/3/2020
tblConstructionPhase	PhaseEndDate	8/5/2020	11/17/2020
tblConstructionPhase	PhaseStartDate	3/3/2020	3/4/2020
tblConstructionPhase	PhaseStartDate	7/23/2020	3/19/2020
tblConstructionPhase	PhaseStartDate	3/5/2020	4/3/2020
tblConstructionPhase	PhaseStartDate	7/30/2020	4/17/2020
tblGrading	AcresOfGrading	0.00	2.24
tblGrading	AcresOfGrading	1.00	0.50
tblGrading	MaterialExported	0.00	60.00
tblLandUse	LandUseSquareFeet	1,770.00	1,767.00
tblLandUse	LandUseSquareFeet	2,823.50	12,768.00
tblLandUse	LotAcreage	0.23	0.80
tblProjectCharacteristics	CO2IntensityFactor	641.35	281.31
tblVehicleTrips	ST_TR	204.47	88.60
tblVehicleTrips	SU_TR	166.88	88.60
tblVehicleTrips	WD_TR	542.60	88.60

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	0.1777	0.9363	0.8241	1.4000e-003	0.0156	0.0538	0.0693	5.1400e-003	0.0503	0.0554	0.0000	123.0693	123.0693	0.0297	0.0000	123.8126
Maximum	**0.1777**	**0.9363**	**0.8241**	**1.4000e-003**	**0.0156**	**0.0538**	**0.0693**	**5.1400e-003**	**0.0503**	**0.0554**	**0.0000**	**123.0693**	**123.0693**	**0.0297**	**0.0000**	**123.8126**

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	0.1777	0.9363	0.8241	1.4000e-003	0.0156	0.0538	0.0693	5.1400e-003	0.0503	0.0554	0.0000	123.0692	123.0692	0.0297	0.0000	123.8124
Maximum	**0.1777**	**0.9363**	**0.8241**	**1.4000e-003**	**0.0156**	**0.0538**	**0.0693**	**5.1400e-003**	**0.0503**	**0.0554**	**0.0000**	**123.0692**	**123.0692**	**0.0297**	**0.0000**	**123.8124**

	ROG	NOx	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	3-2-2020	6-1-2020	0.3669	0.3669
2	6-2-2020	9-1-2020	0.4334	0.4334
3	9-2-2020	9-30-2020	0.1366	0.1366
		Highest	0.4334	0.4334

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	0.0653	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.5000e-004	8.5000e-004	0.0000	0.0000	9.1000e-004
Energy	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	23.8452	23.8452	2.1100e-003	5.0000e-004	24.0460
Mobile	0.3529	1.3618	2.4454	5.4000e-003	0.3682	5.6500e-003	0.3739	0.0988	5.2800e-003	0.1041	0.0000	496.3768	496.3768	0.0303	0.0000	497.1340
Waste						0.0000	0.0000		0.0000	0.0000	1.3722	0.0000	1.3722	0.0811	0.0000	3.3996
Water						0.0000	0.0000		0.0000	0.0000	0.1192	0.3622	0.4814	0.0123	3.0000e-004	0.8768
Total	**0.4186**	**1.3655**	**2.4490**	**5.4200e-003**	**0.3682**	**5.9400e-003**	**0.3742**	**0.0988**	**5.5700e-003**	**0.1044**	**1.4914**	**520.5851**	**522.0765**	**0.1258**	**8.0000e-004**	**525.4573**

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	0.0653	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.5000e-004	8.5000e-004	0.0000	0.0000	9.1000e-004
Energy	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	23.8452	23.8452	2.1100e-003	5.0000e-004	24.0460
Mobile	0.3521	1.3557	2.4267	5.3200e-003	0.3609	5.5700e-003	0.3664	0.0969	5.2100e-003	0.1021	0.0000	488.9207	488.9207	0.0301	0.0000	489.6726
Waste						0.0000	0.0000		0.0000	0.0000	1.3722	0.0000	1.3722	0.0811	0.0000	3.3996
Water						0.0000	0.0000		0.0000	0.0000	0.1192	0.3622	0.4814	0.0123	3.0000e-004	0.8768
Total	**0.4178**	**1.3595**	**2.4303**	**5.3400e-003**	**0.3609**	**5.8600e-003**	**0.3667**	**0.0969**	**5.5000e-003**	**0.1024**	**1.4914**	**513.1290**	**514.6204**	**0.1256**	**8.0000e-004**	**517.9959**

	ROG	NOx	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	**0.19**	**0.44**	**0.76**	**1.48**	**2.00**	**1.35**	**1.99**	**1.99**	**1.26**	**1.96**	**0.00**	**1.43**	**1.43**	**0.17**	**0.00**	**1.42**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/2/2020	3/3/2020	5	2	
2	Grading	Grading	3/4/2020	3/18/2020	5	11	
3	Building Construction	Building Construction	4/3/2020	11/3/2020	5	153	
4	Paving	Paving	3/19/2020	4/2/2020	5	11	
5	Architectural Coating	Architectural Coating	4/17/2020	11/17/2020	5	153	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 2.24

Acres of Paving: 0.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,803; Non-Residential Outdoor: 7,268; Striped Parking Area: 624 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
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
Site Preparation	2	5.00	0.00	8.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	9.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9000e-004	8.4300e-003	4.0900e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.1000e-004	3.1000e-004	0.0000	0.8559	0.8559	2.8000e-004	0.0000	0.8628
Total	**6.9000e-004**	**8.4300e-003**	**4.0900e-003**	**1.0000e-005**	**2.7000e-004**	**3.4000e-004**	**6.1000e-004**	**3.0000e-005**	**3.1000e-004**	**3.4000e-004**	**0.0000**	**0.8559**	**0.8559**	**2.8000e-004**	**0.0000**	**0.8628**

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	3.0000e-005	1.1700e-003	2.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3066	0.3066	2.0000e-005	0.0000	0.3069
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	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0346	0.0346	0.0000	0.0000	0.0346
Total	**5.0000e-005**	**1.1800e-003**	**3.6000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.3412**	**0.3412**	**2.0000e-005**	**0.0000**	**0.3416**

3.2 Site Preparation - 2020

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9000e-004	8.4300e-003	4.0900e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.1000e-004	3.1000e-004	0.0000	0.8559	0.8559	2.8000e-004	0.0000	0.8628
Total	**6.9000e-004**	**8.4300e-003**	**4.0900e-003**	**1.0000e-005**	**2.7000e-004**	**3.4000e-004**	**6.1000e-004**	**3.0000e-005**	**3.1000e-004**	**3.4000e-004**	**0.0000**	**0.8559**	**0.8559**	**2.8000e-004**	**0.0000**	**0.8628**

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	3.0000e-005	1.1700e-003	2.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3066	0.3066	2.0000e-005	0.0000	0.3069
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	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0346	0.0346	0.0000	0.0000	0.0346
Total	**5.0000e-005**	**1.1800e-003**	**3.6000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.3412**	**0.3412**	**2.0000e-005**	**0.0000**	**0.3416**

3.3 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					5.3300e-003	0.0000	5.3300e-003	2.4000e-003	0.0000	2.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0433	0.0419	7.0000e-005		2.5700e-003	2.5700e-003		2.4500e-003	2.4500e-003	0.0000	5.7242	5.7242	1.0800e-003	0.0000	5.7512
Total	**4.7700e-003**	**0.0433**	**0.0419**	**7.0000e-005**	**5.3300e-003**	**2.5700e-003**	**7.9000e-003**	**2.4000e-003**	**2.4500e-003**	**4.8500e-003**	**0.0000**	**5.7242**	**5.7242**	**1.0800e-003**	**0.0000**	**5.7512**

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	1.8000e-004	1.3000e-004	1.3500e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3808	0.3808	1.0000e-005	0.0000	0.3810
Total	**1.8000e-004**	**1.3000e-004**	**1.3500e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3808**	**0.3808**	**1.0000e-005**	**0.0000**	**0.3810**

3.3 Grading - 2020

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					5.3300e-003	0.0000	5.3300e-003	2.4000e-003	0.0000	2.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0433	0.0419	7.0000e-005		2.5700e-003	2.5700e-003		2.4500e-003	2.4500e-003	0.0000	5.7241	5.7241	1.0800e-003	0.0000	5.7512
Total	**4.7700e-003**	**0.0433**	**0.0419**	**7.0000e-005**	**5.3300e-003**	**2.5700e-003**	**7.9000e-003**	**2.4000e-003**	**2.4500e-003**	**4.8500e-003**	**0.0000**	**5.7241**	**5.7241**	**1.0800e-003**	**0.0000**	**5.7512**

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	1.8000e-004	1.3000e-004	1.3500e-003	0.0000	4.3000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3808	0.3808	1.0000e-005	0.0000	0.3810
Total	**1.8000e-004**	**1.3000e-004**	**1.3500e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3808**	**0.3808**	**1.0000e-005**	**0.0000**	**0.3810**

3.4 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	0.0659	0.6772	0.5651	8.7000e-004		0.0400	0.0400		0.0368	0.0368	0.0000	76.5463	76.5463	0.0248	0.0000	77.1652
Total	**0.0659**	**0.6772**	**0.5651**	**8.7000e-004**		**0.0400**	**0.0400**		**0.0368**	**0.0368**	**0.0000**	**76.5463**	**76.5463**	**0.0248**	**0.0000**	**77.1652**

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	1.1800e-003	0.0353	8.8800e-003	8.0000e-005	2.0100e-003	1.7000e-004	2.1800e-003	5.8000e-004	1.6000e-004	7.5000e-004	0.0000	8.0117	8.0117	4.1000e-004	0.0000	8.0220
Worker	2.2800e-003	1.6300e-003	0.0169	5.0000e-005	5.4400e-003	4.0000e-005	5.4800e-003	1.4500e-003	3.0000e-005	1.4800e-003	0.0000	4.7664	4.7664	1.2000e-004	0.0000	4.7692
Total	**3.4600e-003**	**0.0369**	**0.0258**	**1.3000e-004**	**7.4500e-003**	**2.1000e-004**	**7.6600e-003**	**2.0300e-003**	**1.9000e-004**	**2.2300e-003**	**0.0000**	**12.7780**	**12.7780**	**5.3000e-004**	**0.0000**	**12.7912**

3.4 Building Construction - 2020

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	0.0659	0.6772	0.5651	8.7000e-004		0.0400	0.0400		0.0368	0.0368	0.0000	76.5462	76.5462	0.0248	0.0000	77.1651
Total	**0.0659**	**0.6772**	**0.5651**	**8.7000e-004**		**0.0400**	**0.0400**		**0.0368**	**0.0368**	**0.0000**	**76.5462**	**76.5462**	**0.0248**	**0.0000**	**77.1651**

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	1.1800e-003	0.0353	8.8800e-003	8.0000e-005	2.0100e-003	1.7000e-004	2.1800e-003	5.8000e-004	1.6000e-004	7.5000e-004	0.0000	8.0117	8.0117	4.1000e-004	0.0000	8.0220
Worker	2.2800e-003	1.6300e-003	0.0169	5.0000e-005	5.4400e-003	4.0000e-005	5.4800e-003	1.4500e-003	3.0000e-005	1.4800e-003	0.0000	4.7664	4.7664	1.2000e-004	0.0000	4.7692
Total	**3.4600e-003**	**0.0369**	**0.0258**	**1.3000e-004**	**7.4500e-003**	**2.1000e-004**	**7.6600e-003**	**2.0300e-003**	**1.9000e-004**	**2.2300e-003**	**0.0000**	**12.7780**	**12.7780**	**5.3000e-004**	**0.0000**	**12.7912**

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	4.2400e-003	0.0398	0.0391	6.0000e-005		2.1700e-003	2.1700e-003		2.0200e-003	2.0200e-003	0.0000	5.1661	5.1661	1.5000e-003	0.0000	5.2037
Paving	1.0500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.2900e-003**	**0.0398**	**0.0391**	**6.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**5.1661**	**5.1661**	**1.5000e-003**	**0.0000**	**5.2037**

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	3.3000e-004	2.3000e-004	2.4300e-003	1.0000e-005	7.8000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6854	0.6854	2.0000e-005	0.0000	0.6858
Total	**3.3000e-004**	**2.3000e-004**	**2.4300e-003**	**1.0000e-005**	**7.8000e-004**	**1.0000e-005**	**7.9000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6854**	**0.6854**	**2.0000e-005**	**0.0000**	**0.6858**

3.5 Paving - 2020

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	4.2400e-003	0.0398	0.0391	6.0000e-005		2.1700e-003	2.1700e-003		2.0200e-003	2.0200e-003	0.0000	5.1661	5.1661	1.5000e-003	0.0000	5.2037
Paving	1.0500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.2900e-003**	**0.0398**	**0.0391**	**6.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**5.1661**	**5.1661**	**1.5000e-003**	**0.0000**	**5.2037**

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	3.3000e-004	2.3000e-004	2.4300e-003	1.0000e-005	7.8000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6854	0.6854	2.0000e-005	0.0000	0.6858
Total	**3.3000e-004**	**2.3000e-004**	**2.4300e-003**	**1.0000e-005**	**7.8000e-004**	**1.0000e-005**	**7.9000e-004**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**0.6854**	**0.6854**	**2.0000e-005**	**0.0000**	**0.6858**

3.6 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	0.0780					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0185	0.1288	0.1401	2.3000e-004		8.4900e-003	8.4900e-003		8.4900e-003	8.4900e-003	0.0000	19.5324	19.5324	1.5100e-003	0.0000	19.5702
Total	**0.0965**	**0.1288**	**0.1401**	**2.3000e-004**		**8.4900e-003**	**8.4900e-003**		**8.4900e-003**	**8.4900e-003**	**0.0000**	**19.5324**	**19.5324**	**1.5100e-003**	**0.0000**	**19.5702**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.6000e-004	3.7600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0592	1.0592	3.0000e-005	0.0000	1.0598
Total	**5.1000e-004**	**3.6000e-004**	**3.7600e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0592**	**1.0592**	**3.0000e-005**	**0.0000**	**1.0598**

3.6 Architectural Coating - 2020

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	0.0780					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0185	0.1288	0.1401	2.3000e-004		8.4900e-003	8.4900e-003		8.4900e-003	8.4900e-003	0.0000	19.5324	19.5324	1.5100e-003	0.0000	19.5702
Total	**0.0965**	**0.1288**	**0.1401**	**2.3000e-004**		**8.4900e-003**	**8.4900e-003**		**8.4900e-003**	**8.4900e-003**	**0.0000**	**19.5324**	**19.5324**	**1.5100e-003**	**0.0000**	**19.5702**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.6000e-004	3.7600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0592	1.0592	3.0000e-005	0.0000	1.0598
Total	**5.1000e-004**	**3.6000e-004**	**3.7600e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0592**	**1.0592**	**3.0000e-005**	**0.0000**	**1.0598**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3521	1.3557	2.4267	5.3200e-003	0.3609	5.5700e-003	0.3664	0.0969	5.2100e-003	0.1021	0.0000	488.9207	488.9207	0.0301	0.0000	489.6726
Unmitigated	0.3529	1.3618	2.4454	5.4000e-003	0.3682	5.6500e-003	0.3739	0.0988	5.2800e-003	0.1041	0.0000	496.3768	496.3768	0.0303	0.0000	497.1340

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	41.98	41.98	21.03	38,842	38,065
Convenience Market With Gas Pumps	1,772.00	1,772.00	1772.00	950,508	931,498
Parking Lot	0.00	0.00	0.00		
Total	1,813.98	1,813.98	1,793.03	989,350	969,563

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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Convenience Market With Gas Pumps	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Parking Lot	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.7430	19.7430	2.0400e-003	4.2000e-004	19.9193
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.7430	19.7430	2.0400e-003	4.2000e-004	19.9193
NaturalGas Mitigated	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1023	4.1023	8.0000e-005	8.0000e-005	4.1267
NaturalGas Unmitigated	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1023	4.1023	8.0000e-005	8.0000e-005	4.1267

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					
Automobile Care Center	46613.5	2.5000e-004	2.2800e-003	1.9200e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.4875	2.4875	5.0000e-005	5.0000e-005	2.5023
Convenience Market With Gas Pumps	30260.2	1.6000e-004	1.4800e-003	1.2500e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6148	1.6148	3.0000e-005	3.0000e-005	1.6244
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.1000e-004**	**3.7600e-003**	**3.1700e-003**	**2.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**4.1023**	**4.1023**	**8.0000e-005**	**8.0000e-005**	**4.1266**

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					
Automobile Care Center	46613.5	2.5000e-004	2.2800e-003	1.9200e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.4875	2.4875	5.0000e-005	5.0000e-005	2.5023
Convenience Market With Gas Pumps	30260.2	1.6000e-004	1.4800e-003	1.2500e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6148	1.6148	3.0000e-005	3.0000e-005	1.6244
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.1000e-004**	**3.7600e-003**	**3.1700e-003**	**2.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**4.1023**	**4.1023**	**8.0000e-005**	**8.0000e-005**	**4.1266**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	14595.4	1.8624	1.9000e-004	4.0000e-005	1.8790
Convenience Market With Gas Pumps	136490	17.4161	1.8000e-003	3.7000e-004	17.5717
Parking Lot	3640	0.4645	5.0000e-005	1.0000e-005	0.4686
Total		**19.7430**	**2.0400e-003**	**4.2000e-004**	**19.9193**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	14595.4	1.8624	1.9000e-004	4.0000e-005	1.8790
Convenience Market With Gas Pumps	136490	17.4161	1.8000e-003	3.7000e-004	17.5717
Parking Lot	3640	0.4645	5.0000e-005	1.0000e-005	0.4686
Total		**19.7430**	**2.0400e-003**	**4.2000e-004**	**19.9193**

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	0.0653	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.5000e-004	8.5000e-004	0.0000	0.0000	9.1000e-004
Unmitigated	0.0653	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.5000e-004	8.5000e-004	0.0000	0.0000	9.1000e-004

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	7.8000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0574					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.5000e-004	8.5000e-004	0.0000	0.0000	9.1000e-004
Total	**0.0653**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.5000e-004**	**8.5000e-004**	**0.0000**	**0.0000**	**9.1000e-004**

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	7.8000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0574					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.5000e-004	8.5000e-004	0.0000	0.0000	9.1000e-004
Total	**0.0653**	**0.0000**	**4.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.5000e-004**	**8.5000e-004**	**0.0000**	**0.0000**	**9.1000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.4814	0.0123	3.0000e-004	0.8768
Unmitigated	0.4814	0.0123	3.0000e-004	0.8768

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.166524 / 0.102063	0.2134	5.4400e-003	1.3000e-004	0.3887
Convenience Market With Gas Pumps	0.209144 / 0.128185	0.2680	6.8400e-003	1.7000e-004	0.4881
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.4814**	**0.0123**	**3.0000e-004**	**0.8768**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.166524 / 0.102063	0.2134	5.4400e-003	1.3000e-004	0.3887
Convenience Market With Gas Pumps	0.209144 / 0.128185	0.2680	6.8400e-003	1.7000e-004	0.4881
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.4814**	**0.0123**	**3.0000e-004**	**0.8768**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.3722	0.0811	0.0000	3.3996
Unmitigated	1.3722	0.0811	0.0000	3.3996

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	6.76	1.3722	0.0811	0.0000	3.3996
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**1.3722**	**0.0811**	**0.0000**	**3.3996**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	6.76	1.3722	0.0811	0.0000	3.3996
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**1.3722**	**0.0811**	**0.0000**	**3.3996**

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

Rotten Robbie 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
Parking Lot	26.00	Space	0.80	10,400.00	0
Automobile Care Center	1.77	1000sqft	0.04	1,767.00	0
Convenience Market With Gas Pumps	20.00	Pump	0.06	12,768.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	281.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS Calculator

Land Use - applicant provided

Construction Phase - applicant provided

Grading - applicant provided

Vehicle Trips - Traffic Impact Analysis

Energy Use -

Mobile Land Use Mitigation - applicant provided

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	11.00
tblConstructionPhase	NumDays	5.00	11.00
tblConstructionPhase	NumDays	100.00	153.00
tblConstructionPhase	NumDays	5.00	153.00
tblConstructionPhase	PhaseEndDate	3/2/2020	3/3/2020
tblConstructionPhase	PhaseEndDate	3/4/2020	3/18/2020
tblConstructionPhase	PhaseEndDate	7/29/2020	4/2/2020
tblConstructionPhase	PhaseEndDate	7/22/2020	11/3/2020
tblConstructionPhase	PhaseEndDate	8/5/2020	11/17/2020
tblConstructionPhase	PhaseStartDate	3/3/2020	3/4/2020
tblConstructionPhase	PhaseStartDate	7/23/2020	3/19/2020
tblConstructionPhase	PhaseStartDate	3/5/2020	4/3/2020
tblConstructionPhase	PhaseStartDate	7/30/2020	4/17/2020
tblGrading	AcresOfGrading	0.00	2.24
tblGrading	AcresOfGrading	1.00	0.50
tblGrading	MaterialExported	0.00	60.00
tblLandUse	LandUseSquareFeet	1,770.00	1,767.00
tblLandUse	LandUseSquareFeet	2,823.50	12,768.00
tblLandUse	LotAcreage	0.23	0.80
tblProjectCharacteristics	CO2IntensityFactor	641.35	281.31
tblVehicleTrips	ST_TR	204.47	88.60
tblVehicleTrips	SU_TR	166.88	88.60
tblVehicleTrips	WD_TR	542.60	88.60

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	2.1794	11.0257	9.6205	0.0163	1.0509	0.6362	1.5186	0.4589	0.5942	0.9051	0.0000	1,581.3242	1,581.3242	0.3868	0.0000	1,590.9934
Maximum	**2.1794**	**11.0257**	**9.6205**	**0.0163**	**1.0509**	**0.6362**	**1.5186**	**0.4589**	**0.5942**	**0.9051**	**0.0000**	**1,581.3242**	**1,581.3242**	**0.3868**	**0.0000**	**1,590.9934**

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	2.1794	11.0257	9.6205	0.0163	1.0509	0.6362	1.5186	0.4589	0.5942	0.9051	0.0000	1,581.3242	1,581.3242	0.3868	0.0000	1,590.9934
Maximum	**2.1794**	**11.0257**	**9.6205**	**0.0163**	**1.0509**	**0.6362**	**1.5186**	**0.4589**	**0.5942**	**0.9051**	**0.0000**	**1,581.3242**	**1,581.3242**	**0.3868**	**0.0000**	**1,590.9934**

	ROG	NOx	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	0.3579	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Energy	2.2700e-003	0.0207	0.0173	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7780	24.7780	4.7000e-004	4.5000e-004	24.9252
Mobile	1.9197	7.5247	14.8682	0.0293	2.1084	0.0316	2.1399	0.5641	0.0295	0.5936		2,962.6938	2,962.6938	0.1948		2,967.5631
Total	**2.2799**	**7.5454**	**14.8905**	**0.0294**	**2.1084**	**0.0331**	**2.1415**	**0.5641**	**0.0311**	**0.5952**		**2,987.4822**	**2,987.4822**	**0.1953**	**4.5000e-004**	**2,992.4995**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3579	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Energy	2.2700e-003	0.0207	0.0173	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7780	24.7780	4.7000e-004	4.5000e-004	24.9252
Mobile	1.9152	7.4901	14.7648	0.0288	2.0662	0.0312	2.0973	0.5528	0.0291	0.5820		2,917.6732	2,917.6732	0.1935		2,922.5102
Total	**2.2754**	**7.5108**	**14.7871**	**0.0290**	**2.0662**	**0.0327**	**2.0989**	**0.5528**	**0.0307**	**0.5836**		**2,942.4616**	**2,942.4616**	**0.1940**	**4.5000e-004**	**2,947.4465**

	ROG	NOx	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	**0.20**	**0.46**	**0.69**	**1.53**	**2.00**	**1.21**	**1.99**	**2.00**	**1.19**	**1.96**	**0.00**	**1.51**	**1.51**	**0.66**	**0.00**	**1.51**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/2/2020	3/3/2020	5	2	
2	Grading	Grading	3/4/2020	3/18/2020	5	11	
3	Building Construction	Building Construction	4/3/2020	11/3/2020	5	153	
4	Paving	Paving	3/19/2020	4/2/2020	5	11	
5	Architectural Coating	Architectural Coating	4/17/2020	11/17/2020	5	153	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 2.24

Acres of Paving: 0.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,803; Non-Residential Outdoor: 7,268; Striped Parking Area: 624 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
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
Site Preparation	2	5.00	0.00	8.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	9.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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					0.2685	0.0000	0.2685	0.0291	0.0000	0.0291			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085		943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.2685**	**0.3353**	**0.6039**	**0.0291**	**0.3085**	**0.3377**		**943.4872**	**943.4872**	**0.3051**		**951.1158**

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	0.0339	1.1739	0.2452	3.1300e-003	0.0699	3.8100e-003	0.0737	0.0192	3.6500e-003	0.0228		334.5974	334.5974	0.0179		335.0444
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	0.0184	0.0130	0.1260	3.8000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		37.8033	37.8033	9.2000e-004		37.8264
Total	**0.0523**	**1.1869**	**0.3711**	**3.5100e-003**	**0.1110**	**4.0800e-003**	**0.1150**	**0.0300**	**3.9000e-003**	**0.0339**		**372.4007**	**372.4007**	**0.0188**		**372.8708**

3.2 Site Preparation - 2020

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					0.2685	0.0000	0.2685	0.0291	0.0000	0.0291			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085	0.0000	943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.2685**	**0.3353**	**0.6039**	**0.0291**	**0.3085**	**0.3377**	**0.0000**	**943.4872**	**943.4872**	**0.3051**		**951.1158**

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	0.0339	1.1739	0.2452	3.1300e-003	0.0699	3.8100e-003	0.0737	0.0192	3.6500e-003	0.0228		334.5974	334.5974	0.0179		335.0444
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	0.0184	0.0130	0.1260	3.8000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		37.8033	37.8033	9.2000e-004		37.8264
Total	**0.0523**	**1.1869**	**0.3711**	**3.5100e-003**	**0.1110**	**4.0800e-003**	**0.1150**	**0.0300**	**3.9000e-003**	**0.0339**		**372.4007**	**372.4007**	**0.0188**		**372.8708**

3.3 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					0.9687	0.0000	0.9687	0.4371	0.0000	0.4371			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.9687**	**0.4672**	**1.4359**	**0.4371**	**0.4457**	**0.8828**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

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	0.0368	0.0260	0.2520	7.6000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		75.6065	75.6065	1.8500e-003		75.6528
Total	**0.0368**	**0.0260**	**0.2520**	**7.6000e-004**	**0.0822**	**5.3000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**75.6065**	**75.6065**	**1.8500e-003**		**75.6528**

3.3 Grading - 2020

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					0.9687	0.0000	0.9687	0.4371	0.0000	0.4371			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.9687**	**0.4672**	**1.4359**	**0.4371**	**0.4457**	**0.8828**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

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	0.0368	0.0260	0.2520	7.6000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		75.6065	75.6065	1.8500e-003		75.6528
Total	**0.0368**	**0.0260**	**0.2520**	**7.6000e-004**	**0.0822**	**5.3000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**75.6065**	**75.6065**	**1.8500e-003**		**75.6528**

3.4 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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

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	0.0160	0.4610	0.1244	1.0700e-003	0.0271	2.2700e-003	0.0294	7.7900e-003	2.1700e-003	9.9700e-003		113.7309	113.7309	6.2200e-003		113.8863
Worker	0.0331	0.0234	0.2268	6.8000e-004	0.0739	4.8000e-004	0.0744	0.0196	4.4000e-004	0.0201		68.0459	68.0459	1.6600e-003		68.0875
Total	**0.0491**	**0.4844**	**0.3512**	**1.7500e-003**	**0.1010**	**2.7500e-003**	**0.1038**	**0.0274**	**2.6100e-003**	**0.0300**		**181.7768**	**181.7768**	**7.8800e-003**		**181.9738**

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

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	0.0160	0.4610	0.1244	1.0700e-003	0.0271	2.2700e-003	0.0294	7.7900e-003	2.1700e-003	9.9700e-003		113.7309	113.7309	6.2200e-003		113.8863
Worker	0.0331	0.0234	0.2268	6.8000e-004	0.0739	4.8000e-004	0.0744	0.0196	4.4000e-004	0.0201		68.0459	68.0459	1.6600e-003		68.0875
Total	**0.0491**	**0.4844**	**0.3512**	**1.7500e-003**	**0.1010**	**2.7500e-003**	**0.1038**	**0.0274**	**2.6100e-003**	**0.0300**		**181.7768**	**181.7768**	**7.8800e-003**		**181.9738**

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	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669		1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.1906					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9621**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**		**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

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	0.0662	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	**0.0662**	**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**

3.5 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669	0.0000	1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.1906					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9621**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**	**0.0000**	**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

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	0.0662	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	**0.0662**	**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**

3.6 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	1.0191					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	**1.2613**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	7.3500e-003	5.2000e-003	0.0504	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		15.1213	15.1213	3.7000e-004		15.1306
Total	**7.3500e-003**	**5.2000e-003**	**0.0504**	**1.5000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**15.1213**	**15.1213**	**3.7000e-004**		**15.1306**

3.6 Architectural Coating - 2020

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	1.0191					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	**1.2613**	**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**

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	7.3500e-003	5.2000e-003	0.0504	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		15.1213	15.1213	3.7000e-004		15.1306
Total	**7.3500e-003**	**5.2000e-003**	**0.0504**	**1.5000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**15.1213**	**15.1213**	**3.7000e-004**		**15.1306**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9152	7.4901	14.7648	0.0288	2.0662	0.0312	2.0973	0.5528	0.0291	0.5820		2,917.6732	2,917.6732	0.1935		2,922.5102
Unmitigated	1.9197	7.5247	14.8682	0.0293	2.1084	0.0316	2.1399	0.5641	0.0295	0.5936		2,962.6938	2,962.6938	0.1948		2,967.5631

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	41.98	41.98	21.03	38,842	38,065
Convenience Market With Gas Pumps	1,772.00	1,772.00	1772.00	950,508	931,498
Parking Lot	0.00	0.00	0.00		
Total	1,813.98	1,813.98	1,793.03	989,350	969,563

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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Convenience Market With Gas Pumps	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Parking Lot	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.2700e-003	0.0207	0.0173	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7780	24.7780	4.7000e-004	4.5000e-004	24.9252
NaturalGas Unmitigated	2.2700e-003	0.0207	0.0173	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7780	24.7780	4.7000e-004	4.5000e-004	24.9252

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					
Automobile Care Center	127.708	1.3800e-003	0.0125	0.0105	8.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004		15.0245	15.0245	2.9000e-004	2.8000e-004	15.1138
Convenience Market With Gas Pumps	82.9045	8.9000e-004	8.1300e-003	6.8300e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		9.7535	9.7535	1.9000e-004	1.8000e-004	9.8114
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2700e-003**	**0.0207**	**0.0174**	**1.3000e-004**		**1.5700e-003**	**1.5700e-003**		**1.5700e-003**	**1.5700e-003**		**24.7780**	**24.7780**	**4.8000e-004**	**4.6000e-004**	**24.9252**

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					
Automobile Care Center	0.127708	1.3800e-003	0.0125	0.0105	8.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004		15.0245	15.0245	2.9000e-004	2.8000e-004	15.1138
Convenience Market With Gas Pumps	0.0829045	8.9000e-004	8.1300e-003	6.8300e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		9.7535	9.7535	1.9000e-004	1.8000e-004	9.8114
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2700e-003**	**0.0207**	**0.0174**	**1.3000e-004**		**1.5700e-003**	**1.5700e-003**		**1.5700e-003**	**1.5700e-003**		**24.7780**	**24.7780**	**4.8000e-004**	**4.6000e-004**	**24.9252**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3579	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Unmitigated	0.3579	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112

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	0.0427					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6000e-004	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Total	**0.3579**	**4.0000e-005**	**4.9000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0105**	**0.0105**	**3.0000e-005**		**0.0112**

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	0.0427					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6000e-004	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Total	**0.3579**	**4.0000e-005**	**4.9000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0105**	**0.0105**	**3.0000e-005**		**0.0112**

7.0 Water Detail

7.1 Mitigation Measures Water

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

Rotten Robbie 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
Parking Lot	26.00	Space	0.80	10,400.00	0
Automobile Care Center	1.77	1000sqft	0.04	1,767.00	0
Convenience Market With Gas Pumps	20.00	Pump	0.06	12,768.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	281.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS Calculator

Land Use - applicant provided

Construction Phase - applicant provided

Grading - applicant provided

Vehicle Trips - Traffic Impact Analysis

Energy Use -

Mobile Land Use Mitigation - applicant provided

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDays	2.00	11.00
tblConstructionPhase	NumDays	5.00	11.00
tblConstructionPhase	NumDays	100.00	153.00
tblConstructionPhase	NumDays	5.00	153.00
tblConstructionPhase	PhaseEndDate	3/2/2020	3/3/2020
tblConstructionPhase	PhaseEndDate	3/4/2020	3/18/2020
tblConstructionPhase	PhaseEndDate	7/29/2020	4/2/2020
tblConstructionPhase	PhaseEndDate	7/22/2020	11/3/2020
tblConstructionPhase	PhaseEndDate	8/5/2020	11/17/2020
tblConstructionPhase	PhaseStartDate	3/3/2020	3/4/2020
tblConstructionPhase	PhaseStartDate	7/23/2020	3/19/2020
tblConstructionPhase	PhaseStartDate	3/5/2020	4/3/2020
tblConstructionPhase	PhaseStartDate	7/30/2020	4/17/2020
tblGrading	AcresOfGrading	0.00	2.24
tblGrading	AcresOfGrading	1.00	0.50
tblGrading	MaterialExported	0.00	60.00
tblLandUse	LandUseSquareFeet	1,770.00	1,767.00
tblLandUse	LandUseSquareFeet	2,823.50	12,768.00
tblLandUse	LotAcreage	0.23	0.80
tblProjectCharacteristics	CO2IntensityFactor	641.35	281.31
tblVehicleTrips	ST_TR	204.47	88.60
tblVehicleTrips	SU_TR	166.88	88.60
tblVehicleTrips	WD_TR	542.60	88.60

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	2.1764	11.0152	9.6228	0.0164	1.0509	0.6361	1.5186	0.4589	0.5942	0.9051	0.0000	1,591.3948	1,591.3948	0.3865	0.0000	1,601.0557
Maximum	**2.1764**	**11.0152**	**9.6228**	**0.0164**	**1.0509**	**0.6361**	**1.5186**	**0.4589**	**0.5942**	**0.9051**	**0.0000**	**1,591.3948**	**1,591.3948**	**0.3865**	**0.0000**	**1,601.0557**

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	2.1764	11.0152	9.6228	0.0164	1.0509	0.6361	1.5186	0.4589	0.5942	0.9051	0.0000	1,591.3948	1,591.3948	0.3865	0.0000	1,601.0557
Maximum	**2.1764**	**11.0152**	**9.6228**	**0.0164**	**1.0509**	**0.6361**	**1.5186**	**0.4589**	**0.5942**	**0.9051**	**0.0000**	**1,591.3948**	**1,591.3948**	**0.3865**	**0.0000**	**1,601.0557**

	ROG	NOx	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	0.3579	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Energy	2.2700e-003	0.0207	0.0173	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7780	24.7780	4.7000e-004	4.5000e-004	24.9252
Mobile	2.3089	7.4073	12.4625	0.0314	2.1084	0.0308	2.1392	0.5641	0.0288	0.5929		3,179.7147	3,179.7147	0.1758		3,184.1108
Total	**2.6691**	**7.4280**	**12.4848**	**0.0315**	**2.1084**	**0.0324**	**2.1408**	**0.5641**	**0.0304**	**0.5945**		**3,204.5031**	**3,204.5031**	**0.1763**	**4.5000e-004**	**3,209.0471**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3579	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Energy	2.2700e-003	0.0207	0.0173	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7780	24.7780	4.7000e-004	4.5000e-004	24.9252
Mobile	2.3043	7.3759	12.3465	0.0309	2.0662	0.0304	2.0966	0.5528	0.0284	0.5813		3,131.6954	3,131.6954	0.1745		3,136.0575
Total	**2.6645**	**7.3966**	**12.3687**	**0.0310**	**2.0662**	**0.0320**	**2.0982**	**0.5528**	**0.0300**	**0.5829**		**3,156.4838**	**3,156.4838**	**0.1750**	**4.5000e-004**	**3,160.9939**

	ROG	NOx	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	**0.17**	**0.42**	**0.93**	**1.49**	**2.00**	**1.23**	**1.99**	**2.00**	**1.22**	**1.96**	**0.00**	**1.50**	**1.50**	**0.77**	**0.00**	**1.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/2/2020	3/3/2020	5	2	
2	Grading	Grading	3/4/2020	3/18/2020	5	11	
3	Building Construction	Building Construction	4/3/2020	11/3/2020	5	153	
4	Paving	Paving	3/19/2020	4/2/2020	5	11	
5	Architectural Coating	Architectural Coating	4/17/2020	11/17/2020	5	153	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 2.24

Acres of Paving: 0.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 21,803; Non-Residential Outdoor: 7,268; Striped Parking Area: 624 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
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
Site Preparation	2	5.00	0.00	8.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	9.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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					0.2685	0.0000	0.2685	0.0291	0.0000	0.0291			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085		943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.2685**	**0.3353**	**0.6039**	**0.0291**	**0.3085**	**0.3377**		**943.4872**	**943.4872**	**0.3051**		**951.1158**

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	0.0330	1.1458	0.2277	3.1800e-003	0.0699	3.7500e-003	0.0736	0.0192	3.5800e-003	0.0227		340.3134	340.3134	0.0170		340.7390
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	0.0174	0.0105	0.1342	4.1000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.0388	41.0388	9.9000e-004		41.0636
Total	**0.0504**	**1.1563**	**0.3619**	**3.5900e-003**	**0.1110**	**4.0200e-003**	**0.1150**	**0.0300**	**3.8300e-003**	**0.0339**		**381.3523**	**381.3523**	**0.0180**		**381.8026**

3.2 Site Preparation - 2020

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					0.2685	0.0000	0.2685	0.0291	0.0000	0.0291			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085	0.0000	943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.2685**	**0.3353**	**0.6039**	**0.0291**	**0.3085**	**0.3377**	**0.0000**	**943.4872**	**943.4872**	**0.3051**		**951.1158**

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	0.0330	1.1458	0.2277	3.1800e-003	0.0699	3.7500e-003	0.0736	0.0192	3.5800e-003	0.0227		340.3134	340.3134	0.0170		340.7390
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	0.0174	0.0105	0.1342	4.1000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.0388	41.0388	9.9000e-004		41.0636
Total	**0.0504**	**1.1563**	**0.3619**	**3.5900e-003**	**0.1110**	**4.0200e-003**	**0.1150**	**0.0300**	**3.8300e-003**	**0.0339**		**381.3523**	**381.3523**	**0.0180**		**381.8026**

3.3 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					0.9687	0.0000	0.9687	0.4371	0.0000	0.4371			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.9687**	**0.4672**	**1.4359**	**0.4371**	**0.4457**	**0.8828**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

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	0.0348	0.0210	0.2683	8.2000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		82.0777	82.0777	1.9800e-003		82.1271
Total	**0.0348**	**0.0210**	**0.2683**	**8.2000e-004**	**0.0822**	**5.3000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**82.0777**	**82.0777**	**1.9800e-003**		**82.1271**

3.3 Grading - 2020

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					0.9687	0.0000	0.9687	0.4371	0.0000	0.4371			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.9687**	**0.4672**	**1.4359**	**0.4371**	**0.4457**	**0.8828**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

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	0.0348	0.0210	0.2683	8.2000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		82.0777	82.0777	1.9800e-003		82.1271
Total	**0.0348**	**0.0210**	**0.2683**	**8.2000e-004**	**0.0822**	**5.3000e-004**	**0.0827**	**0.0218**	**4.9000e-004**	**0.0223**		**82.0777**	**82.0777**	**1.9800e-003**		**82.1271**

3.4 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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

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	0.0152	0.4559	0.1087	1.1000e-003	0.0271	2.2300e-003	0.0293	7.7900e-003	2.1400e-003	9.9300e-003		116.6832	116.6832	5.7500e-003		116.8269
Worker	0.0313	0.0189	0.2415	7.4000e-004	0.0739	4.8000e-004	0.0744	0.0196	4.4000e-004	0.0201		73.8699	73.8699	1.7800e-003		73.9144
Total	**0.0464**	**0.4748**	**0.3502**	**1.8400e-003**	**0.1010**	**2.7100e-003**	**0.1037**	**0.0274**	**2.5800e-003**	**0.0300**		**190.5531**	**190.5531**	**7.5300e-003**		**190.7413**

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

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	0.0152	0.4559	0.1087	1.1000e-003	0.0271	2.2300e-003	0.0293	7.7900e-003	2.1400e-003	9.9300e-003		116.6832	116.6832	5.7500e-003		116.8269
Worker	0.0313	0.0189	0.2415	7.4000e-004	0.0739	4.8000e-004	0.0744	0.0196	4.4000e-004	0.0201		73.8699	73.8699	1.7800e-003		73.9144
Total	**0.0464**	**0.4748**	**0.3502**	**1.8400e-003**	**0.1010**	**2.7100e-003**	**0.1037**	**0.0274**	**2.5800e-003**	**0.0300**		**190.5531**	**190.5531**	**7.5300e-003**		**190.7413**

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	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669		1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.1906					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9621**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**		**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

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	0.0626	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	**0.0626**	**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**

3.5 Paving - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669	0.0000	1,035.3926	1,035.3926	0.3016		1,042.9323
Paving	0.1906					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9621**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**	**0.0000**	**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

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	0.0626	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	**0.0626**	**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**

3.6 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	1.0191					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	**1.2613**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

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	6.9500e-003	4.2100e-003	0.0537	1.6000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		16.4155	16.4155	4.0000e-004		16.4254
Total	**6.9500e-003**	**4.2100e-003**	**0.0537**	**1.6000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**16.4155**	**16.4155**	**4.0000e-004**		**16.4254**

3.6 Architectural Coating - 2020

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	1.0191					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	**1.2613**	**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**

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	6.9500e-003	4.2100e-003	0.0537	1.6000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		16.4155	16.4155	4.0000e-004		16.4254
Total	**6.9500e-003**	**4.2100e-003**	**0.0537**	**1.6000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**16.4155**	**16.4155**	**4.0000e-004**		**16.4254**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3043	7.3759	12.3465	0.0309	2.0662	0.0304	2.0966	0.5528	0.0284	0.5813		3,131.6954	3,131.6954	0.1745		3,136.0575
Unmitigated	2.3089	7.4073	12.4625	0.0314	2.1084	0.0308	2.1392	0.5641	0.0288	0.5929		3,179.7147	3,179.7147	0.1758		3,184.1108

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	41.98	41.98	21.03	38,842	38,065
Convenience Market With Gas Pumps	1,772.00	1,772.00	1772.00	950,508	931,498
Parking Lot	0.00	0.00	0.00		
Total	1,813.98	1,813.98	1,793.03	989,350	969,563

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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Convenience Market With Gas Pumps	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789
Parking Lot	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.2700e-003	0.0207	0.0173	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7780	24.7780	4.7000e-004	4.5000e-004	24.9252
NaturalGas Unmitigated	2.2700e-003	0.0207	0.0173	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7780	24.7780	4.7000e-004	4.5000e-004	24.9252

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					
Automobile Care Center	127.708	1.3800e-003	0.0125	0.0105	8.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004		15.0245	15.0245	2.9000e-004	2.8000e-004	15.1138
Convenience Market With Gas Pumps	82.9045	8.9000e-004	8.1300e-003	6.8300e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		9.7535	9.7535	1.9000e-004	1.8000e-004	9.8114
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2700e-003**	**0.0207**	**0.0174**	**1.3000e-004**		**1.5700e-003**	**1.5700e-003**		**1.5700e-003**	**1.5700e-003**		**24.7780**	**24.7780**	**4.8000e-004**	**4.6000e-004**	**24.9252**

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					
Automobile Care Center	0.127708	1.3800e-003	0.0125	0.0105	8.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004		15.0245	15.0245	2.9000e-004	2.8000e-004	15.1138
Convenience Market With Gas Pumps	0.0829045	8.9000e-004	8.1300e-003	6.8300e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		9.7535	9.7535	1.9000e-004	1.8000e-004	9.8114
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2700e-003**	**0.0207**	**0.0174**	**1.3000e-004**		**1.5700e-003**	**1.5700e-003**		**1.5700e-003**	**1.5700e-003**		**24.7780**	**24.7780**	**4.8000e-004**	**4.6000e-004**	**24.9252**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3579	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Unmitigated	0.3579	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112

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	0.0427					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6000e-004	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Total	**0.3579**	**4.0000e-005**	**4.9000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0105**	**0.0105**	**3.0000e-005**		**0.0112**

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	0.0427					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3147					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.6000e-004	4.0000e-005	4.9000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0105	0.0105	3.0000e-005		0.0112
Total	**0.3579**	**4.0000e-005**	**4.9000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0105**	**0.0105**	**3.0000e-005**		**0.0112**

7.0 Water Detail

7.1 Mitigation Measures Water

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

Rotten Robbie 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
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	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	4	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	2	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	1	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	1	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	6	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	1.85300E-002	1.28810E-001	1.40100E-001	2.30000E-004	8.49000E-003	8.49000E-003	0.00000E+000	1.95324E+001	1.95324E+001	1.51000E-003	0.00000E+000	1.95702E+001
Cement and Mortar Mixers	9.70000E-004	6.08000E-003	5.09000E-003	1.00000E-005	2.40000E-004	2.40000E-004	0.00000E+000	7.56160E-001	7.56160E-001	8.00000E-005	0.00000E+000	7.58120E-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	1.73400E-002	2.06230E-001	8.09100E-002	2.20000E-004	8.50000E-003	7.82000E-003	0.00000E+000	1.93899E+001	1.93899E+001	6.27000E-003	0.00000E+000	1.95467E+001
Forklifts	1.65300E-002	1.48890E-001	1.35440E-001	1.80000E-004	1.10900E-002	1.02000E-002	0.00000E+000	1.54099E+001	1.54099E+001	4.98000E-003	0.00000E+000	1.55345E+001
Graders	4.80000E-004	6.33000E-003	1.81000E-003	1.00000E-005	2.00000E-004	1.90000E-004	0.00000E+000	5.83060E-001	5.83060E-001	1.90000E-004	0.00000E+000	5.87780E-001
Pavers	1.26000E-003	1.35200E-002	1.39500E-002	2.00000E-005	6.60000E-004	6.00000E-004	0.00000E+000	1.98764E+000	1.98764E+000	6.40000E-004	0.00000E+000	2.00371E+000
Rollers	1.00000E-003	1.00200E-002	9.11000E-003	1.00000E-005	6.40000E-004	5.90000E-004	0.00000E+000	1.10921E+000	1.10921E+000	3.60000E-004	0.00000E+000	1.11818E+000
Rubber Tired Dozers	7.40000E-004	7.79000E-003	2.84000E-003	1.00000E-005	3.80000E-004	3.50000E-004	0.00000E+000	5.16000E-001	5.16000E-001	1.70000E-004	0.00000E+000	5.20180E-001
Tractors/Loaders/Backhoes	3.50000E-002	3.51690E-001	3.80850E-001	5.20000E-004	2.22400E-002	2.04600E-002	0.00000E+000	4.55834E+001	4.55834E+001	1.47400E-002	0.00000E+000	4.59520E+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	1.85300E-002	1.28810E-001	1.40100E-001	2.30000E-004	8.49000E-003	8.49000E-003	0.00000E+000	1.95324E+001	1.95324E+001	1.51000E-003	0.00000E+000	1.95702E+001
Cement and Mortar Mixers	9.70000E-004	6.08000E-003	5.09000E-003	1.00000E-005	2.40000E-004	2.40000E-004	0.00000E+000	7.56160E-001	7.56160E-001	8.00000E-005	0.00000E+000	7.58120E-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	1.73400E-002	2.06230E-001	8.09100E-002	2.20000E-004	8.50000E-003	7.82000E-003	0.00000E+000	1.93899E+001	1.93899E+001	6.27000E-003	0.00000E+000	1.95467E+001
Forklifts	1.65300E-002	1.48890E-001	1.35440E-001	1.80000E-004	1.10900E-002	1.02000E-002	0.00000E+000	1.54099E+001	1.54099E+001	4.98000E-003	0.00000E+000	1.55345E+001
Graders	4.80000E-004	6.33000E-003	1.81000E-003	1.00000E-005	2.00000E-004	1.90000E-004	0.00000E+000	5.83060E-001	5.83060E-001	1.90000E-004	0.00000E+000	5.87780E-001
Pavers	1.26000E-003	1.35200E-002	1.39500E-002	2.00000E-005	6.60000E-004	6.00000E-004	0.00000E+000	1.98764E+000	1.98764E+000	6.40000E-004	0.00000E+000	2.00371E+000
Rollers	1.00000E-003	1.00200E-002	9.11000E-003	1.00000E-005	6.40000E-004	5.90000E-004	0.00000E+000	1.10921E+000	1.10921E+000	3.60000E-004	0.00000E+000	1.11818E+000
Rubber Tired Dozers	7.40000E-004	7.79000E-003	2.84000E-003	1.00000E-005	3.80000E-004	3.50000E-004	0.00000E+000	5.16000E-001	5.16000E-001	1.70000E-004	0.00000E+000	5.20180E-001
Tractors/Loaders/Backhoes	3.50000E-002	3.51690E-001	3.80850E-001	5.20000E-004	2.22400E-002	2.04600E-002	0.00000E+000	4.55834E+001	4.55834E+001	1.47400E-002	0.00000E+000	4.59520E+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	1.02394E-006	1.02394E-006	0.00000E+000	0.00000E+000	1.53294E-006
Cement and Mortar Mixers	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
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	1.54720E-006	1.54720E-006	0.00000E+000	0.00000E+000	1.02319E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.29786E-006	1.29786E-006	0.00000E+000	0.00000E+000	6.43728E-007
Graders	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
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	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	0.00000E+000	0.00000E+000	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	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.31627E-006	1.31627E-006	0.00000E+000	0.00000E+000	1.08809E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		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	0.00	0.00	0.00	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	0.01	0.00	0.01	0.00	0.00	0.00
Grading	Fugitive Dust	0.01	0.00	0.01	0.00	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00
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	0.31	0.57	0.93	1.57	1.41	1.51	0.00	1.62	1.62	0.87	0.00	1.62
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	0.00	0.00	0.00	0.00	0.00
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: Urban

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.02			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	7.70			
No	Commute	Workplace Parking Charge				
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	15.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.02			

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		
No	On-site Renewable		

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		
No	Use Reclaimed Water		
No	Use Grey Water		
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		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	