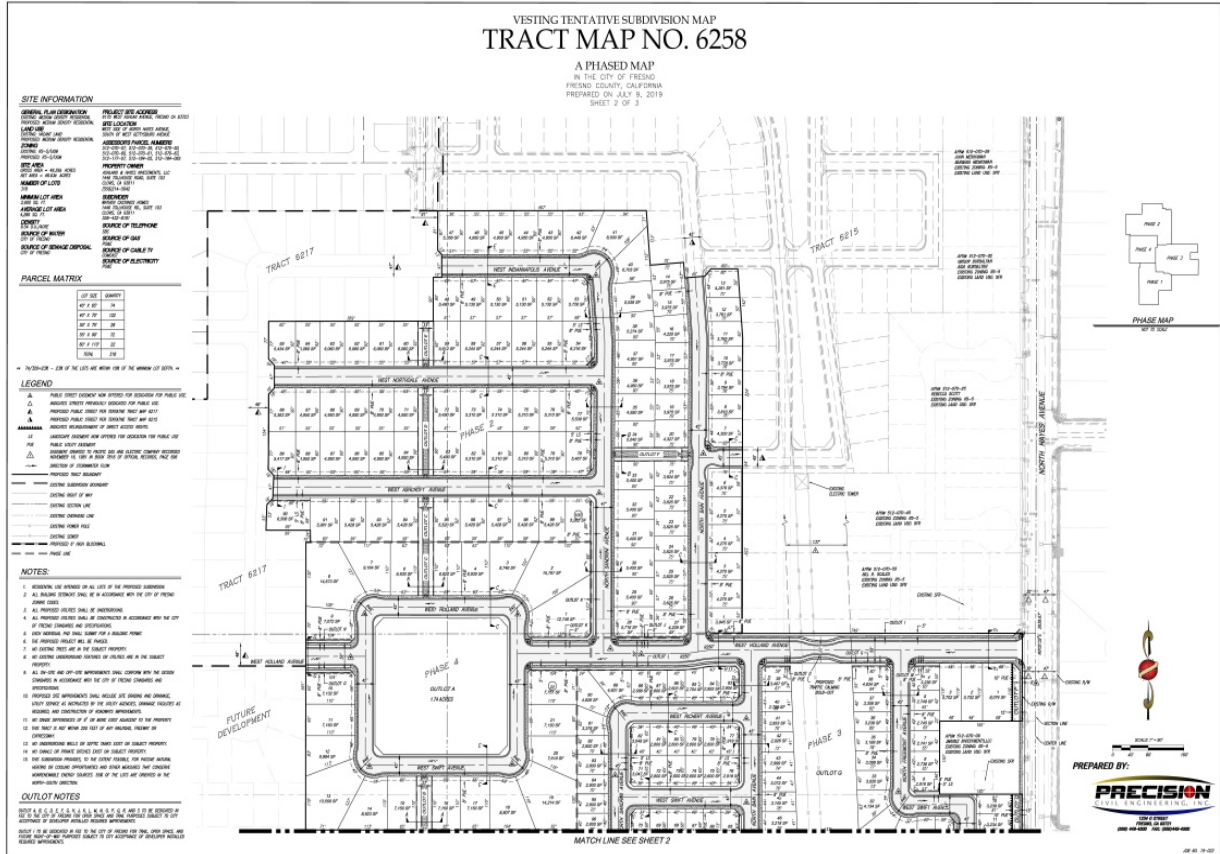


WESTERRA TRACT 6258



December 2019

DRAFT Initial Study / Mitigated Negative Declaration

Prepared for:

Prepared by:

The City of Fresno (Lead Agency)
Development and Resource Management Department
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Fresno CA, 93721

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Section 1

Initial Study/Negative Declaration Process

City of Fresno

2600 Fresno Street
Fresno, CA 93721

SECTION 1

Introduction

Project Title: Westerra Tract 6258

1.1 California Environmental Quality Act Guidelines

Section 15063 of the California Environmental Quality Act (CEQA) Guidelines requires that the Lead Agency prepare an Initial Study to determine whether a discretionary project will have a significant effect on the environment. All phases of the project planning, implementation, and operation must be considered in the Initial Study. The purposes of an Initial Study, as listed under Section 15063(c) of the CEQA Guidelines, include:

- (1) Provide the lead agency with information to use as the basis for deciding whether to prepare an EIR or negative declaration;*
- (2) Enable an applicant or lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration;*
- (3) Assist the preparation of an EIR, if one is required, by:*
 - (A) Focusing the EIR on the effects determined to be significant,*
 - (B) Identifying the effects determined not to be significant,*
 - (C) Explaining the reasons for determining that potentially significant effects would not be significant, and*
 - (D) Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.*
- (4) Facilitate environmental assessment early in the design of a project;*
- (5) Provide documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment*
- (6) Eliminate unnecessary EIRs;*
- (7) Determine whether a previously prepared EIR could be used with the project.*

1.2 Initial Study

This document, Environmental Assessment No. P#_____ is the Initial Study/Mitigated Negative Declaration (IS/MND) on the potential environmental impacts of Tract 6258 Housing Development (Project). The Project consists off the proposed construction and operation of a new development of 318 single family residential lots on a 48.63 net acre portion of a 49.29 gross acre property. The project site is located within the northwest portion of the City of Fresno, approximately 9.5 miles northwest of downtown Fresno and 18 miles southeast of the City of Madera. The parcels are located north of West Ashlan Street and south of West Gettysburg Avenue between North Hayes Street and North Bryan Street. The proposed project will contain several different lot sizes that are consistent with the City of Fresno Zoning Ordinance. The lots for the proposed project are currently vacant land and will include the following lot sizes: 40' x 65' (74 lots), 40' x 70' (122 lots), 50' x 75' (28 lots), 55' x 90' (72 lots), and 60' x 110' (22 lots). The density of the proposed housing development is 6.54 dwelling units per acre (D.U./acre).

The City of Fresno will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA guidelines.

1.3 Environmental Checklist

The Lead Agency may use the CEQA Environmental Checklist Form [CEQA Guidelines, Section 15063(d)(3) and (f)] in preparation of an Initial Study to provide information for determination if there are significant effects of the project on the environment. A copy of the completed Environmental Checklist is set forth in **Section Three**.

1.4 Notice of Intent to Adopt a Mitigated Negative Declaration

The Lead Agency shall provide a Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration (CEQA Guidelines, Section 15072) to the public, responsible agencies, trustee agencies and the County Clerk within which the project is located, sufficiently prior to adoption by the Lead Agency of the Negative Declaration to allow the public and agencies the review period.

Prior to approving the project, the Lead Agency shall consider the proposed Mitigated Negative Declaration together with any comments received during the public review process, and shall adopt the proposed Mitigated Negative Declaration only if it finds on the basis of the whole record before it, that there is no substantial evidence that the project will have a significant effect on the environment and that the Negative Declaration reflects the Lead Agency's independent judgment and analysis.

The written and oral comments received during the public review period will be considered by the City of Fresno prior to adopting the Mitigated Negative Declaration. Regardless of the type of CEQA document that must be prepared, the overall purpose of the CEQA process is to:

1. Assure that the environment and public health and safety are protected in the face of discretionary projects initiated by public agencies or private concerns;

2. Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and the responsible trustee agencies charged with managing resources (e.g. wildlife, air quality) that may be affected by the project; and
3. Provide a forum for public participation in the decision-making process pertaining to potential environmental effects.

According to Section 15070, a public agency shall prepare or have prepared a proposed Negative Declaration or Mitigated Negative Declaration for a project subject to CEQA when:

- (a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
- (b) The initial study identifies potentially significant effects, but:
 - (1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed Mitigated Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
 - (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

The Environmental Checklist Discussion contained in Section Three of this document has determined that the environmental impacts of the project are less than significant with mitigation measures and that a Mitigated Negative Declaration is adequate for adoption by the Lead Agency.

1.5 Negative Declaration or Mitigated Negative Declaration

The Lead Agency shall prepare or have prepared a proposed Negative Declaration or Mitigated Negative Declaration (CEQA Guidelines Section 15070) for a project subject to CEQA when the Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment.

The proposed Negative Declaration or Mitigated Negative Declaration circulated for public review shall include the following:

- (a) A brief description of the project, including a commonly used name for the project.
- (b) The location of the project, preferably shown on a map.
- (c) A proposed finding that the project will not have a significant effect on the environment.
- (d) An attached copy of the Initial Study documenting reasons to support the finding.

- (e) Mitigation measures, if any.

1.6 Intended Uses of Initial Study/Negative Declaration documents

The Initial Study/Negative Declaration document is an informational document that is intended to inform decision-makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed project. The environmental review process has been established to enable the public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency must balance any potential environmental effects against other public objectives, including economic and social goals.

The City of Fresno, as Lead Agency, will make a determination, based on the environmental review for the Environmental Study, Initial Study and comments from the general public, if there are less than significant impacts from the proposed project and the requirements of CEQA can be met by adoption of a Mitigated Negative Declaration.

1.7 Notice of Determination (NOD)

The Lead Agency shall file a Notice of Determination within five working days after deciding to approve the project. The Notice of Determination (CEQA Guidelines, Section 15075) shall include the following:

- (1) An identification of the project including the project title as identified on the proposed negative declaration, its location, and the State Clearinghouse identification number for the proposed negative declaration if the notice of determination is filed with the State Clearinghouse.
- (2) A brief description of the project.
- (3) The agency's name and the date on which the agency approved the project.
- (4) The determination of the agency that the project will not have a significant effect on the environment.
- (5) A statement that a negative declaration or a mitigated negative declaration was adopted pursuant to the provisions of CEQA.
- (6) A statement indicating whether mitigation measures were made a condition of the approval of the project, and whether a mitigation monitoring plan/program was adopted.
- (7) The address where a copy of the negative declaration or mitigated negative declaration may be examined.
- (8) The identity of the person undertaking a project which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies or the identity of the person receiving a lease, permit, license, certificate, or other entitlement for use from one or more public agencies.

Section 2

Project Description

City of Fresno

2600 Fresno Street
Fresno, CA 93721

SECTION 2

Project Description

Project Title: Westerra Tract 6258

2.1 Project Description

Precision Civil Engineering, Inc. on behalf of Wathen Castanos, Inc. filed a Vesting Tentative Tract Map No. 6258 for development of a 49.29 acre vacant property in the City of Fresno. This proposed project consists of the construction of 318 single-family residential lots on a 48.63 net acre portion of the property. The project will contain several different lot sizes that are consistent with the City of Fresno Zoning Ordinance. The lot sizes include the following: 40' x 65' (74 lots), 40' x 70' (122 lots), 50' x 75' (28 lots), 55' x 90' (72 lots), and 60' x 110' (22 lots). The City of Fresno's General Plan has designated the project site as Medium Density Residential and zoned as Residential Single Family - Medium Density (RS-5).

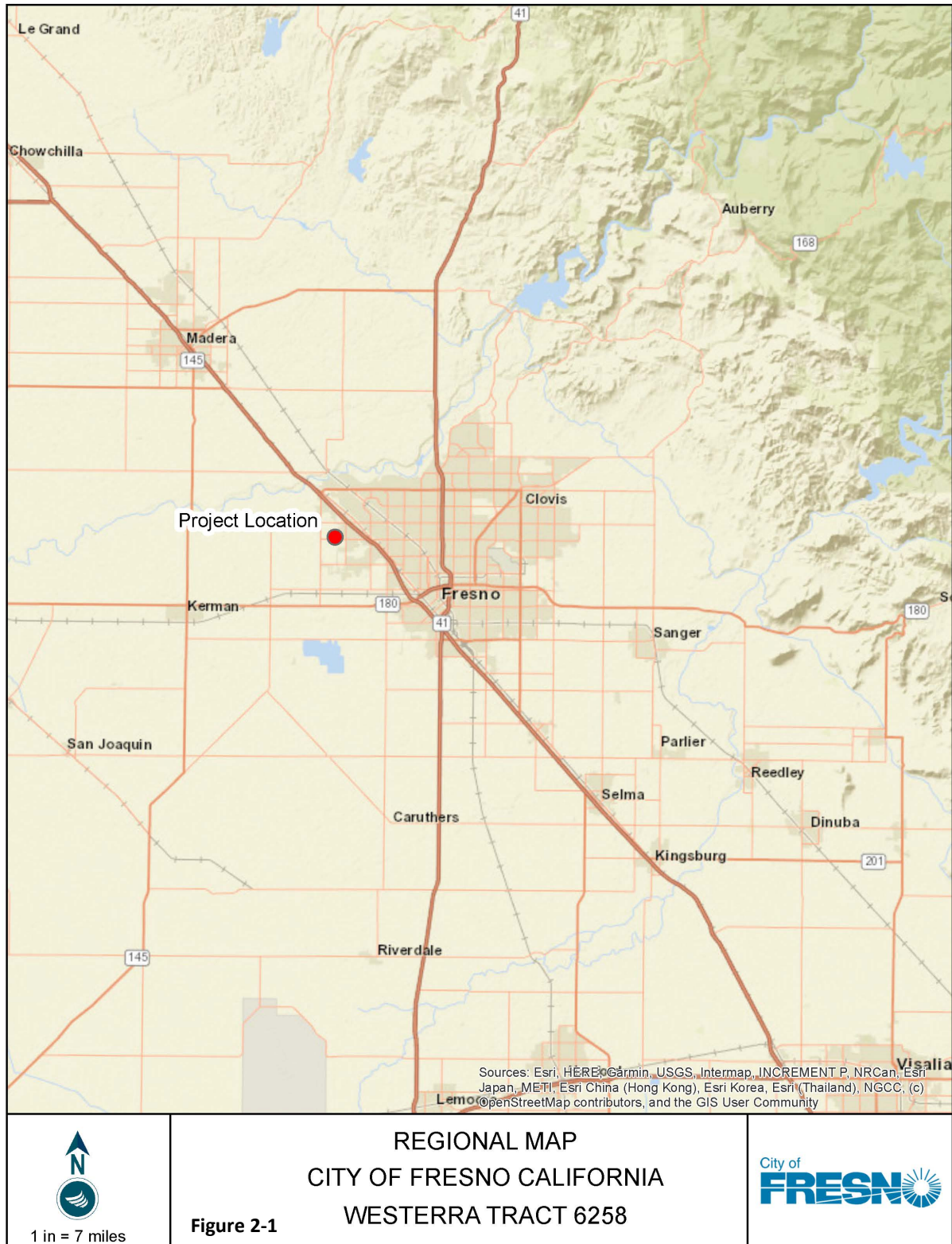
The project will also require dedications for public street right-of-way and utility easements as well as the construction of public facilities and infrastructure in accordance with the standards, specifications, and policies of the City of Fresno in order to facilitate the future proposed development of the subject property.

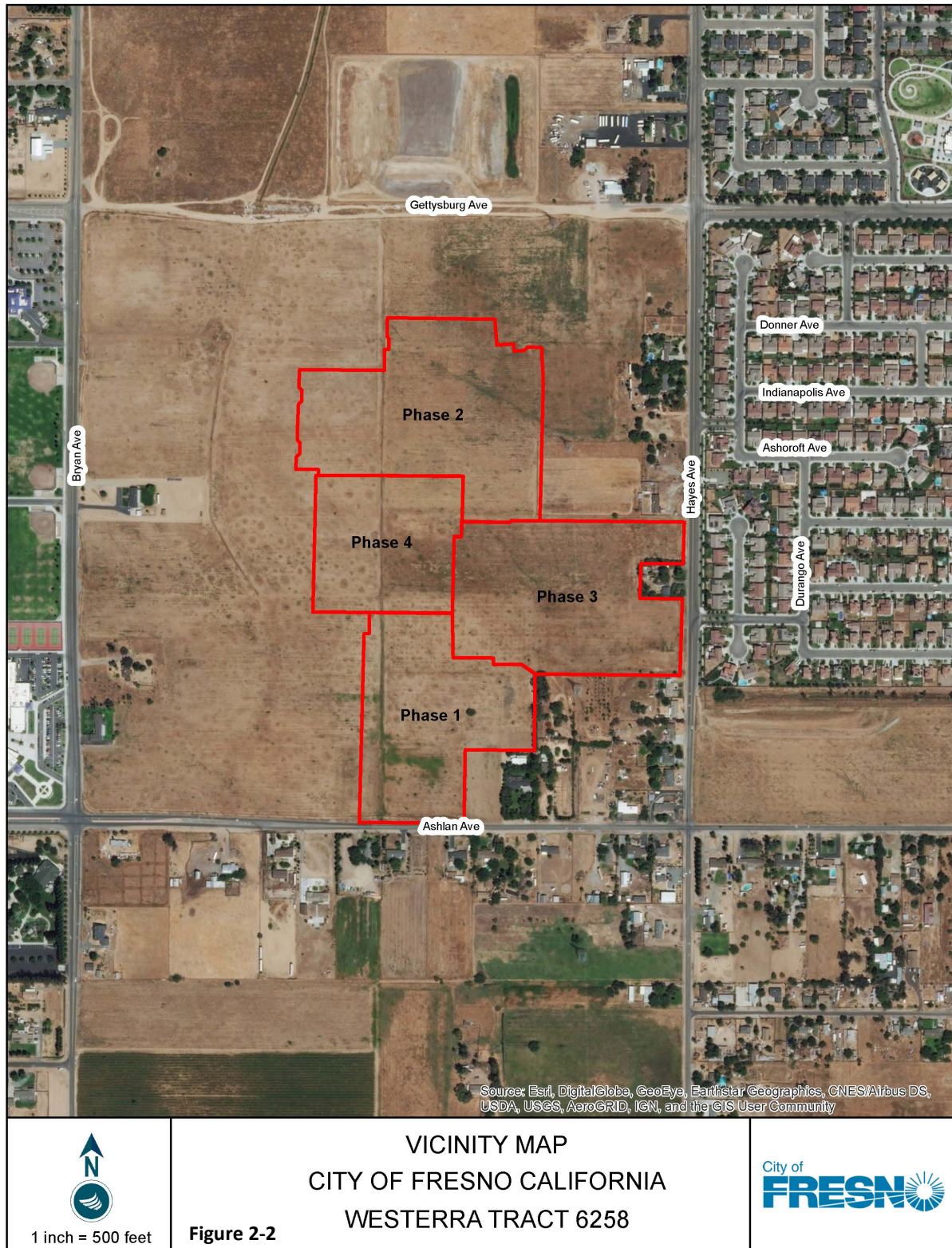
2.2 Project Location

The proposed project site is located within the northwest portion of the City of Fresno, approximately 9.5 miles northwest of downtown Fresno and 18 miles southeast of the city of Madera. The project is proposed to be developed on the following APNs: 512-070-07, 512-070-39, 512-070-50, 512-070-60, 512-070-61, 512-070-63, 512-177-07, 512-184-05, and 512-184-06S. The project is located in Section 16, Township 13 South, Range 19 East, Fresno County, California, Mount Diablo Meridian. Existing land uses for the site include residential and commercial designations. There are no existing structures within the proposed project area.

2.3 Other Permits and Approvals

The discretionary review of the proposed Vesting Tentative Subdivision Map (Tract Map 6258) will be required by the City of Fresno.





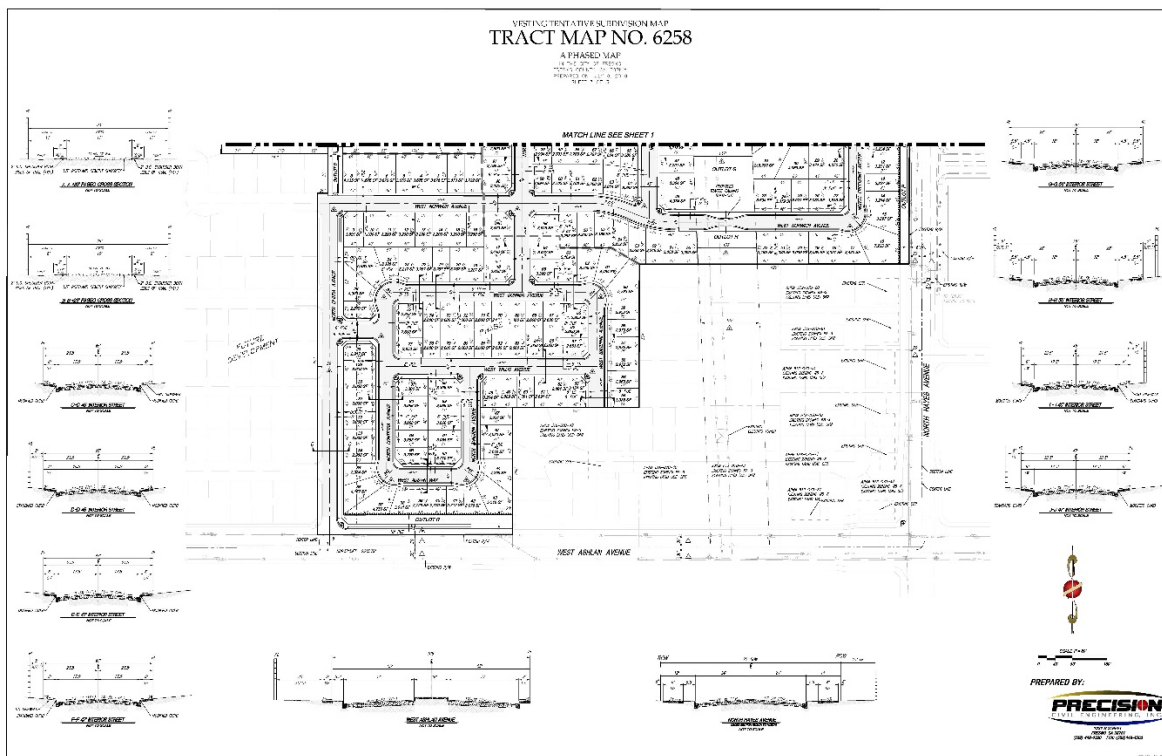
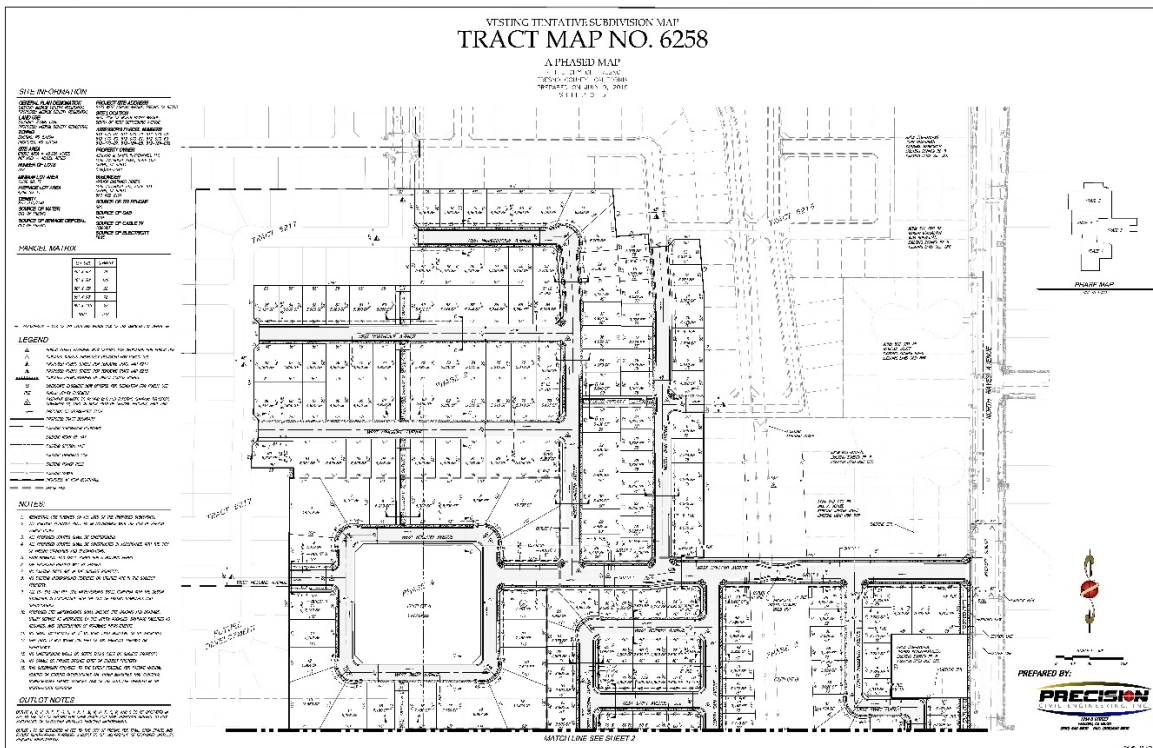


Figure 2-3: Site Tract Map

Section 3

Evaluation of Environmental Impacts

City of Fresno

2600 Fresno Street
Fresno, CA 93721

SECTION 3

Evaluation of Environmental Impacts

Project Title: Westerra Tract 6258

Initial Study Checklist

3.1 ENVIRONMENTAL CHECKLIST FORM

1. **Project Title:** Westerra Tract 6258

2. **Lead Agency:** City of Fresno
Development and Resource Management Department
Contact Person: Chris Lang
2600 Fresno Street
Fresno, CA 93721
(559) 621-2489

3. **Applicant:** Wathen Castanos
Contact Person: Eric Gibbons
1446 Tollhouse Road, #103
Clovis, CA 93611
(559) 432-8181

4. **Project Location:** Westerra Tract 6258 will be located on the following lots; Assessor's Parcel Number (APN) 512-070-07, 512-070-39, 512-070-50, 512-070-60, 512-070-61, 512-070-63, 512-177-07, 512-184-05, and 512-184-06S. The parcels are located north of West Ashlan Street and south of West Gettysburg Avenue between North Hayes Street and North Bryan Street. The lots for the proposed project are currently vacant land. There are multiple private residences along the east side of the project site, as well as housing developments constructed along the northwest corner. The proposed site is located in the northwest portion of the City of Fresno, approximately 9.5 miles northwest of downtown Fresno and 18 miles southeast of the City of Madera.

5. **General Plan Designation:** The parcels involved in the proposed project are designated by the City of Fresno General Plan as Medium Density Residential and will stay as designated.

6. **Zoning Designation:** The project site is currently zoned by the City of Fresno as a Residential Single Family, Medium Density/Urban Growth Management Zone (RS-5/UGM) and will stay as designated.
7. **Project Description:** This document is the Initial Study/Mitigated Negative Declaration for the proposed construction and operation of 318 single-family residential lots on a 48.63 acre portion of the 49.29-acre subject property. The project is located in the City of Fresno, approximately 9.5 miles northwest of downtown Fresno. The project will contain several different lot sizes – 40' x 65' (74 lots), 40' x 70' (122 lots), 50' x 75' (28 lots), 55' x 90' (72 lots), and 60' x 110' (22 lots – that are consistent with the City of Fresno Zoning Ordinance. The project is being proposed for development within 4 phases; the first phase in January 2020 and the final phase of all construction will be complete in April 2022. The City of Fresno will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines.
8. **Surrounding Land Uses and Settings:**
 - North: Medium Density (5.0-12 D.U./acre) and Open Space – Community Park
 - South: Medium Density (5.0-12 D.U./acre)
 - East: Medium Low Density (3.5-6 D.U./acre) and Medium Density (5.0-12 D.U./acre)
 - West: Public Facilities – Elementary, Middle & High School
9. **Required Approvals:** Vesting Tentative Tract Map 6258 will require discretionary review by the City of Fresno.
10. **Native American Consultation:** In accordance with Assembly Bill (AB) 52 and Senate Bill (SB) 18, potentially affected Tribes were formally notified of this Project September 5, 2019, and were given the opportunity to request consultation on the Project. The City contacted the Native American Heritage Commission, requesting a contact list of applicable Native American Tribes, which was provided to the City. The City provided letters to the listed Tribes, notifying them of the Project and requesting consultation, if desired. The City did not receive any responses from the tribes contacted. Refer to Section XVIII – Tribal Cultural Resources for more information.
11. **Parking and access:** Vehicular access to the project will be available via West Ashlan Road and North Hayes Avenue. During construction, workers would utilize existing facility parking areas, land within the project site, and/or temporary construction staging areas for parking of vehicles and equipment.
12. **Landscaping and Design:** The landscape and design plans will be required during building permit submittal.

- 13. Utilities and Electrical Services:** Water, Sewer, and electrical services will be provided to the project site for connections. Storm water will be partially collected on site within the project area and excess storm water will be collected in the storm water system within the City of Fresno.

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

- | | | |
|---|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Agriculture and Forest Resources | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Hydrology and Water Quality | <input checked="" type="checkbox"/> Transportation |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Utilities and Service System |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Noise | <input type="checkbox"/> Wildfire |
| <input checked="" type="checkbox"/> Geology and soils | <input type="checkbox"/> Population | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

3.3 DETERMINATION

This determination is to be completed by the Lead Agency, where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION WILL BE PREPARED.
- ☒ I find that the proposed project is a subsequent project identified in the MEIR but that it is not fully within the scope of the MEIR because the proposed project could have a significant effect on the environment that was not examined in the MEIR. However, there will not be a significant effect in this case, because mitigation measures have been agreed upon by the project proponent to reduce impacts. The project specific mitigation measures and all applicable mitigation measures contained in the MEIR Mitigation Measure Monitoring Checklist will be imposed upon the proposed project. A MITIGATED NEGATIVE DECLARATION will be prepared.

- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A Negative Declaration is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is requested.

Will Tackett, Supervising Planner

DATE

EVALUATION OF ADDITIONAL ENVIRONMENTAL IMPACTS NOT ASSESSED IN THE MEIR:

1. For the purposes of this MEIR Initial Study, the following answers have the corresponding meanings:
 - a. “No Impact” means the subsequent project will not cause any additional significant effect related to the threshold under consideration which was not previously examined in the MEIR.
 - b. “Less Than Significant Impact” means there is an impact related to the threshold under consideration that was not previously examined in the MEIR, but that impact is less than significant;
 - c. “Less Than Significant with Mitigation Incorporation” means there is a potentially significant impact related to the threshold under consideration that was not previously examined in the MEIR, however, with the mitigation incorporated into the project, the impact is less than significant.

- d. "Potentially Significant Impact" means there is an additional potentially significant effect related to the threshold under consideration that was not previously examined in the MEIR.
2. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
 3. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
 4. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
 5. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
 6. A "Finding of Conformity" is a determination based on an initial study that the proposed project is a subsequent project identified in the MEIR and that it is fully within the scope of the MEIR because it would have no additional significant effects that were not examined in the MEIR.
 7. Earlier analyses may be used where, pursuant to the tiering, program EIR or MEIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c) (3)(D). In this case, a brief discussion should identify the following.
 - Earlier Analysis Used. Identify and state where they are available for review.
 - Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in the MEIR or another earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

- Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated.” Describe and mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
8. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

3.5 ENVIRONMENTAL ANALYSIS

The following section provides an evaluation of the impact categories and questions contained in the checklist and identify mitigation measures, if applicable.

I. AESTHETICS

Except as provided in Public Resource Code Section 210999, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 a 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AFFECTED ENVIRONMENT

The Project is located within an urbanized area in the northwest portion of the City of Fresno, approximately 9.5 miles northwest of downtown Fresno and 18 miles southeast of the city of Madera. The site is generally flat with unobstructed views of the surrounding homes, Harvest Elementary school, Glacier Point Middle School, and vacant lands. There are no existing structures within the proposed project area.

The following photos demonstrate the aesthetic character of the project area. As shown, the proposed project site is located in a relatively flat area with agricultural development.



View of the South Edge of the Project Site.
Source: 4-Creeks, Inc. August 29, 2019



View of the West Edge of the Project Site.
Source: 4-Creeks, Inc. August 29, 2019



View of the North Edge of Project Site
Source: 4-Creeks, Inc. August 29, 2019



View of East Edge of the Project Site.
Source: 4-Creeks, Inc. August 29, 2019

Discussion

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

No Impact: A scenic vista is defined as a viewpoint that provides expansive views of highly valued landscape for the benefit of the general public. The Sierra Nevada Mountains are the only natural and visual resource in the Project area. The mountains are rarely visual from the Fresno area due to poor air quality in the valley. The proposed project site is located approximately 30 miles west of the Sierra Nevada Foothills.

The low profile of the proposed facilities, in conjunction with the distance between the proposed facilities to the scenic mountain range, would prevent any impacts to scenic vistas from occurring. Therefore, the project has *no impact* on scenic vistas or designated scenic resources or highways.

- b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within state scenic highway?**

No Impact: There are no identified scenic highways near the Project site. The project is within an urbanized area of the City of Fresno and there are no other scenic vistas or other protected scenic resources on or near the site. Therefore, the Project has *no impact* on scenic vistas or designated scenic resources or highways.

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

Less than Significant Impact: The proposed project site is located in an urbanized area characterized by residential developments. The proposed project would not alter the existing visual character of the public views of the site and its surrounding by constructing 318 new single family homes. The design of the proposed project is subject to the City's Design Guidelines adopted for the City's General Plan which apply to site layout, building design, landscaping, lighting parking and signage. Detailed architectural plans, color palettes and building materials as well as landscaping plans will be submitted by the Project developer to the City of Fresno Planning and Development Department. The Plans shall be required prior to issuance of any building permits.

The proposed project site is currently vacant agricultural land that does not include any components which would substantially degrade the existing visual character or quality of the site or its surroundings. The improvements anticipated by the project are typical of residential development and would generally be expected from residents of the City of Fresno, especially in the highly developing area which the project is being proposed. The project itself is not visually imposing anything against the scale of the existing adjacent residential properties and nature of the surrounding area. Therefore, the Project would have a *less than significant impact*.

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

Less than Significant Impact with Mitigation Incorporation: The subject site currently has no on-site sources of lighting, with the exception of any outdoor lighting utilized by an existing single residential home abutting the subject property. The project will introduce new lighting that will be typical of residential developments, such as street lighting, residential lighting and vehicle lights. Additional night lighting sources on the Project site, especially any unshielded light, could result in spillover light that could impact surrounding adjacent residential uses. This would create new sources of light that could potentially have a significant impact on nighttime light levels in the area. During the project review process, staff will ensure that lights are located in areas that will minimize light sources to the neighboring properties and meet City standards.

Further, Mitigation Measures (MM) AES-1 through MM AES-3 from the General Plan MEIR require lighting systems to be shielded to direct light to ground surfaces and orient light away from adjacent properties. In addition, MM AES – 5 requires use of non-reflective building materials to reduce glare impacts.

In addition, a condition of approval will require that lighting, where provided for public streets, shall be hooded and so arranged and controlled so as not to cause a nuisance either to traffic or to the living environment. The amount of light shall be provided according to the standards of the Department of Public Works. As a result, the Project will implement the necessary mitigation measures and will have *a less than significant impact* on aesthetics.

Mitigation Measures for Impacts to Aesthetics:

Mitigation Measure AES-1, AES-2, AES-3, and AES 5. See attached MEIR Mitigation Measure Monitoring Checklist within the MMRP. In conclusion, the Project with MEIR mitigation measures will not result in any aesthetic impacts beyond those analyzed in MEIR SCH No. 2012111015.

II. AGRICULTURE AND FOREST RESOURCES:

<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:</p>	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forestland or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The City of Fresno is located within Fresno County where agriculture is a vital component of the economy and is a significant source of the County's cultural identity. As such, preserving the productivity of agricultural lands is integral to maintaining the City's culture and economic viability.

The project site does not contain any agricultural resources, nor will the proposed project affect any on-going agricultural operations. The nearest row crops are located 0.25 miles south of the project site and would be the nearest agricultural area to the project.

Regulatory Setting

California Land Conservation Act of 1965: The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, allows local governments to enter into contracts with private landowners to restrict the activities on specific parcels of land to agricultural or open space uses. The landowners benefit from the contract by receiving greatly reduced property tax assessments.

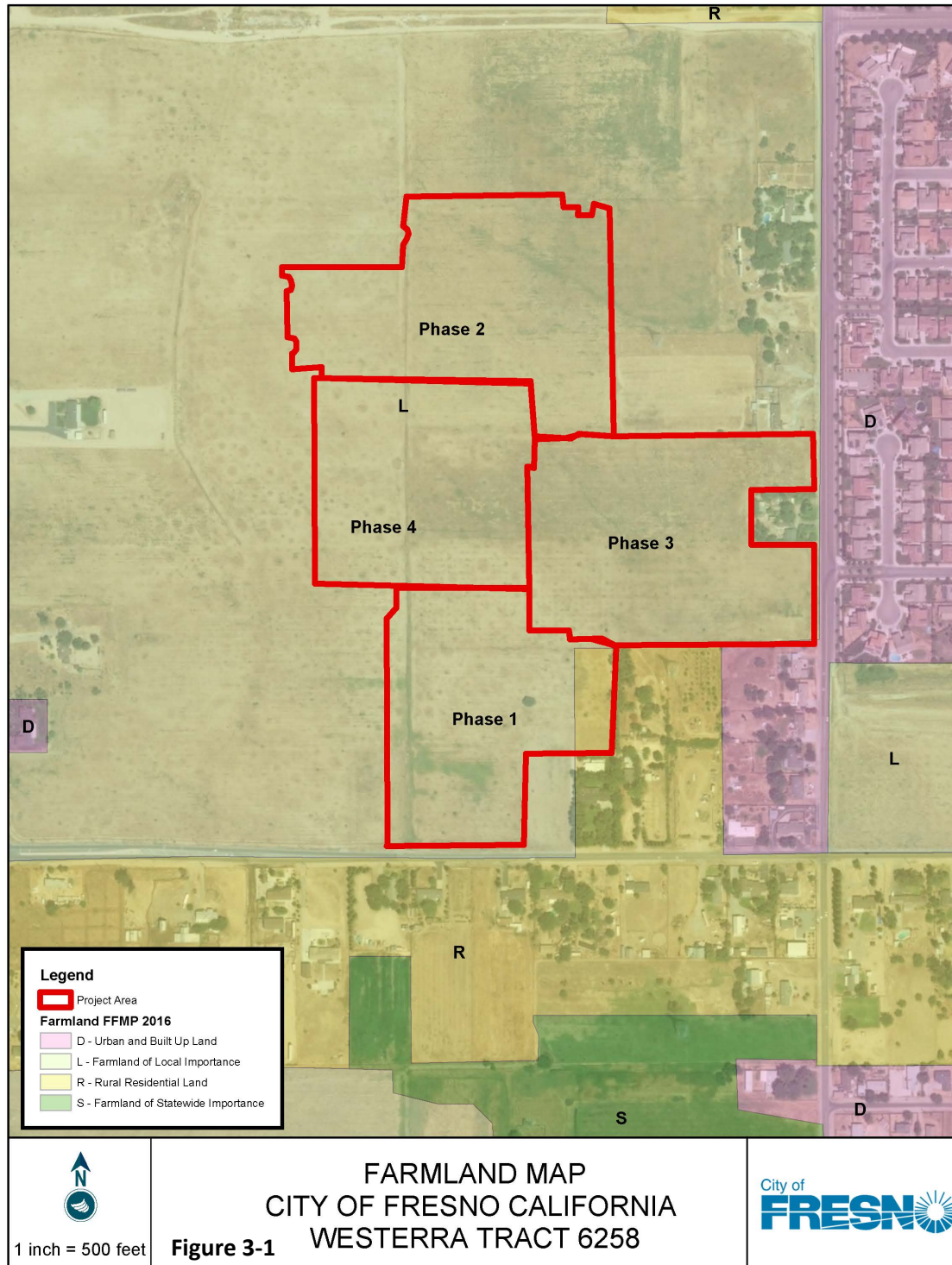
California Farmland Mapping and Monitoring Program (FMMP): The FMMP is implemented by the California Department of Conservation (DOC) to conserve and protect agricultural lands within the State. Land is included in this program based on soil type, annual crop yields, and other factors that influence the quality of farmland. The FMMP mapping categories for the most important statewide farmland are as follows:

- **Prime Farmland** has the ideal physical and chemical composition for crop production. It has been used for irrigated production in the four years prior to classification and is capable of producing sustained yields.
- **Farmland of Statewide Importance** has also been used for irrigated production in the four years prior to classification and is only slightly poorer quality than Prime Farmland.
- **Unique Farmland** has been cropped in the four years prior to classification and does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but has produced specific crops with high economic value.
- **Farmland of Local Importance** encompasses farmland that does not meet the criteria for the previous three categories. These may lack irrigation, produce major crops, be zoned as agricultural, and/or support dairy.
- **Grazing Land** has vegetation that is suitable for grazing livestock.

City of Fresno General Plan: The Fresno General Plan contains the following policies regarding agricultural resources pertaining to the proposed project:

Policy RC-9-c (Farmland Preservation Program): In coordination with regional partners or independently, establish a Farmland Preservation Program. When Prime Farmland, Unique Farmland, or

Farmland of Statewide Importance is converted to urban uses outside City limits, this program would require that the developer mitigate the loss of such farmland consistent with the requirements of CEQA. The Farmland Preservation Program shall provide several mitigation options that may include, but are not limited to the following: Restrictive Covenants or Deeds, In Lieu Fees, Mitigation Banks, Fee Title Acquisition, Conservation Easements, or any other mitigation method that is in compliance with the requirements of CEQA. The Farmland Preservation Program may be modeled after some or all of the programs described by the California Council of Land Trusts.



Discussion

- a) **Would the project 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?**

No Impact: The proposed project would not involve construction on lands designated as Prime Farmland, however the project would convert the currently vacant land to non-agricultural use. The City of Fresno has designated the properties as Medium Density Residential and zoned Medium Density Residential. There are no agricultural resources or forest lands present on the project site, which consists of Local Importance Farmland as designated in the 2016 Rural Mapping Edition: Fresno County Important Farmland Map of the California Department of Conservation. Urban and Built-Up Land does not provide enough protection under CEQA because it typically involves land that is not suitable for agricultural uses. Therefore, implementation of the project would not result in the conversion of farmland to nonagricultural use and there is *no impact*.

- b) **Would the project conflict with existing zoning for agricultural use, or a Williamson Act Contract?**

No Impact: The proposed project will not conflict with existing zoning for agricultural use because site is zoned in a Residential Single Family, Medium Density (5R/UGM). The project is not under a Williamson Act Contract. Therefore, the Project will have *no impact*.

- c) **Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned timberland Production (as defined by Government Code section 51104(g))?**

No Impact: The project site is not zoned for forest or timberland production and there is no zone change proposed for the site. Therefore, *no impacts* would occur.

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

No Impact: No conversion of forestland, as defined under Public Resource Code or General Code, will occur as a result of the project and there would be *no impacts*.

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

No Impact: As discussed above, the proposed project would not conflict with any agricultural uses, convert any existing Farmland, or result in the conversion of forestland to non-forestland. No

adjacent farmland will be affected or converted to non-agricultural use as a result of this housing development. Therefore, there is *no impact*.

In Conclusion, the Project will not result in any agriculture or forestry impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

III. AIR QUALITY

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

Environmental Setting

The City of Fresno can be commonly characterized by warm summers and foggy winters, with frequent temperature inversions and low rainfall levels. The surrounding mountains intercept precipitation and act as a barrier by resisting air movement and preventing the dispersal of pollution. The formation and retention of air pollutants can be favorable in these types of conditions. Air pollution is directly related to regional topography. Topographic features can either stimulate the movement of air or restrict air movement. The proposed project site is within the San Joaquin Valley Air Basin, which is bordered by the Sierra Nevada Mountains to the east, Coastal Ranges to the west, and the Tehachapi Mountains to the south. As a result, the San Joaquin Valley Air Basin (SJVAB) is highly susceptible to pollution accumulation over time.

The proposed project is located within SJVAB, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility. For each of the listed pollutants, the SJVAPCD adopted thresholds of significance for construction and operation emissions, which can be found in Table 3-3.

Air quality plans, or attainment plans, use state and federal ambient air quality standards to bring the air basins into attainment with such standards. Under the Federal Clean Air Act, each criteria pollutant area can be classified as “attainment”, “nonattainment”, or “extreme nonattainment” based on whether the NAAQS have been reached. Attainment relative to the State standard is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal extreme non-attainment area of O₃, a State and Federal non-attainment area for PM_{2.5}, a State nonattainment area for PM₁₀, and a Federal and State attainment area for CO, SO₂, NO₂, Pb. As shown in the Table 3-1, the SJVAB is in nonattainment for several pollutant standards.

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – One hour	No Federal Standard ^f	Nonattainment/Severe
Ozone – Eight hour	Nonattainment/Extreme ^e	Nonattainment
PM 10	Attainment ^c	Nonattainment
PM 2.5	Nonattainment ^d	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

^a See 40 CFR Part 81
^b See CCR Title 17 Sections 60200-60210
^c On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM₁₀ National Ambient Air Quality Standard (NAAQS) and approved the PM₁₀ Maintenance Plan.
^d The Valley is designated nonattainment for the 1997 PM_{2.5} NAAQS. EPA designated the Valley as nonattainment for the 2006 PM_{2.5} NAAQS on November 13, 2009 (effective December 14, 2009).
^e Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
^f Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Table 3-1. San Joaquin Valley Attainment Status; Source: SJVAPCD

Regulatory Setting

Federal Clean Air Act – The 1977 Federal Clean Air Act (CAA) authorized the establishment of the National Ambient Air Quality Standards (NAAQS) and set deadlines for their attainment. The Clean Air Act identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to meet interim milestones. The U.S. EPA is the federal agency charged with administering the Act and other air quality-related legislation. EPA’s principal functions include setting NAAQS; establishing minimum national emission limits for major sources of pollution; and promulgating regulations. Under CAA, the NCCAB is identified as an attainment area for all pollutants.

CARB Off-Road Mobile Source Emission Reduction Program – The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off-road mobile sources include most construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NOX) and toxic particulate matter from diesel engines. CARB is currently developing a control measure to reduce diesel PM and NOX emissions from existing off-road diesel equipment throughout the state.

California Clean Air Act – California Air Resources Board (CARB) coordinates and oversees both state and federal air pollution control programs in California. As part of this responsibility, CARB monitors existing air quality, establishes CAAQS, and limits allowable emissions from vehicular sources. Regulatory authority within established air basins is provided by air pollution control and management districts, which control stationary-source and most categories of area-source emissions and develop regional air quality plans. The project is located within the jurisdiction of the SJVAPCD.

The state and federal standards for the criteria pollutants are presented in Section 8.4 of The San Joaquin Valley Unified Air Pollution Control District’s 2015 “Guidance for Assessing and Mitigating Air Quality Impacts”. These standards are designed to protect public health and welfare. The “primary” standards have been established to protect the public health. The “secondary” standards are intended to protect the nation’s welfare and account for air pollutant effects on soils, water, visibility, materials, vegetation and other aspects of general welfare. The U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005, and the annual PM₁₀ standard on September 21, 2006, when a new PM_{2.5} 24-hour standard was established.

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet 8 Hour Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable Particulate Matter (PM₁₀)	24 Hour	50 µg/m	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	20 µg/m ³		--		
Fine Particulate Matter (PM_{2.5})	24 Hour		Gravimetric or Beta Attenuation	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	12 µg/m ³		15 µg/m ³		

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	--	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	--	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		--	--	
Nitrogen Dioxide (NO ₂) ⁸	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	--	Gas Phase Annual Chemiluminescence
	Arithmetic Mean	0.030 ppm (57 µg/m ³)		53 ppb (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	--		--	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ⁹	--	
	Annual Arithmetic Mean	--		0.030 ppm (for certain areas) ⁹	--	
Lead ^{10,11}	30 Day Average	1.5 µg/m ³	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m ³ (for certain areas) ¹¹	Same as Primary Standard	
	Rolling 3-Month Average	--		0.15 µg/m ³		
Visibility Reducing Particles ¹²	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standard		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Vinyl Chloride¹⁰	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			
<p>1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.</p> <p>2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.</p> <p>3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.</p> <p>4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.</p> <p>5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.</p> <p>6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</p> <p>7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.</p> <p>8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.</p> <p>9. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.</p> <p>10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</p> <p>11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.</p> <p>12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.</p>						

Table 3-2. Ambient Air Quality Standards; Source: SJVAPCD

San Joaquin Valley Air Pollution Control District (SJVAPCD) – The SJVAPCD is responsible for enforcing air quality standards in the project area. To meet state and federal air quality objectives, the SJVAPCD adopted the following thresholds of significance for projects:

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
Nox	10	10	10
ROG	10	10	10
SOx	27	27	27
PM₁₀	15	15	15
PM_{2.5}	15	15	15

Table 3-3. SJVAPCD Thresholds of Significance for Criteria Pollutants; Source: SJVAPCD

The following SJVAPCD rules and regulations may apply to the proposed project:

- **Rule 3135:** Dust Control Plan Fee. All projects which include construction, demolition, excavation, extraction, and/or other earth moving activities as defined by Regulation VIII (Described below) are required to submit a Dust Control Plan and required fees to mitigate impacts related to dust.
- **Rule 4101:** Visible Emissions. District Rule 4101 prohibits visible emissions of air contaminants that are dark in color and/or have the potential to obstruct visibility.
- **Rule 9510:** Indirect Source Review (ISR). This rule reduces the impact PM₁₀ and NOX emissions from growth on the SJVB. This rule places application and emission reduction requirements on applicable development projects in order to reduce emissions through onsite mitigation, offsite SJVAPCD administered projects, or a combination of the two. This project will submit an Air Impact Assessment (AIA) application in accordance with Rule 9510's requirements.
- **Regulation VIII:** Fugitive PM₁₀ Prohibitions. Regulation VIII is composed of eight rules which together aim to limit PM₁₀ emissions by reducing fugitive dust. These rules contain required management practices to limit PM₁₀ emissions during construction, demolition, excavation, extraction, and/or other earth moving activities.

Discussion

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

Less than Significant Impact: The proposed project is located within the boundaries of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and would result in air pollutant emissions that are regulated by the air district during both its construction and operational phases. The SJVAPCD is responsible for bringing air quality in the City of Fresno into compliance with federal and state air quality standards. The air district has Particulate Matter (PM) plans, Ozone Plans, and Carbon Monoxide Plans that serve as the clean air plan for the basin.

Together, these plans quantify the required emission reductions to meet federal and state air quality standards and provide strategies to meet these standards. The SJVAPCD adopted the Indirect Source Review (ISR) Rule in order to fulfill the District's emission reduction commitments in its PM₁₀ and Ozone (NO_x) attainment plans and has since determined that implementation and compliance with ISR would reduce the cumulative PM₁₀ and NO_x impacts anticipated in the air quality plans to a less than significant level.

Construction Phase. The project would entail construction of 318 single-family dwelling units over four phases from the beginning of 2020 until the end of 2023. The project would generate pollutant emissions from the following activities: site preparation, grading, trenching, and building construction. The construction related emissions from these activities were calculated using CalEEMod. The full CalEEMod Report can be found in Appendix A. As shown in Table 3-4 below, project construction related emissions for each phase do not exceed the thresholds established by the SJVAPCD.

Phase I	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Emissions Generated from Project Construction	2.6442	1.8069	0.00486	3.3840	0.4351	0.2771
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
Phase II	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Emissions Generated from Project Construction	2.6442	1.8069	0.00486	3.3840	0.4351	0.2771
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
Phase III	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Emissions Generated from	2.5742	1.7959	0.00483	3.0994	0.4134	0.2569

Project Construction						
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
Phase IV	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Emissions Generated from Project Construction	2.2895	1.7196	0.00432	2.4031	0.3122	0.2024
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
*Threshold established by SJVAPCD for SOx, however emissions are reported as SO2 by CalEEMod.						

Table 3-4. Projected Project Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Construction for Phases 1 through 4; Source: SJVAPCD, CalEEMod Analysis (Appendix A)

Operational Phase. Implementation of the proposed project would result in long-term emissions due to the operation of 318 homes and two parks within the proposed project area. That being said, the project will meet the minimum requirements for Title 24 and include solar panels on the new homes – per the California Building Standards Commission’s new standard set to take effect in 2020. The Full CalEEMod Report can be found in Appendix A. As shown in Table 3-5 below, the project’s operational emissions for each phase do not exceed the thresholds established by the SJVAPCD.

Phase I	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Operational Emissions (Dry Years)	4.7391	1.3098	0.0198	4.8916	1.1000	0.3239
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
Phase II	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Operational Emissions (Dry Years)	5.8846	1.4325	0.0255	3.4062	1.4338	0.6582
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
Phase III	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Operational Emissions (Dry Years)	7.2422	1.5892	0.0288	4.6190	1.5614	0.7855
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
Phase IV	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)

Operational Emissions (Dry Years)	6.6602	1.5316	0.00275	4.3549	1.5144	0.7385
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
*Threshold established by SJVAPCD for SOx, however emissions are reported as SO2 by CalEEMod.						

Table 3-5. Projected Project Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Operations for Phases 1 through 4; Source: SJVAPCD, CalEEMod Analysis (Appendix A)

Because the emissions from both construction and operation of the proposed project would be below the thresholds of significance established by the SJVAPCD, the project would not conflict with or obstruct implementation of an applicable air quality plan. Additionally, the project will not occur at a scale or scope with potential to contribute substantially or cumulatively to existing or projected air quality violations, impacts, or increases of criteria under a federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors). The proposed project will comply with all applicable air quality plans. Therefore, there will be *less than significant impacts*.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact: The SJVAPCD is responsible for bringing air quality in the City of Fresno into compliance with federal and state air quality standards. The significance thresholds and rules developed by the SJVAPCD are designed to prevent projects from violating air quality standards or significantly contributing to existing air quality violations. As discussed above, construction related emissions from the project will not exceed thresholds established by the SJVAPCD, and emissions related to project operations would be minimal.

The project will comply with all applicable SJVAPCD rules and regulations, which will further reduce the potential for any significant impacts related to air quality as a result of project implementation. Because these thresholds and regulations are designed to achieve and/or maintain federal and state air quality standards, and the project is compliant with these thresholds and regulations, the project will not violate an air quality standard or significantly contribute to an existing air quality violation. The impact is *less than significant*.

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

Less Than Significant Impact: Emissions will be generated during construction and (less so) operation of the proposed project, however it would not expose any sensitive receptors to substantial pollutant concentrations. Emissions generated during construction and operation will be regulated by the SJVAPCD. While the project site is located within sensitive receptors, such as other residential properties, there are no project components identified by the CARB

that could potentially impact any sensitive receptors. These include heavily traveled roads, distribution centers, fueling stations, and dry-cleaning operations. Because the project will comply with all thresholds and regulations established by the SJVAPCD, and would not expose sensitive receptors to substantial pollutant concentrations, there would be a *less than significant impact*.

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

Less Than Significant Impact: During construction, the diesel powered vehicles and equipment in use on-site could create localized odors. These odors would be temporary (limited to construction) and are not expected to be noticeable past the construction period. Once the project is operational, there would be no source of odors from the project. While there are sensitive receptors adjacent to the project site, such as approximately 10 existing residential homes, any odors that may be generated during construction would be temporary and common to such activities. Because odors relating to diesel powered equipment generated during project construction are temporary (limited to only the construction period), relatively insignificant and would not affect a significant number of people. The Project will have a *less than significant impact*.

In Conclusion, the Project will not result in any air quality impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

BIOLOGICAL RESOURCES

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

Discussion for this section originates from the Habitat Assessment that was prepared for this project by Soar Environmental Consulting, Inc. to identify sensitive biological resources, provide project impact

analysis, and suggest mitigation measures. The Habitat Assessment dated September 9, 2019 can be found in the Appendices to this Initial Study.

Environmental Setting

The proposed Project site is located in a portion of the central San Joaquin Valley that has experienced intensive agricultural and urban disturbances. Current agricultural endeavors in the region include dairies, row crops, and orchards. Based upon historical aerial maps, the Project site was exclusively used for agricultural purposes between 1962 and 2007, including orchards and vineyards. Between 2007 and 2009, the Project site was cleared of all agricultural features and nearly all vegetation. Since 2007 the Project site has been frequently disked and has been vegetated by ruderal and invasive plant species, including non-native grasses and plants such as Jimsonweed (*Datura wrightii*), Doveweed (*Croton setigerus*), Rescue grass (*Bromus catharticus*), Tumbleweed (*Amaranthus albus*), Reedgrass (*Phragmites australis*), Horseweed (*Erigeron canadensis*), Slender Russian-thistle (*Kali collina*), Porcelain berry (*Ampelopsis heterophylla*), Prickly lettuce (*Lactuca serriola*), Great brome (*Bromus diandrus*), Yellow star-thistle (*Centaurea solstitialis*), Common puncturevine (*Tribulus terrestris*), Vinegar weed (*Trichostema lanceolatum*), and Bermuda grass (*Cynodon dactylon*). Scattered occurrences of non-native Tree of Heaven (*Ailanthus altissima*) were observed on the Project site. Common tree species observed near the Project site included Eucalyptus (*Eucalyptus spp.*), and Oak (*Quercus spp.*).

Regulatory Setting

Federal Endangered Species Act (FESA): defines an *endangered species* as “any species or subspecies that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.”

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712): FMBTA prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs.

Although the USFWS and its parent administration, the U.S. Department of the Interior, have traditionally interpreted the FMBTA as prohibiting incidental as well as intentional “take” of birds, a January 2018 legal opinion issued by the Department of the Interior now states that incidental take of migratory birds while engaging in otherwise lawful activities is permissible under the FMBTA. However, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800), even if incidental to lawful activities.

Birds of Prey (CA Fish and Game Code Section 3503.5): Birds of prey are protected in California under provisions of the Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess,

or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

Clean Water Act: Section 404 of the Clean Water Act of (1972) is to maintain, restore, and enhance the physical, chemical, and biological integrity of the nation’s waters. Under Section 404 of the Clean Water Act, the US Army Corps of Engineers (USACE) regulates discharges of dredged and fill materials into “waters of the United States” (jurisdictional waters). Waters of the US including navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

California Endangered Species Act (CESA): CESA prohibits the take of any state-listed threatened and endangered species. CESA defines *take* as “any action or attempt to hunt, pursue, catch, capture, or kill any listed species.” If the proposed project results in a take of a listed species, a permit pursuant to Section 2080 of CESA is required from the CDFG.

City of Fresno General Plan: The Fresno General Plan includes the following ordinance pertaining to tree preservation and Protected Trees:

Ordinance 15-2308-c (Protected Trees):

1. No Protected Tree shall be removed, pruned, or otherwise materially altered without a Tree Removal Permit except as provided in this section. Trimming of a Protected Tree is allowed without such a permit.
2. Protected Trees are as follows:
 - a. *Heritage Trees.*
 - b. *Multi-Trunk Trees.* Any multi-trunk tree which has at least one trunk 12 inches or greater in diameter or 38 inches or great in circumference measured four feet above the adjacent grade, except for developed single-family residential properties.
 - c. *Any Tree 12-Inches or Greater in Diameter.* Any tree which measures 12 inches or greater in diameter or 38 inches or great in circumference measured four feet above the adjacent grade, except for developed single-family residential properties.
 - d. *Parkway Trees and Any Tree Located on Public Property.*
 - e. *Condition of Approval.* Any tree required to be plated or retained as a condition of approval of a development application or a Building Permit.
 - f. *Trees Required by a Development Permit.* Trees required or memorialized under a Development Permit.

Discussion

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

- a. **Less Than Significant Impact with Mitigation:** The existing roadway system and development within the project area have altered the natural landscape by the introduction of non-native plant species and by the removal of potentially suitable native habitat for sensitive plant or animal species within the project area.

Prior to performing the habitat assessment, Soar Environmental conducted a review of the California Natural Diversity Database (CNDDDB) and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), as well as the City of Fresno General Plan. The CNDDDB and IPaC search indicated that the State-listed and/or Federally-listed sensitive species most likely to occur within or near the Project site were Fresno kangaroo rat (FKR, *Dipodomys nitratoideus exilis*), San Joaquin kit fox (SJKF, *Vulpes macrotis mutica*), blunt-nosed leopard lizard (BNLL, *Gambelia sila*), giant garter snake (GGS, *Thamnophis gigas*), California red-legged frog (CARF, *Rana draytonii*), California tiger salamander (CTS, *Ambystoma californiense*), vernal pool fairy shrimp (VPFS, *Branchinecta lynchi*), Swainson's hawk (SWHA, *Buteo swainsoni*), great blue heron (*Ardea herodias*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), double-crested cormorant (*Dipodomys nitratoideus brevinasus*), valley elderberry longhorn beetle (VELB, *Desmocerus californicus dimorphus*), American badger (*Taxidea taxus*), western pond turtle (*Actinemys marmorata*), and hairy Orcutt grass (HOG, *Orcuttia pilosa*).

While none of the listed species were observed on the project site, potential suitable habitat features for SJKF, SWHA, and American badger were observed within the project footprint. By utilizing the mitigation measures described below, the impact to special-status species will be less than significant for CEQA considerations.

SJKF Habitat

During the field survey, no signs of SJKF were observed in the Project footprint or surrounding areas. However, there are potentially suitable habitat features on site for this species such as the large soil stockpile on the northwestern boundary and the more densely covered vegetated grassland and weeds portion within the northern and center of the Project footprint. Burrows with openings of greater than 3 inches within the Project boundaries may support potential dens for this species. However, the mitigation measures described below will render the potential impact to SJKF less than significant under CEQA considerations.

SWHA Habitat

During the habitat assessment, potential habitat for SWHA was observed in eucalyptus and pine trees on the eastern boundary within the adjacent property. A Red-tailed Hawk was observed in the vicinity, but no nest was observed. There is a potential nesting area for raptors in the electrical towers crossing the northeast boundary. The mitigation measures described below will render potential impacts to SWHA as less than significant under CEQA considerations.

American Badger Habitat

During the field survey, no signs of American badger were observed in the Project footprint or surrounding areas. However, there are potentially suitable habitat features on site for this species such as the complex of burrows located in the dirt mounds in the northwestern edge of the Project site. The mitigation measures described below will render potential impacts to American badger as less than significant under CEQA considerations.

Special status species observations and potential habitat findings are summarized in Table 3.2 below.

Species Name	Species Observed on Project Site	Potential Habitat on Project Site
Fresno kangaroo rat (<i>Dipodomys nitratooides exilis</i>)	No	No
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	No	Yes
blunt-nosed leopard lizard (<i>Gambelia sila</i>)	No	No
giant garter snake (<i>Thamnophis gigas</i>)	No	No
California red-legged frog (<i>Rana draytonii</i>)	No	No
California tiger salamander (<i>Ambystoma californiense</i>)	No	No
vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	No	No
Swainson's hawk (<i>Buteo swainsoni</i>)	No	Yes
great blue heron (<i>Ardea herodias</i>)	No	No
yellow-headed blackbird (<i>Xanthocephalus xanthocephalus</i>)	No	No

double-crested cormorant (<i>Dipodomys nitratoideus brevinasus</i>)	No	No
valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	No	No
American badger (<i>Taxidea taxus</i>)	No	Yes
western pond turtle (<i>Actinemys marmorata</i>)	No	No
hairy Orcutt grass (<i>Actinemys marmorata</i>)	No	No

Table 3-6. Special Status Species Findings

Implementation of the following mitigation measures will reduce potential impacts to sensitive species to a less than significant level.

- b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?**

Less than Significant Impact: During the Habitat Assessment Soar Environmental did not observe riparian habitat or other sensitive natural communities. Development of the proposed project would not impact any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife (CDFW), or United States Fish and Wildlife Service (USFWS). Therefore, the proposed project would have *less than significant impact* to riparian habitats or other sensitive natural communities.

- c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through director removal, filling, hydrological interruption, or other means?**

No Impact: No water or other hydrologic features occur within the limits of construction and operation of the proposed project. There will be *no impacts* to state or federally protected wetlands would occur due to the proposed project.

The project site also contains existing recharge basins that would be regulated by the RWQCB. Minor impacts to these basins are expected from the construction of new pipelines and recovery wells. These impacts will be localized and largely temporary, with most of the impacted areas

allowed to return to pre-project condition following construction. Impacts to these basins are considered *less than significant* under CEQA. However, the RWQCB should be notified prior to work within the basins.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

No Impact: The proposed project would not be located within any streams or other waterways that could be used by migratory fish or as a wildlife corridor for other wildlife species. Additionally, the project is surrounded in all cardinal directions by existing urban (school and residential) use or active construction of residential developments. As such, the project would not interfere substantially with the movement of any resident or migratory fish, wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. There would be *no impact*.

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

No Impact: The City of Fresno General Ordinance Section 15-2308 permits the removal of trees, including trees with 12-inch diameter trunks, in conjunction with a development application. The Open Space Element of the General Plan directs the City to ensure landmark trees are preserved and the Scenic Highways Element requires City road improvement projects on scenic roads to preserve mature trees. The proposed project is not located on a scenic road and therefore, the policy related to mature trees would not be applicable. Therefore, there would be *no impact*.

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

No Impact: The proposed project is not located within the boundaries of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional or state habitat conservation plan. There would be *no impact*.

Mitigation Measures for Impacts to Biological Resources:

Mitigation Measure BIO-1: Prior to the commencement of ground disturbance activities, a qualified biologist will evaluate the surrounding trees and the electrical towers for large stick nests belonging to SWHA, or other raptors. Active SWHA nests should be avoided by at least 150 feet during construction. All active nests should be monitored during Project activities for signs of activity and/or distress. If signs of distress are observed, Project activities should be adjusted to prevent further disturbance to the raptors.

Mitigation Measure BIO-2: A qualified biologist will survey the small mammal burrows within the Project footprint prior to the commencement of ground disturbance. If the biologist observes signs indicating the presence, or recent past presence for SJKF, monitoring efforts should be initiated and the feature location avoided by a buffer of 50 feet (or more) until it has been confirmed that no SJKF are present within the Project footprint.

Mitigation Measure BIO-3: Prior to the commencement of ground disturbance activities, a qualified biologist will evaluate the small mammal burrows on the Project site by monitoring with cameras to confirm the presence or absence of American badger. If the biologist observes signs indicating the presence, or recent past presence for American badger, monitoring efforts should be initiated and the feature location avoided by a buffer of 50 feet (or more) until it has been confirmed that no American badger are present within the Project footprint.

Mitigation Measure BIO-4: Project construction should be conducted outside of the nesting season (March 1 to September 15). If Project construction occurs during nesting season, a qualified biologist will conduct a preconstruction survey of the Project site and the surrounding habitat for nesting birds to avoid any adverse impacts leading to nest failure or abandonment. The preconstruction survey will be conducted no more than 30 days before the commencement of Project construction.

Areas of particular importance are the eucalyptus and pine trees located on the eastern boundary aligning the private residential houses, and all of the Trees of Heaven within the Project site, as these provide ample nesting habitat for raptors and other Migratory Bird Treaty Act protected species. Active raptor nests should be avoided by at least 150 feet, and non-raptor nests should be avoided by at least 50 feet. All nests should be monitored during Project activities for signs of distress. If signs of distress are observed, Project activities should be adjusted to prevent further disturbance to the birds.

In Conclusion, with these mitigation measures implemented, the Project will not result in any biological resources impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

IV. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The history of early settlement in the Fresno County area focused primarily on farming and ranching. European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. European-American settlement of this region began in 1851 with the building of Fort Miller on the San Joaquin River. Unfortunately, hostility grew between American settlers and Native inhabitants, which initially prevented widespread settlement of the area. By the 1860s, such stresses between the two groups were reduced and settlers began to inhabit more regions.

The many areas in this region are associated with either Native American or Euro-American occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements. The City of Fresno lies at the intersection of where ethnographers generally recognize three cultural-geographical divisions of Yokuts: Foothills, Northern Valley, and Southern Valley. The Foothill Yokuts included about 15 named tribes, representing the eastern third of the 40 to 50 recorded Yokuts tribes.

A Cultural Resources Records Search was conducted by the Southern San Joaquin Valley Information Center on August 19, 2019. According to the records search, there has been no previous cultural resource studies conducted within the project area. There have been seven studies within the one-half mile radius. There are no recorded cultural resources within the project area and it is unknown if any exist there. There are two recorded resources within a one-half mile radius. These consist of a historic era farm and historic era railroad. The full findings of the cultural records search can be found in Appendix C.

Regulatory Setting

National Historic Preservation Act: The National Historic Preservation Act was adopted in 1966 to preserve historic and archeological sites in the United States. The Act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation offices.

California Historic Register: The California Historic Register was developed as a program to identify, evaluate, register, and protect Historical Resources in California. California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, experimental, or other value. In order for a resource to be designated as a historical landmark, it must meet the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

City of Fresno General Plan: The Historic and Cultural Resources Element of the Fresno General Plan is intended to maintain and enhance a citywide program for historic and cultural preservation, consistent with the State and Federal Certified Local Government program and State laws and regulations related to historic and cultural resources. The following policies may apply to the proposed project's cultural resources:

Policy HCR-2-a (Identification and Designation of Historic Properties): Work to identify and evaluate potential historic resources and districts and prepare nomination forms for Fresno's Local Register of Historic Resources and California and National registries, as appropriate.

Policy HCR-2-f (Archaeological Resources): Consider State Office of Historic Preservation guidelines when establishing CEQA mitigation measures for archaeological resources.

Policy HCR-2-n: Property Database and Informational System. Identify all historic resources within the city designated on the Local, State, or National register, and potential significant resources (building, structure, object or site) in existence for at least 45 years, and provide this information on the City's website.

Discussion

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?

No Impact: A records search was conducted on behalf of the Applicant at the Southern San Joaquin Valley Archaeological Information Center (AIC), to determine if historical or archaeological sites had previously been recorded within the study area, if the project area had been systematically surveyed by archaeologists prior to the initial study, and/or whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive.

The records search stated that there has been no previous cultural resource studies conducted within the proposed project area, though seven studies were conducted within a one-half mile radius of the project. There are no recorded cultural resources within the project area; however there are two recorded cultural resources within a one-half mile radius of the project site. These resources consist of an historic era farm and an historic era railroad. The historic era farm is the "Brewer Adobe 14," located at 5901 West Shaw Avenue. This resource has been determined eligible for listing in the National Register of Historic Places and is also listed in the California Register of Historic Places.

Based on the results of the records search and historic resources, no other previously recorded cultural resources are located within the project site. Therefore, the Project will have *no impact*.

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

Less Than Significant Impact with Mitigation: There are no known archaeological resources located within the project area. Implementation of Fresno General Plan MEIR Mitigation Measures CUL-1 and CUL-2 pertaining to protection of cultural resources will ensure that potential impact will be *less than significant with mitigation* incorporation.

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact with Mitigation: There are no known human remains buried in the project vicinity. If human remains are unearthed during development, there is a potential for a significant impact. As such, implementation of Fresno General Plan MEIR Mitigation Measure CUL-2 will ensure that impacts remain *less than significant with mitigation* incorporation.

Mitigation Measures for Impacts to Cultural Resources:

General Plan MEIR Mitigation Measures CUL-1 AND CUL-2 (shown in the attached MEIR Mitigation Measure Monitoring Checklist.

In Conclusion, with MEIR Mitigation Measures incorporated, the Project will not result in any cultural or historical resource impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

V. ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

California's total energy consumption is second-highest in the nation, however in 2016, the state's per capita energy consumption ranked 48th, due in part to its mild climate and its energy efficiency programs. In 2017, California ranked second in the nation in conventional hydroelectric generation and first as a producer of electricity from solar, geothermal, and biomass resources while also in 2017, solar PV and solar thermal installations provided about 16% of California's net electricity generation.

Southern California Edison (SCE) provides electricity services to the region. SCE serves approximately 15 million people throughout a 50,000 square-mile service area in central, coastal, and southern California. SCE supplies electricity to its customers through a variety of renewable and nonrenewable sources. Table 3-6 below shows the proportion of each energy resource sold to California consumers by PG&E in 2017 as compared to the statewide average.

Fuel Type		PG&E Power Mix	California Power Mix
Coal		0%	4%
Large Hydroelectric		8%	15%
Natural Gas		20%	34%
Nuclear		6%	9%
Other (Oil/Petroleum Coke/Waste Heat)		0%	<1%
Unspecified Sources of Power ¹		34%	9%
Eligible Renewables	Biomass	0%	2%
	Geothermal	8%	4%
	Small Hydro	1%	3%

	Solar	13%	10%
	Wind	10%	10%
	Total Eligible Renewable	32%	29%
1. "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.			

Table 3-7. 2017 SCE and State Average Power Resources; Source: California Energy Commission

SCE also offers Green Rate Options, which allow consumers to indirectly purchase up to 100% of their energy from renewable sources. To accomplish this, SCE purchases the renewable energy necessary to meet the needs of Green Rate participants from solar renewable developers.

California electrical consumption in 2016 was 7,830.8 trillion British thermal unit (BTU) while total electrical consumption by Fresno County in 2017 was 25.457 trillion BTU.

Regulatory Setting

California Code of Regulations, Title 20: Title 20 of the California Code of Regulations establishes standards and requirements for appliance energy efficiency. The standards apply to a broad range of appliances sold in California.

California Code of Regulations, Title 24: Title 24 of the California Code of Regulations is a broad set of standards designed to address the energy efficiency of new and altered homes and commercial buildings. These standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting.

California Green Building Standards Code (CALGreen): CalGreen is a mandatory green building code that sets minimum environmental standards for new buildings. It includes standards for volatile organic compound (VOC) emitting materials, water conservation, and construction waste recycling.

Clean Energy and Pollution Reduction Act (SB 350): The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1078 and SB 107): Established in 2002 under SB 1078, the State's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed,

requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopt the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

Discussion

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

Less Than Significant Impact: The proposed project includes construction and operation of a 318 unit single-family residential tract, on 49.29 gross acres. Since the land is currently vacant, the dwelling units would introduce energy usage on a site currently demanding little to no energy. This proposed project would consume energy in the short- and long-term through project construction and operation.

During construction, energy would be consumed through two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass. During project construction may also increase energy consumption related to worker trips and operation of construction equipment. This energy use would be limited to the greatest extent possible through compliance with local, state, and federal regulations and is justified by the project's benefit.

Title 24 Building Energy Efficiency Standards offer guidance on construction techniques to maximize energy conservation and create a financial incentive to use recycled materials and products originating from nearby sources. The proposed project would be required to follow all Title 24 standards, which provide minimum efficiency standards related to various building features, including appliances, building insulation and roofing, lighting, etc. Implementation of Title 24 standards significantly increases energy savings and generally ensures materials used throughout the construction process would not involve wasteful, inefficient, or unnecessary consumption of energy.

Adopted federal vehicle fuel standards have continually improved since their original adoption in 1975 and assists in avoiding the inefficient, wasteful, and unnecessary use of energy by vehicles. The proposed project would generate daily weekday vehicle trips as outlined in the Traffic study. It will also create annual average of 608,894 vehicle miles travels (VMT). The

length of these trips and the individual vehicle fuel efficiencies are not known; therefore, the resulting energy consumption cannot be accurately calculated.

The proposed project's operational energy consumption would occur for numerous purposes such as, building heating and cooling, lighting, electronics, and refrigeration. Operational energy would also include each vehicle trip associated with the proposed project's use.

Therefore, the Project would have a *less than significant impact*.

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

No Impact: The proposed project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency. Once construction is complete, the project is expected to achieve net zero energy consumption. The proposed project is subject to the California New Residential Zero Net Energy Action Plan 2015-2020. This plan establishes a goal for all residential buildings built after January 1, 2020 to be zero net energy. The California Energy Commission is responsible for the development and enforcement of specific strategies to achieve this goal. These strategies are implemented through Title 24, Part 6 of the California Building Code, which requires developers to include certain measures (including solar panels on all new residential buildings) to achieve required building efficiency standards.

The project will also be subject to energy conservation requirements in the California Energy Code and CALGreen. Adherence to City and State code requirements will ensure that the proposed project would not result in wasteful and inefficient use of nonrenewable resources due to building operation. Therefore, there would be a *no impact*.

VI. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct and indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The City of Fresno Planning Area covers roughly 166 square miles in the central portion of Fresno County, California. The City is located within the San Joaquin Valley structural basin, bounded to the east

by the Sierra Nevada Mountain Range and to the west by the Coastal Ranges. The natural topography within the Planning Area follows drainage channels that follow northeast towards the southwest. However, due to land developed for agricultural use over the years, there are also many sub-channels that transport water in a northwest-southeast course. No active faults are mapped within the City of Fresno Planning Area.

The project area is located on the high alluvial fan of the San Joaquin River. The existing topography is relatively flat with no significant land forms, such as vernal pools. The project site is mapped as containing soils classified as San Joaquin Sandy Loam, shallow, 0-3 percent slopes (Natural Resources Conservation Service, US Department of Agriculture, Soil Survey Geographic Database).

Development of the proposed project requires compliance with grading and drainage standards of the City of Fresno and the Fresno Metropolitan Flood Control District (FMFCD) Standards. Additionally, all buildings would be constructed in compliance with California Building Code (CBC) Title 24, which identifies specific design requirements to reduce damage resulting from strong seismic ground shaking, ground failure, landslide, soil erosion, and expansive soils. Prior to construction, the project applicant would be required to test the site soils to determine the presence of expansive soils in accordance with the CBC Title 24. If expansive soils are suspected or found, the project applicant would be required to provide design and construction solutions in accordance with the CBC to reduce risks associated with unstable and expansive soils.

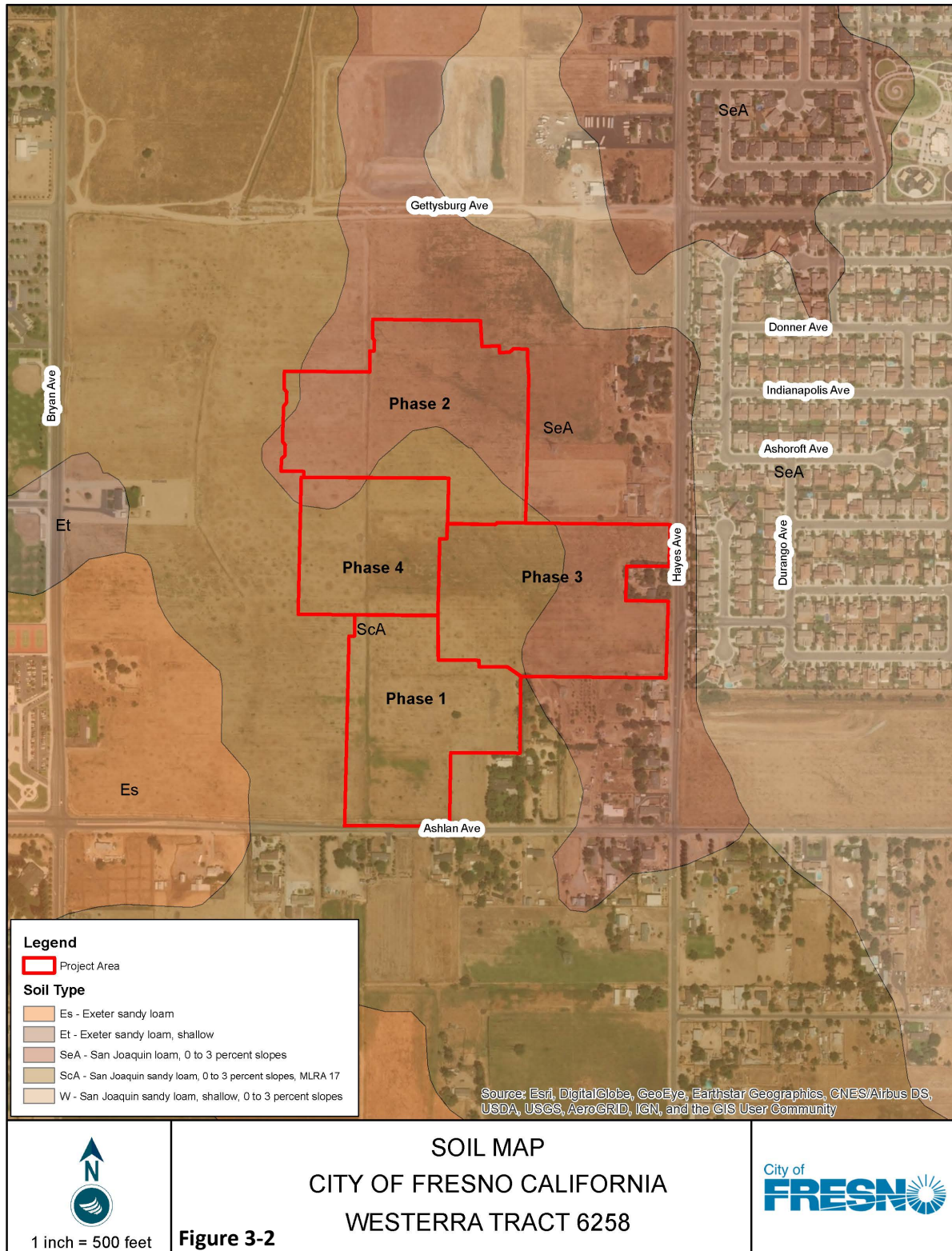
Geologic Stability and Seismic Activity

- Seismicity:** The City of Fresno is considered to be a low to moderate earthquake hazard area and has no known active earthquake faults. However, shakes may be felt from epicenters located to the south, east, and west. The San Andreas Fault is the longest, most significant fault zone in California and is approximately 61 miles west of City of Fresno Planning Area. The Nunez Fault is located approximately 48 miles southwest of the Planning Area, and the Sierra Nevada and Owens Valley Fault Zones bound the eastern edge more than 90 miles east of the Planning Area. The City's greatest threat from a major earthquake would be from potential flooding caused by damage to dams along the San Joaquin River.
- Liquefaction:** Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluid-like behavior of the soil, which can result in landslides and lateral spreading. While no specific countywide assessment of liquefaction has been performed, the Fresno County Multi-Jurisdictional Local Hazard Mitigation Plan identifies the risk of liquefaction within the County as low. This is because the soil types in the area either too coarse or too high in clay content to be suitable for liquefaction.

- **Landslides:** Landslides refer to a wide variety of processes that result in the downward and outward movement of soil, rock, and vegetation under gravitational influence. Landslides can be caused by both natural and human-induced changes in slope stability and often accompany other natural hazard events, such as floods, wildfire, or earthquake. Both City and County General Plans have historically recognized that slopes exceeding 26 percent are essentially “undevelopable” and “not readily available” due to inherent instability, engineering difficulties, and costs. The Fresno County Multi-Jurisdictional Local Hazard Mitigation Plan states that occurrence of landslide events within populated areas of Fresno County is unlikely. Majority of the City, including the proposed project site, is considered to be at low risk of landslides and mudslides because of its flat topography.
- **Subsidence:** Land Subsidence refers to the vertical sinking of land as a result of either manmade or natural underground voids. Subsidence has occurred throughout the Central Valley at differing rates since the 1920’s as a result of groundwater, oil, and gas withdrawal. Within the San Joaquin Valley, land subsidence is predominantly located in the southern and western portions of the valley, where precipitation is low and groundwater recharge is minimal. These areas are not located within the City of Fresno’s Planning Area. Although, several areas within the City show signs of shallow subsidence, the majority of Fresno, including the proposed project site, is not considered to be at risk of subsidence related hazards.

Soils Involved in Project: The proposed project involves construction on one soil type. The properties of the San Joaquin Series are described briefly below:

- **San Joaquin Loam:** The San Joaquin series consists of moderately deep to a duripan, well and moderately well drained soils that formed in alluvium derived from mixed but dominantly granitic rock sources. They are on undulating low terraces with slopes of 0 to 9 percent. The mean annual precipitation is about 15 inches and the mean annual temperature is about 61° F.



Regulatory Setting

California Building Code: The California Building Code contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. CBC provisions provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures and certain equipment.

City of Fresno Municipal Code

Section 11-101 (California Building Code):

The City of Fresno Municipal Code has incorporated and adopted the CBC, 2013 Edition, as promulgated by the California Building Standards Commission, which incorporates the adoption of the 2012 edition of the of the International Building Code, as amended with necessary California amendments and the 2012 International Building Code of the International Code Council, with the exception of Appendix B. Together with the City's amendments to the CBC provided in Section 11- 102, these shall be referred to as the Fresno Building Code. One copy of the CBC is on file and available for use by the public in the Development and Resource Management Department, Building and Safety Services Division.

City of Fresno General Plan: The Fresno General Plan includes the following policies regarding soils and geology:

Policy I-3-a : The City of Fresno shall enforce the latest adopted Uniform Building Code and the Dangerous Building Ordinance (Article 12 of Fresno Municipal Code, Chapter 12) to ensure seismic protection for new and existing construction.

Policy I-3-c: In areas having potential geologic and/or soils hazards, development shall not have on- site drainage or disposal for wastewater, stormwater runoff, swimming pool/spa water, unless a soil analysis by a registered civil engineer (or engineering geologist specializing in soil geology) concludes that on-site drainage/disposal will not induce, worsen or spread geologic hazards.

Policy I-3-d: Development shall be prohibited in areas where analysis by a registered civil engineer or registered geologist determines that no corrective measures could feasibly mitigate potential geologic hazards.

Policy E-19-a: Continue to require mandatory abatement of existing septic systems and mandatory connection to the city's public sewage collection and disposal system including those areas outside the city's adopted sphere of influence where determined necessary for public health and safety reasons.

Policy E-19-b: Discourage use of septic systems, community wastewater disposal systems or other non-regional sewage treatment and disposal systems within the Fresno Metropolitan Area and including areas located outside the city's sphere of influence if these types of wastewater treatment facilities would cause discharges that could result in groundwater degradation, or if such systems are not economically feasible.

Discussion

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

No Impact: Although the project is located in an area of relatively low seismic activity, the project site could be affected by ground shaking from nearby faults. The potential for strong seismic ground shaking on the project site is not a significant environmental concern due to the infrequent seismic activity of the area and distance to the faults. The project does not propose any components which could cause substantial adverse effects in the event of an earthquake. Additionally, the project has no potential to indirectly or directly cause the rupture of an earthquake fault. Therefore, there is *no impact* related to the risk of loss, injury or death involving a rupture of a known earthquake fault.

- ii. Strong seismic ground shaking?**

No Impact: According to the Fresno County Multi-Hazard Mitigation Plan, the project site is located in an area of relatively low seismic activity. The proposed project does not include any activities or components which could feasibly cause strong seismic ground shaking, either directly or indirectly. There is *no impact*.

- iii. Seismic-related ground failure, including liquefaction?**

No Impact: No specific countywide assessment of liquefaction has been performed; however the Fresno County Multi-Hazard Mitigation Plan identifies the risk of liquefaction within the county as low because the soil types are unsuitable for liquefaction. The area's low potential for seismic activity would further reduce the likelihood of liquefaction occurrence. Because the project site is within an area of low seismic activity, and the soils associated with the project area not suitable for liquefaction, there are *no impacts*.

- iv. Landslides?**

No Impact: The City of Fresno is considered at low risk of small landslides. Additionally, the project site is generally flat and there are no hill slopes in the area. No geologic landforms exist on or near the site that would result in a landslide event. As a result, there is very low potential for landslides. There would be no impact.

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

Less Than Significant Impact: Minimal soil will be removed from the project site to construct the 318 dwelling units, roadways, and parks. Although these construction activities will result in a loss of topsoil, any soil erosion impacts would be temporary and subject to best management practices required by SWPPP. These best management practices are developed to prevent significant impacts related to erosion from construction. Because impacts related to erosion would be temporary and limited to construction and required best management practices would prevent significant impacts related to erosion, the impact will remain *less than significant*.

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

Less than Significant Impact with Mitigation: The proposed site is not at significant risk from earthquakes, ground shaking, liquefaction, or landslide and is otherwise considered geologically stable. Subsidence is typically related to over-extraction of groundwater from certain types of geologic formations where the water is partly responsible for supporting the ground surface. The project site may be subject to geological hazards including settlement potential and existing fills that could harmfully impact structures. Therefore, there will be a *less than significant impact with mitigation*.

Mitigation Measures for Impacts to Subsidence

Mitigation Measure GEO-1: The project proponent shall retain a registered geotechnical engineer to prepare a design level geotechnical analysis prior to the issuance of any grading and/or building permit. The analysis shall address site preparation measures and foundation design requirements of the project. The design-level analysis shall be prepared to the satisfaction of the City of Fresno. Final design-level project plans shall be designed in accordance with the approved geotechnical analysis. This shall include certification of engineered fills and subgrade preparation through monitoring of earthwork and compaction testing by a geotechnical engineer during construction.

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

No Impact: Expansive soils contain large amounts of clay, which absorb water and cause the soil to increase in volume. Conversely, the soils associated with the proposed project site are granular, well-draining, and therefore have a limited ability to absorb water or exhibit expansive behavior. Because the soils associated with the project are not suitable for expansion, implementation of the project will pose no direct or indirect risk to life or property caused by expansive soils and there is *no impact*.

- e) **Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

No Impact: The proposed project would not include the use of septic tanks or any other alternative wastewater disposal systems. The dwelling units and parks will be required to tie into the existing sewer services. Therefore, there would be *no impact*.

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

Less Than Significant Impact with Mitigation: There are no unique geologic features and no known paleontological resources located within the project area. However, there is always the possibility that paleontological resources may exist below the ground surface. Implementation of the cultural mitigation measures in section V will ensure that any impacts resulting from project implementation remain *less than significant with mitigation incorporation*.

In Conclusion, the Project will not result in any Geology and soils impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

VII. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Natural processes and human activities emit greenhouse gases. The presence of GHGs in the atmosphere affects the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 34°C cooler. However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

The effect of greenhouse gasses on earth's temperature is equivalent to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydro chlorofluorocarbons, and hydro fluorocarbons, per fluorocarbons, sulfur and hexafluoride. Some gases are more effective than others. The Global Warming Potential (GWP) has been calculated for each greenhouse gas to reflect how long it remains in the atmosphere, on average, and how strongly it absorbs energy. Gases with a higher GWP absorb more energy, per pound, than gases with a lower GWP, and thus contribute more to global warming. For example, one pound of methane is equivalent to twenty-one pounds of carbon dioxide.

GHGs as defined by AB 32 include the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs as defined by AB 32 are summarized in Table 3-7. Each gas's effect on climate change depends on three main factors. The first being the quantity of these gases are in the atmosphere, followed by how long they stay in the atmosphere and finally how strongly they impact global temperatures.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Methane (CH ₄)	Is a flammable gas and is the main component of natural gas	12 years	21	Emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
Carbon dioxide (CO ₂)	An odorless, colorless, natural greenhouse gas.	30-95 years	1	Enters the atmosphere through burning fossil fuels (coal, natural gas and oil), solid waste, trees and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
Chloro-fluorocarbons	Gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are non-toxic nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	55-140 years	3,800 to 8,100	Were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone.
Hydro-fluorocarbons	A man-made greenhouse gas. It was developed to replace ozone-depleting gases found in a variety of appliances. Composed of a group of greenhouse gases containing carbon, chlorine and at least one hydrogen atom.	14 years	140 to 11,700	Powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Nitrous oxide (N ₂ O)	Commonly known as laughing gas, is a chemical compound with the formula N ₂ O. It is an oxide of nitrogen. At room temperature, it is a colorless, non-flammable gas, with a slightly sweet odor and taste. It is used in surgery and dentistry for its anesthetic and analgesic effects.	120 years	310	Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
Pre-fluorocarbons	Has a stable molecular structure and only breaks down by ultraviolet rays about 60 kilometers above Earth's surface.	50,000 years	6,500 to 9,200	Two main sources of pre-fluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	An inorganic, odorless, colorless, and nontoxic nonflammable gas.	3,200 years	23,900	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing and as a tracer gas.

Table 3-8. Greenhouse Gasses; Source: EPA, Intergovernmental Panel on Climate Change

In regards to the quantity of these gases are in the atmosphere, we first must establish the amount of particular gas in the air, known as concentration, or abundance, which are measured in parts per million, parts per billion and even parts per trillion. To put these measurements in more relatable terms, one part per million is equivalent to one drop of water diluted into about 13 gallons of water, roughly a full tank of gas in a compact car. Therefore, it can be assumed larger emission of greenhouse gases lead to a higher concentration in the atmosphere.

Each of the designated gases described above can reside in the atmosphere for different amounts of time, ranging from a few years to thousands of years. All of these gases remain in the atmosphere long enough to become well mixed, meaning that the amount that is measured in the atmosphere is roughly the same all over the world regardless of the source of the emission.

This section presents regulations to GHG emissions, discussion about their contribution to climate change, and quantification of proposed project generated GHG emissions. Mitigation measures will also be recommended to reduce the project's potential impacts.

Regulatory Setting

Assembly Bill (AB) 32 – Global Warming Solutions Act of 2006: AB 32 set the 2020 greenhouse gas emissions reduction goal into law. It directed the California Air Resources Board to begin developing

discrete early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit. The reduction measures to meet the 2020 target are to be adopted by the start of 2011.

Executive Order S-03-05 (EO S-03-05): EO S-3-05 establishes greenhouse gas emission reduction targets, creates the Climate Action Team and directs the Secretary of Cal/EPA to coordinate efforts with meeting the targets with the heads of other state agencies. The EO requires the Secretary to report back to the Governor and Legislature biannually on progress toward meeting the GHG targets, GHG impacts to California, Mitigation and Adaptation Plans.

Executive Order S-14-08 (EO S-14-08): EO S-14-08 requires that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.

City of Fresno General Plan: The City of Fresno has prepared a Greenhouse Gas Reduction Plan (GHG Plan) within their General Plan Update in efforts to reduce GHG emissions. The GHG Plan focuses on emissions generated by activities within the City of Fresno. The GHG Plan is designed to ensure that the development accommodated by the buildout of the General Plan supports the goals of AB 32. The Fresno Green Sustainability Strategy includes a commitment to meet the 2020 AB 32 goal and Executive Order S-03-05. While the State has yet to adopt a target or strategies for reaching targets past 2020, broad targets have been discussed for upcoming years.

Discussion

- a) **Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

Less Than Significant Impact: Greenhouse gas emissions for the construction and operation of the proposed pipeline and recovery wells were modeled using the California Emissions Estimator Model (CalEEMod). The full CalEEMod report can be found in Appendix A.

Construction: Greenhouse gasses would be generated during construction from activities including site preparation, grading, building construction, application of architectural coatings, and paving. The CalEEMod Emissions report predicts that this project will create a maximum of 1,650 MT of CO₂e emissions per year during construction. Because the SJVAPCD does not have numeric thresholds for assessing the significance of construction-related GHG emissions, predicted emissions from project construction were compared to SCAQMD thresholds for construction related GHG emissions. The SCAQMD currently has a threshold of 10,000 metric tons of CO₂e per year for construction emissions amortized over a 30-year project lifetime. Because project construction would generate far less GHG emissions than this threshold, impacts related to GHG emissions during project construction would be less than significant.

Operation: Implementation of the proposed project would result in long-term greenhouse gas emissions associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, as well as mobile emissions. The U.S. Environmental Protection Agency published a rule for the mandatory reporting of greenhouse gases (GHG) from sources that in general emit 25,000 MT or more of CO₂e per year. Project GHG emissions were calculated using CalEEMod based on 49.29 acres of development with 318 single-family residential units. The project is estimated to produce 7,760 MT of CO₂e per year, which is well below the 25,000 MT threshold for greenhouse gas emissions.

Because the GHG emissions related to construction are below accepted thresholds of significance, and the project would generate very little GHG emissions while under operation, the impact is *less than significant*.

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

No Impact: The proposed project will comply with all Federal, State, and Local rules pertaining to the regulation of greenhouse gas emissions. In addition, the project will implement Best Performance Standards developed by the SJVAPCD. Projects implementing Best Performance Standards are determined to have a less than significant impact on global climate change. The project will not conflict with any plan, policy, or regulation developed to reduce GHG emissions. Therefore, there would be *no impact*.

In Conclusion, the Project will not result in any greenhouse gas impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 or excessive noise to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

In this document, the term “hazardous materials” will refer to hazardous wastes and hazardous substances, which is defined as a substances or materials that have the capability of posing an substantial risk to peoples’ safety, health, and property. California Health and Safety Code Section 25501 defines a hazardous material as follows:

“Hazardous material” means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.”

“Hazardous Wastes” are defined in California Health and Safety Code Section 25141(b) as wastes that:

“... because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.”

The proposed project site is located approximately 0.25 miles east from the nearest school, Harvest Elementary School and Glacier Point Middle School. The site is also about 14 miles north from the nearest public airport (Fresno Yosemite International Airport).

The Department of Toxic Substances Control’s (DTSC’s) Envirostor was used to identify any sites known to be associated with releases of hazardous materials or wastes within the project area. This research confirmed that the project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Regulatory Setting

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S. Code [U.S.C.] §9601 et seq.). The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or the Superfund Act) authorizes the President to respond to releases or threatened releases of hazardous substances into the environment.

Occupational Safety and Health Administration. The Occupational Safety and Health Administration (OSHA) sets and enforces Occupational Safety and Health Standards to assure safe working conditions. OSHA provides training, outreach, education, and compliance assistance to promote safe workplaces. The proposed Project would be subject to OSHA requirements during construction, operation, and maintenance.

Toxic Substances Control Act of 1976 (15 U.S.C. §2601 et seq.). The Toxic Substance Control Act was enacted by Congress in 1976 and authorizes the EPA to regulate any chemical substances determined to cause an unreasonable risk to public health or the environment.

Hazardous Waste Control Law, Title 26. The Hazardous Waste Control Law creates hazardous waste management program requirements. The law is implemented by regulations contained in Title 26 of the California Code of Regulations (CCR), which contains requirements for the following aspects of hazardous waste management:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

California Code of Regulations, Title 22, Chapter 11. Title 22 of the California Code of Regulations contains regulations for the identification and classification of hazardous wastes. The CCR defines a waste as hazardous if it has any of the following characteristics: ignitability, corrosivity, reactivity, and/or toxicity.

California Emergency Services Act. The California Emergency Services Act created a multi-agency emergency response plan for the state of California. The Act coordinates various agencies, including CalEPA, Caltrans, the California Highway Patrol, regional water quality control boards, air quality management districts, and county disaster response offices.

Hazardous Materials Release Response Plans and Inventory Law of 1985. Pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985, local agencies are required to develop “area plans” for response to releases of hazardous materials and wastes. Tulare County maintains a Hazardous Material Incident Response Plan to coordinate emergency response agencies for incidents and requires the submittal of business plans by persons who handle hazardous materials.

City of Fresno General Plan: The Fresno General Plan includes the following policies pertaining to hazards and hazardous materials and have been relevant to this analysis:

- **Policy NS-4-a (Processing and Storage):** Require safe processing and storage of hazardous materials, consistent with the California Building Code and Uniform Fire Code, as adopted by the City.
- **Policy NS-4-b (Coordination):** Maintain a close liaison with the Fresno County Environmental Health Department, Cal-EPA Division of Toxics, and the State Office of Emergency Services to assist in developing and maintaining hazardous material business plans, inventory statements, risk management prevention plans, and contingency/emergency response actions plans.
- **Policy NS-4-e (Compliance with County Program):** Require that the production, use, storage, disposal, and transport of hazardous materials conform to the standards and procedures

established by the County Division of Environmental Health. Require compliance with the County's Hazardous Waste Generator Program, including the submittal and implementation of a Hazardous Materials Business Plan, when applicable.

- **Policy NS-4-f (Hazardous Materials Facilities):** Require facilities that handle hazardous materials or hazardous wastes to be designed, constructed, and operated in accordance with applicable hazardous materials and waste management laws and regulations.
- **Policy NS-4-f (Emergency Vehicle Access):** Require adequate access for emergency vehicles in all new development, including adequate widths, turning radii, hard standing areas, and vertical clearance.

Fresno Municipal Code Section 15-2514 (Fire and Explosive Hazards): Pursuant to Section 15-2514 all activities involving the processing, use, or storage of flammable and explosive materials shall be equipped with adequate safety devices in accordance with the Fire Code and shall be approved by the Fresno Fire Department. In addition, the use, handling, storage, and transportation of hazardous materials shall comply with the provisions of applicable federal and state laws.

Discussion

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

Less than Significant Impact: Project construction activities may involve the use, storage, and transport of hazardous materials. During construction, the contractor will use fuel trucks to refuel onsite equipment, and may use paints and solvents to a limited degree. The storage, transport, and use of these materials will comply with Local, State, and Federal regulatory requirements. There is the potential for small leaks due to refueling of construction equipment, however standard construction Best Management Practices (BMPs) included in the SWPPP will reduce the potential for the release of construction related fuels and other hazardous materials by controlling runoff from the site, and requiring proper disposal or recycling of hazardous materials. There would be a *less than significant impact*.

- b) **Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

No Impact: The proposed project is not anticipated to create a significant hazard to the public or the public as the proposed project would not routinely transport, use, dispose, or discharge hazardous materials into the environment. Therefore, there would be *no impact*.

- c) **Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

No Impact: The project site is located within ¼ mile of two existing schools, however there is no reasonably foreseeable condition or incident involving the emission, handling, or disposal of hazardous materials, substances, or waste that would affect areas within ¼ miles of existing or proposed school sites. There is *no impact*.

- d) Would the project 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?**

No Impact: The project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. There would be *no impact*.

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

No Impact: The proposed project is located approximately 14 miles away from the nearest public airport (Fresno Yosemite International Airport) and is not located in an airport land use plan. Implementation of the proposed project would not result in a safety hazard for people residing or working in the project area. There is no impact.

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

No Impact: The City's design and environmental review procedures shall ensure compliance with emergency response and evacuation plans. In addition, the site plan will be reviewed by the Fire Department per standard City procedure to ensure consistency with emergency response and evacuation needs. Therefore, the proposed project would have *no impact* on emergency evacuation.

- g) Would the project expose people or structures, either directly or indirectly, to significant risk of loss, injury or death involving wildland fires?**

No Impact: The land surrounding the project site is developed with urban, suburban, and agricultural uses and are not considered to be wildlands. Additionally, the 2017 Fresno County Multi-Jurisdictional Local Hazard Mitigation Plan finds that fire hazards within the City of Fresno, including the proposed project site, have low frequency, limited extent, limited magnitude, and low significance. The proposed project would not expose people or structures to significant risk of loss, injury or death involving wildland fires and there is *no impact*.

In Conclusion, Project will not result in any hazards or hazardous materials impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

IX. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise sustainably degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones risk the release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater movement plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Surface Water: The San Joaquin River is the City of Fresno's primary surface water feature. It is 366 miles long and is located approximately four miles northwest of the proposed project site. The San Joaquin River travels through the San Joaquin Valley from the San Francisco Bay to the Sierra Nevada Mountain. The river's surface water has a variety of uses, such as municipal and domestic water supply, wildlife habitat, migration and spawning grounds, as well as for recreational, agricultural, and industrial uses.

Groundwater: The San Joaquin Valley Groundwater Basin is comprised of six sub-basins. The City of Fresno is located within the Kings River Subbasin, which spans across 1,530 square miles. Subsurface recharge occurs through movement of groundwater from external sources, such as the Sierra Nevada Mountain Ranges. Subsurface water tends to flow from areas with a higher groundwater table into areas with lower groundwater tables because the groundwater table surrounding the City is higher than inside Fresno itself. Although groundwater levels have declined an average of 1.5 feet since 1990, the City of Fresno estimates that by 2025, groundwater operations would be balanced, and subsurface courses would not be directed into the City.

Stormwater Drainage: The Fresno Metropolitan Flood Control District (FMFCD) plans, implements, operates, and maintains storm drainage facilities within the Fresno-Clovis metropolitan area. Storm water facilities consist of pipelines, storm drain inlets, retention basins, stormwater pump stations, and urban detention (water quality) basins. The project site will be within the FMFCD service area, and the proposed project will eventually connect to the City's municipal drainage system.

Recycled Water: The City of Fresno has the capacity to produce up to five million gallons per day of tertiary treated recycled water. This water is used for the irrigation of agriculture, parks, and cemeteries.

Regulatory Setting

Clean Water Act: The Clean Water Act (CWA) is enforced by the U.S. EPA and was developed in 1972 to regulate discharges of pollutants into the waters of the United States. The Act made it unlawful to discharge any pollutant from a point source into navigable waters unless a National Pollution Discharge Elimination System (NPDES) Permit is obtained.

National Flood Insurance Act: The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from, and mitigating against disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that aid with mitigating future damages from natural hazards.

California Water Quality Porter-Cologne Act: California's primary statute leading water quality and water pollution concerns with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the nine Regional Water Quality Boards (RWQCB) power to protect water quality and further develop the Clean Water Act within California. The applicable RWQCB for the proposed project is the Central Valley RWQCB.

Central Valley RWQCB: The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The SWRCB and the Central Valley RWQCB will adopt policies, enforce the cleanup of discarded hazardous materials, and regulate discharges and waste disposal sites

into surface waters and groundwater. The Central Valley TWQCB requires a National Pollution Discharge Elimination System (NPDES) Permit and Stormwater Pollution Prevention Plan (SWPPP) for projects disturbing more than one acre of total land area. Because the project is greater than one acre, a NPDES Permit and SWPPP will be required.

City of Fresno General Plan: The City of Fresno General Plan identifies the following hydrologic resource goals and policies that are potentially applicable to the proposed project:

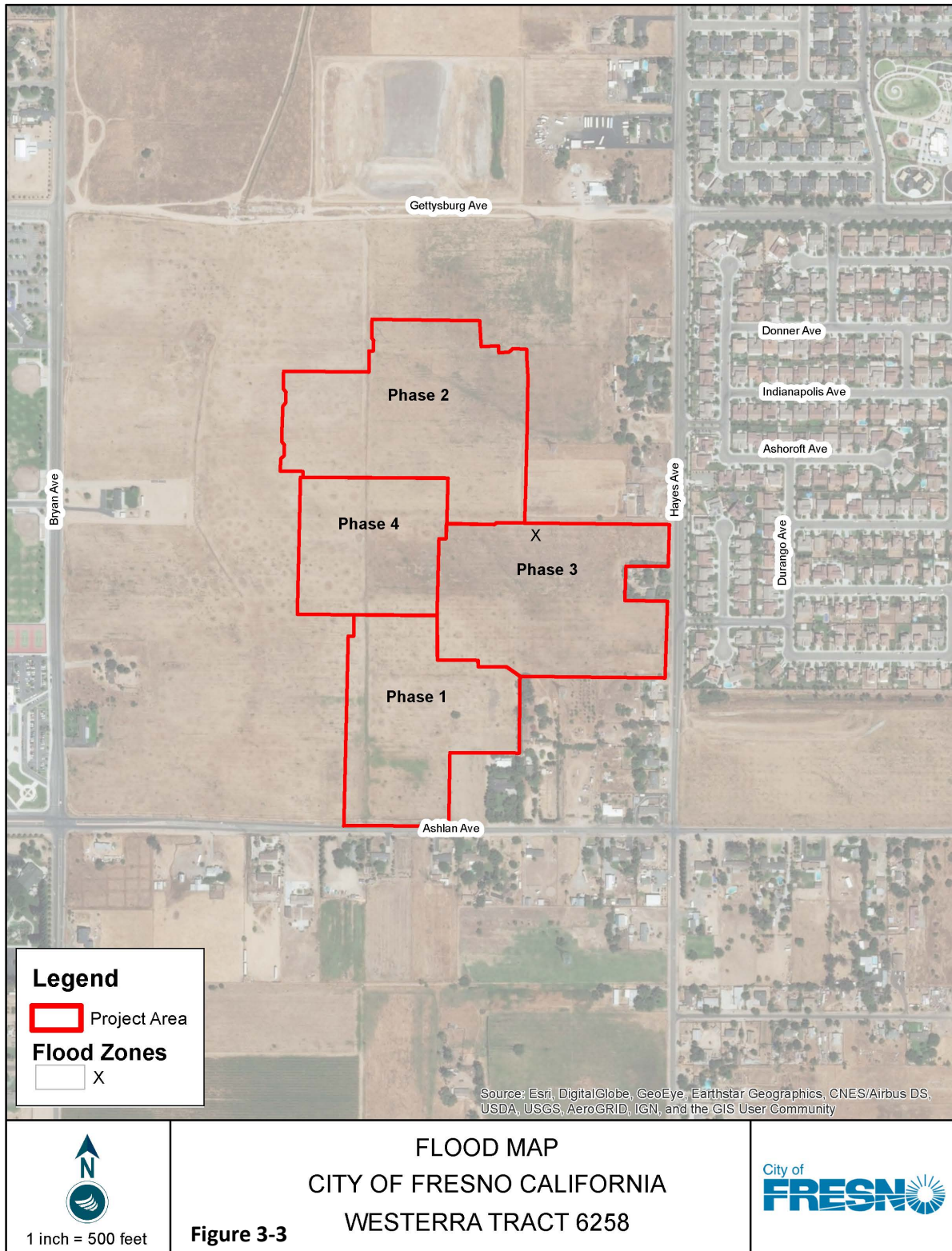
- **Policy NS-3-h (Runoff Controls):** Implement grading regulations and related development policies that protect area residents from events that exceed the capacity of the Storm Drainage and Flood Control Master Plan system of facilities.
- **Policy NS-3-I (New Development Must Mitigate Impact):** Require new development to not significantly impact the existing storm drainage and flood control system by imposing conditions of approval as project mitigation, as authorized by law. As part of this process, closely coordinate and consult with the FMFCD to identify appropriate conditions that will result in mitigation acceptable and preferred by FMFCD for each project
- **Policy PU-7-a (Reduce Wastewater):** Identify and consider implementing water conservation standards and other programs and policies, as determined appropriate, to reduce wastewater flows.
- **Policy PU-8-g (Review Project Impact on Supply):** Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.
- **Policy RC-7-c (Best Practices for Conservation):** Require all City Facilities and all new private development to follow U.S. Bureau of Reclamation Best Management Practices for water conservation, as warranted and appropriate.

Fresno Municipal Code – Chapter 6 (Municipal Services and Utilities): This chapter of the Fresno Municipal Code contains the following regulations relating to hydrology and water quality:

- **Article 7 (Urban Storm Water Quality Management and Discharge Control):** This article prohibits illicit discharges and connections to the storm drain system. The chapter also addresses stormwater quality in accordance with the requirements of the NPDES permit, prohibits the discharge of non- stormwater into the storm drain system, and requires the reduction of pollutants in stormwater discharges by implementing BMPs and low impact development features for new development and redevelopment projects.
- **Article 9 (Recycled Water Ordinance):** This article regulates residential, commercial, and industrial connections to the City’s recycled water service connections. All areas within the Recycled Water Project Area are eligible for recycled water services for approved uses in compliance with applicable federal, state, and local statutes.
- **Grading Plan Check Process:** Before obtaining a grading permit, all development projects are required to submit grading plans to the City of Fresno for review and approval. Developers must submit the following to satisfy the grading plan check process (City of Fresno 2018):

- Grading plans stamped and signed by a licensed architect or civil engineer; and
- Proof of coverage under the NPDES Construction General Permit and comply with the requirements of the permit, including developing erosion control site plan

City of Fresno 2015 Urban Water Management Plan: The Urban Water Management Plan (UWMP) is a requirement of the Urban Water Management Planning Act (UWMPA) (Division 6, Part 2.6 of the California Water Code (CWC) §10610-10656). The UWMPs must be filed every five years and submitted to the Department of Water Resources (DWR). UWMPs are required of the state's urban water suppliers in an effort to assist their resource planning and to ensure adequate water supplies are available for future use, and apply to urban water suppliers with 3,000 or more connections being served or supplying more than 3,000 acre-feet (af) of water annually.



Discussion

- a) **Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

Less than Significant Impact: The project will result in less than significant impacts to water quality due to potentially polluted runoff generated during construction activities. Construction would include excavation, grading, and other earthwork that may occur across most of the 49.29 acre project site. During storm events, exposed construction areas across the project site may cause runoff to carry pollutants, such as chemicals, oils, sediment, and debris.

In addition, soil erosion may result. Implementation of a Stormwater Pollution Prevention Plan (SWPPP) will be required for the project. A SWPPP identifies all potential sources of pollution that could affect stormwater discharges from the project site and identifies best management practices (BMPs) related to stormwater runoff. There may be chemicals or surfactants used during project maintenance or operations, so discharge could impact water quality standards. The SWPPP identifies all potential sources of pollution that could affect stormwater discharge during construction and identifies BMPs related to stormwater runoff. The impact is *less than significant*.

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

Less than Significant Impact: The proposed project's water service would be provided by the City of Fresno. The Department of Public Utilities Water Division has determined that no new or expanded water facilities are necessary to serve the project. Groundwater supplies would not substantially be affected by the proposed project, nor is the project anticipated to result in added demands beyond those considered in the City of Fresno's 2015 Urban Water Management Plan. Therefore, the impact is *less than significant impact*.

- c) **Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:**

- i. **Result in substantial erosion or siltation on- or off-site?**

Less than Significant Impact: A Stormwater Pollution Prevention Plan (SWPPP) will be implemented during project construction. SWPPPs include mandated erosion control measures, which are developed to prevent significant impacts related to erosion caused by runoff during construction. The impact is *less than significant*.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less than Significant Impact: The project would not result in substantial surface runoff or contribute to flooding on- or off-site. While there is the potential for runoff to occur during project construction, implementation of required SWPPP BMPs will reduce any impacts related to stormwater runoff, including flooding, to less than significant. The project will have a *less than significant impact*.

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?

No Impact: The project will result in less than significant impacts to water quality due to potentially polluted runoff generated during construction activities. Construction would include excavation, grading, and other earthwork that may occur across most of the 18 acre project site. During storm events, exposed construction areas across the project site may cause runoff to carry pollutants, such as chemicals, oils, sediment, and debris. In addition, soil erosion may result. Implementation of a Stormwater Pollution Prevention Plan (SWPPP) will be required for the project. A SWPPP identifies all potential sources of pollution that could affect stormwater discharges from the project site and identifies best management practices (BMPs) related to stormwater runoff. There may be chemicals or surfactants used during project maintenance or operations, so discharge could impact water quality standards. There is *no impact*.

iv. Impede or redirect flood flows?

No Impact: The proposed project would not direct excess surface waters, impede or redirect any potential flood flows. There is *no impact*.

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

No Impact: The proposed project is located inland and not near an ocean or large body of water, therefore, would not be affected by a tsunami. The project site is located in a relatively flat area and would not be impacted by inundation related to mudflow. Since the project is located in an area that is not susceptible to inundation, the project would not risk release of pollutants due to project inundation. As such, there is *no impact*.

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

No Impact: The project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan given that the project would create

substantial degradation of water quality. No chemicals or surfactants will be used during project maintenance or operations, so there will be no ongoing discharge that could impact water quality. There is *no impact*.

In Conclusion, the Project will not result in any hydrologic impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

X. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The proposed project site is located within the northwest portion of the City of Fresno, approximately 9.5 miles northwest of downtown Fresno and 18 miles southeast of the city of Madera. The project is proposed to be developed on the following APNs: 512-070-07, 512-070-39, 512-070-50, 512-070-60, 512-070-61, 512-070-63, 512-177-07, 512-184-05, and 512-184-06S. While the project site is currently vacant land, it is proposed to a medium density residential area – as it is designated in the City’s General Plan.

The City of Fresno General Plan has zoned the project site as Medium Density Residential. While a small portion of the project site is currently zoned as Commercial Community. However, as noted in the Fresno Municipal Code (15-2020), “The minimum lot area, width and frontage requirements of the zone that covers the greatest portion of the lot area shall apply to the entire lot.” Therefore, the Medium Density Residential uses will apply to the entire lot.

Regulatory Setting

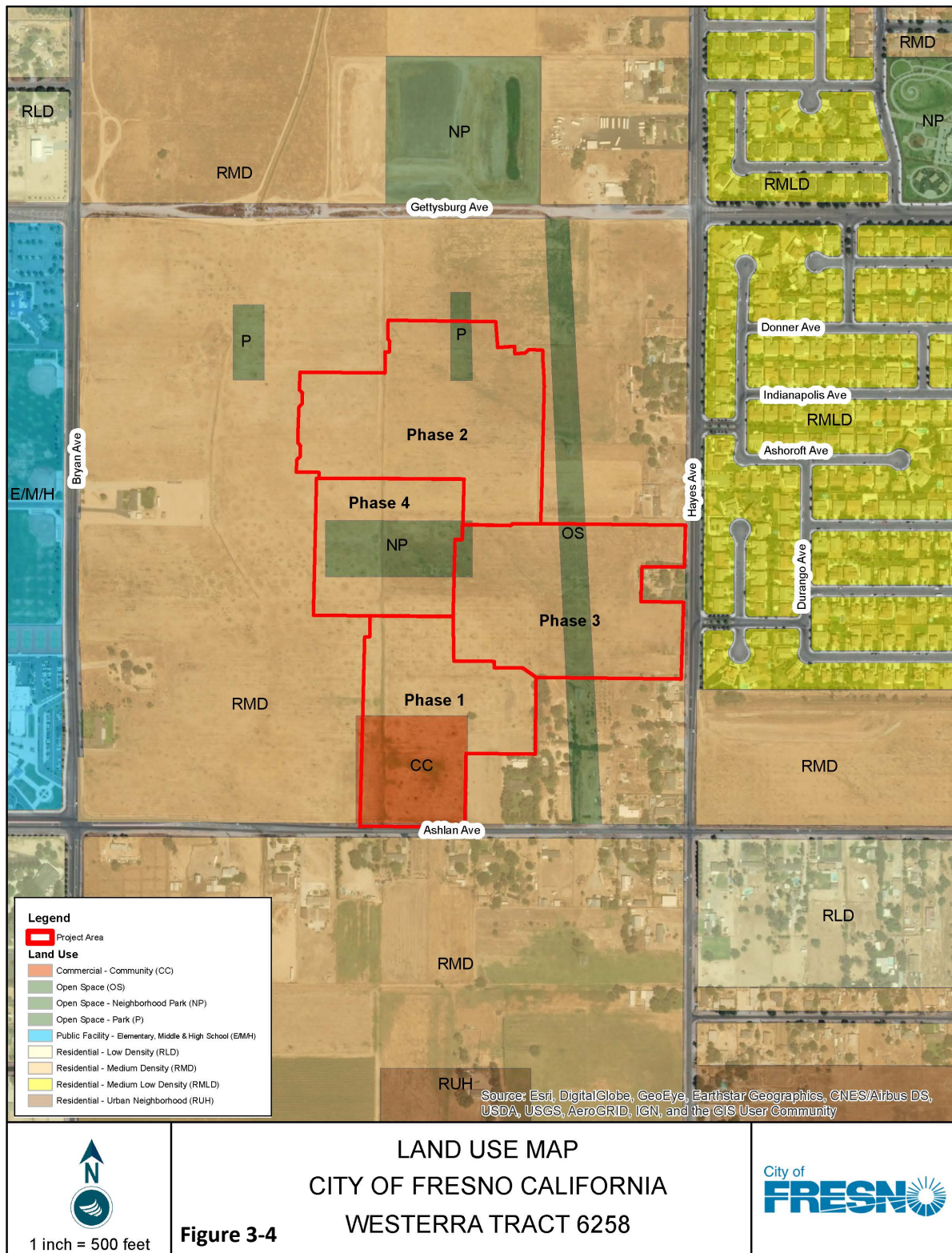
City of Fresno 2025 General Plan: The General Plan governs the distribution and intensity of land uses, sets the principles for evaluating development and guides the development and growth of the City. The following objectives and policies are used by the City of Fresno to regulate urban design and are currently adopted in the 2025 General Plan and zoning ordinance:

Urban Form, Land Use, and Design Element:

- **Objective C-21.** Incorporate the following design considerations and practices for single-family clustered projects, multi-family, and residential/ institutional projects.
- **Policy C-21-a.** An architectural theme shall be established for each development, including visually enhanced architectural features and building materials (which shall be applied

throughout the development, particularly where visible to street frontages and adjacent properties).

- **Policy C-21-b.** In order to promote attractive external appearances and appealing living environments, design measures should be utilized to avoid large scale massive and repetitive “institutional” visual appearances, and to provide a more varied, small scale appearance suggestive of single-family residential development.
- **Policy C-21-c.** The design measures should include variations of the building footprints with indentations, projections and offsets; variations in the exterior walls using a variety of materials and features such as balconies, bay windows, verandas and entryways and varied roof forms with slopes, ridges and valleys suggestive of single-family residential structures.
- **Policy E-1-a:** Implement the following classified street system in accordance with adopted engineering design standards and the 2025 Fresno General Plan Land Use and Circulation Map (Exhibit 4) and the Transportation (Streets and Highways) Element Map (Exhibit 7) adopted and incorporated herein depicting the location and general alignment of streets and highways.
- **Policy E-1-f:** Allow a Level of Service “D” (“LOS D”) as the acceptable level of traffic congestion on major streets. LOS “D” according to the Caltrans and COFCG accepted LOS criteria, as developed by the Florida Department of Transportation, means moderate congestion at peak traffic periods; approaching unstable flow with reduced speeds, limited maneuverability, and loss of convenience; average speeds range from 9 to 17 miles per hour on arterials with stopped delays of 40 seconds or less.
- **Policy E-2-h:** Limit the number of driveway access points on all major streets to minimize traffic disruption and protect traffic flows. No development shall be approved if it will adversely affect the flow of traffic on a public street below an acceptable standard to be determined by the Public Works Director and based upon the policies noted herein.



Discussion

a) Would the project physically divide an established community?

Less than Significant Impact: The project has no characteristics that would physically divide an established community in the City of Fresno. Its immediate vicinity is comprised of other residential neighborhoods, two schools, and several vacant lots within a mile of the site. The proposed project includes the construction of 318 single-family residential units on 48.63 acres of a 49.29-acre vacant lot. Existing surrounding areas will be improved for better access routes. The proposed project is designated by the City of Fresno as Medium Density Residential under the City General Plan and zoned as Medium Density Residential. There will be no changes to the general plan and zoning designations.

Based upon compliance with goals, objectives and policies, referred in the Regulatory Setting section above, the proposed project is determined to be consistent with the City of Fresno General Plan. The project would have a *less than significant impact*.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact: The proposed project is located in an area that is planned for residential and urban development by the City. The construction of this project will not conflict with any conservation plans because it is not located within any conservation plan areas. It is determined that the proposed project is consistent with respective general plan objectives and policies and will not significantly conflict with applicable land use plans, policies or regulations of the City of Fresno. Furthermore, the proposed project, including the design and improvement of the subject property, is found; (1) To be consistent with the goals, objectives and policies of the applicable City of Fresno General Plan; (2) To be suitable for the type and density of development; (3) To be safe from potential cause or introduction of serious public health problems; and, (4) To not conflict with any public interests in the subject property or adjacent lands. The authorization request for the proposed plan amendments regarding re-zoning is expected to be approved. The proposed project will have a *less than significant impact*.

In Conclusion, the Project will not result in land use and planning impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XI. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 lands use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The San Joaquin Valley has been a leading producer of minerals because of the abundance and wide variety of mineral resources that are present in the Central Valley. Extracted resources include aggregate products (sand and gravel), fossil fuels (oil and coal), metals (gold, copper, mercury, and tungsten), and other minerals used in construction or industrial applications (high-grade clay, asbestos, diatomite, gypsum, granite, etc.).

However most of these mines are now closed – leaving only 23 active mining claims within the County of Fresno. There are no mineral resource zones in the City of Fresno and there is no mineral extraction occurring on or adjacent to the proposed project site.

Regulatory Setting

California State Surface Mining and Reclamation Act: The California State Surface Mining and Reclamation Act was adopted in 1975 to regulate surface mining to prevent adverse environmental impacts and to preserve the state’s mineral resources. The Act is enforced by the California Department of Conservation’s Division of Mine Reclamation.

City of Fresno General Plan: The following mineral resource policies in the Land Use and Planning Element of the Fresno General Plan are potentially applicable to the proposed project.

San Joaquin River Corridor:

- **Policy RC-10-b:** Zoning in San Joaquin Riverbottom. Maintain zoning consistent with on-going mineral extraction in the San Joaquin Riverbottom that also allows multiple open space uses in conformance with State law, and the City’s Surface Mining Ordinance.

Development within the Parkway

- Policy RC-10-b: Zoning in San Joaquin Riverbottom. Maintain zoning consistent with on-going mineral extraction in the San Joaquin Riverbottom that also allows multiple open space uses in conformance with State law and the City's Surface Mining Ordinance.

Discussion

- a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

Less than Significant Impact: The proposed project is located within MRZ-3 zone, which shows potential of having mineral resources, but is presently unproven. These types of sites are known for containing mineral deposits that may qualify as mineral resources. MRZ-3 zones are divided on the basis of knowledge of economic characteristics of the resources. MRZ-3 areas are considered to have a moderate potential for the discovery of economic mineral deposits.

The project site has no known mineral resources that would be of a value to the region and the residents of the state, therefore the proposed project would not result in the loss of impede the mining of regionally or locally important mineral resources. Therefore, there is a *less than significant impact*.

- b) Would the project result in the loss of availability of a locally - important mineral resource recovery site delineated on a local general plan, specific plan or other lands use plan?**

Less than Significant Impact: The project site is located within MRZ-3 zone, as designated under the City of Fresno. An example of a MRZ-3 area would be where there is direct evidence of a surface exposure of a geologic unit, such as a limestone body, known to be or to contain a mineral resource elsewhere but has not been sampled or tested at the current location.

For that reason, the proposed project would not result in the loss of availability of known regionally or locally important mineral resources. There is a *less than significant impact*.

In Conclusion, the Project will not result in any mineral resource impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XII. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permeant 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive ground-borne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Noise is often described as unwanted sound. Sound is the variation in air pressure that the human ear can detect. If the pressure variations occur at least 20 times per second, they can be detected by the human ear. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Ambient noise is the “background” noise of an environment. Ambient noise levels on the proposed project site are primarily due to agricultural activities and traffic. Construction activities usually result in an increase in sound above ambient noise levels.

The properties surrounding the project site are predominately under residential use, with the exception of some vacant farmland, a sport complex and two schools. Harvest Elementary School and Glacier Point Middle School are the nearest sensitive receptor, located approximately 0.25 miles west of the project site.

Regulatory Setting

California General Plan Guidelines: The State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research (OPR) (2003), provides guidance for the compatibility of projects within areas of specific noise exposure. Acceptable and unacceptable community noise exposure limits for various land use categories have been determined to help guide new land use decisions in California communities. In many local jurisdictions, these guidelines are used to derive local noise standards and guidance. Citing EPA materials and the State Sound Transmissions Control Standards, the State's general plan guidelines recommend interior and exterior Community Noise Equivalent Level (CNEL) of 45 and 60 decibels (dB) for residential units.

California Department of Transportation: In 2013, the California Department of Transportation (Caltrans) published the Transportation and Construction Vibration Manual. The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage.

City of Fresno General Plan: The City of Fresno General Plan addresses noise and vibration standards within the Noise and Safety Element. The following noise related policies are applicable to the proposed project:

- **Policy NS-1-a (Desirable and Generally Acceptable Exterior Noise Environment):** Establish 65 dB Ldn or CNEL as the standard for the desirable maximum average exterior noise levels for defined usable exterior areas of residential and noise-sensitive uses for noise, but designate 60 dB Ldn or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise sensitive uses. Maintain a 65 dB Ldn or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses, and maintain 70 dB Ldn or CNEL as maximum average exterior noise level for industrial land uses, both to be measured at the property line of parcels where noise is generated which may impinge on neighboring properties.
- **Policy NS-1-b (Conditionally Acceptable Exterior Noise Exposure Range):** Establish the conditionally acceptable noise exposure level range for residential and other noise sensitive uses to be 65 dB Ldn or require appropriate noise reducing mitigation measures as determined by a site specific acoustical analysis to comply with the desirable and conditionally acceptable exterior noise level.
- **Policy NS-1-c (Generally Unacceptable Exterior Noise Exposure Range):** Establish the conditionally acceptable noise exposure level range for residential and other noise sensitive uses to be 65 dB Ldn or CNEL to be generally unacceptable for residential and other noise sensitive

uses for noise generated by sources in Policy NS-1-a, and study alternative less noise-sensitive uses for these areas if otherwise appropriate. Require appropriate noise reducing mitigation measures as determined by a site specific acoustical analysis to comply with the generally desirable or generally acceptable exterior noise level and the required 45 dB interior noise level standards set in Table 4.11-4 as conditions of permit approval.

Discussion

- a) **Would the project result in generation of a substantial temporary or permeant 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?**

Less than Significant Impact: Project construction would be temporary, anticipated to last from approximately January 2020 to April 2022 in four phases.

- Phase I would begin grading January 2020; homes beginning April 2020.
- Phase II would begin grading January 2020; Park will be complete in late 2020; homes beginning in early 2023.
- Phase III would begin grading January 2021; Homes beginning April 2021.
- Phase IV would begin grading January 2022; homes beginning in April 2022.

The average noise levels generated by construction equipment that will be use in the proposed project are shown below.

Type of Equipment	dBA at 50 feet
Bore/Drill Rigs	82
Excavators	81
Tractors	84
Loaders	85
Backhoes	80
Trenchers	80
Cement and Mortar Mixers	85
Welders	74

*Table 3-8. Noise levels of Noise-Generating Construction Equipment.
Source: Federal Highway Administration Construction Noise Handbook.*

The City's Noise Control Ordinance requires noise-producing equipment used during construction to be restricted to the hours between 7:00 a.m. to 10:00 p.m. Construction would not occur outside of these hours. Short term noise from construction is inevitable and cannot be mitigated beyond a certain level. Compliance with city noise control measures will prevent significant impacts related to increased ambient noise levels as a result of construction.

Because noise generated during project operations will not exceed noise thresholds established by the City of Fresno General Plan and will comply with all regulations regarding construction hours, implementation of the proposed project will not expose persons to noise levels exceeding established standards and there is *no impact*.

b) Would the project result in generation of excessive ground-borne vibration or groundborne noise levels?

No Impact: The City of Fresno General Plan states that projects that use vibration-intensive construction activities, such as pile drivers, jack hammers, and vibratory rollers, near sensitive receptors must be evaluated for potential vibration. Because the proposed short term construction noise levels will occur within city ordinance hours and operational noise levels will not create significant levels as a residential use, therefore there is *no impact*.

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

No Impact: The proposed project is not located within an airport land use plan. Fresno Yosemite International Airport is the nearest public airport and is located approximately 14 miles away from the project site. Therefore, there is *no impact*.

In Conclusion, the Project will not result in any noise impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XIII. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The current status of the project site is currently designated for Medium Density Residential in an Urban Growth Management area zone by the City of Fresno General Plan. The proposed project would include the construction of 318 single-family homes on 49.29 gross acres of vacant land. The density for the project would be 6.54 D.U./acre.

Properties immediately east of the subject property have been developed with a combination of rural residential and conventional single-family residential subdivision and are planned for Medium to Medium Low Density Residential along. Properties further to the north and south are predominantly comprised of agricultural and vacant agricultural lots, with the exception of a few single-family residences. To the west of the project site, there are two schools, Harvest Elementary School and Glacier Point Middle School, the Office for the Central Unified School District and Deran Koligian Stadium. There are no existing residences on the property, therefore the proposed project will not directly or indirectly impact unwanted population growth in area, nor will it displace any existing housing.

Regulatory Setting

Fresno General Plan (Housing Element): The Housing Element provides the City of Fresno with a coordinated and comprehensive strategy for promoting the production of safe, decent, and affordable housing for all community residents. The City of Fresno's population size is controlled by the development code and Housing Element of the General Plan. These documents regulate the number of dwelling units per acre allowed on various land uses and establish minimum and maximum lot sizes. These factors have a direct impact on the County's population size.

Discussion

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

Less than Significant Impact: The median household size according to the Fresno's Housing Element is 3.07 persons per unit. Using this ratio, the proposed project would accommodate approximately 977 people upon completion – a population which is not anticipated to affect any regional population, housing or employment projects anticipated by City policy documents. That being said, the project site is located in an area where the City is anticipating and encouraging growth. Additionally, the project would not create any long-term employment opportunities that would lead to population growth. Therefore, there would be a *less than significant impact*.

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

No Impact: There project would not require the removal of any existing structures. Nor would the project displace any existing housing or people. Therefore, there is *no impact*.

In Conclusion, the Project will not result in any population and housing impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XIV. PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable serve ratios, response times of other performance objectives for any of the public services:				
a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Fire: The project site is served by the Fresno Fire Protection Department which operates 20 fire stations within the City of Fresno. The nearest fire station is Fire Station 18 on N La Ventana Avenue, located approximately three miles north proposed project site.

Police: Law enforcement services are provided to the project site via the City of Fresno Police Department. The Fresno Police Department will continue to provide police protection services to the proposed project site upon development. The nearest Police Department station is the Northwest District Station, located approximately four miles southeast of the proposed project site.

Schools: The proposed project site is located within the Fresno Unified School District. The nearest school within that district is Harvest Elementary and Glacier Point Middle School, which is located approximately 0.25 miles west of the project site.

Discussion

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental

facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable serve ratios, response times of other performance objectives for any of the public services:

a. Fire protection?

Less than Significant Impact: The City of Fresno Fire Department (Fire Department) offers a full range of services including fire prevention, suppression, urban search, emergency medical care, hazardous materials, and rescue response, in addition to emergency preparedness planning and public education coordination within the Fresno City limit. The Fire Department also has mutual aid agreements with the Fresno County Fire Protection District, and the City of Clovis Fire Departments.

While the proposed project consists of addition of 318 residential homes to the City of Fresno, it will result in an increased demand for fire protection service. According to the City of Fresno Fire Department, the proposed project would be served by Fresno Fire Station 18, approximately five miles from the project site. The project would be required to deposit a Fire Service Fee with the City prior to occupancy of the facility. Payment of the required fees would provide funding to supplement fire protection staff and equipment to improve response times and would minimize impacts to fire protection services. For these reasons, the project would have a *less than significant impact* to fire protection services.

b. Police protection?

Less than Significant Impact: Police protection services would be provided to the proposed project from the existing Northwest District Station, which is located on 3781 N. Hughes Ave, located approximately four miles. The project site is located in an area currently served by the Police Department; the Department would not need to expand its existing service area or construct a new facility to serve the project site.

The project applicant will be required to deposit a Police Service Fee with the City prior to occupancy of the facility. Payment of the required fees would provide funding to supplement police staff and equipment and reduce impacts to police protection services. Since implementation of the proposed project would not result in increased demand for police protection services, there would be a *less than significant impact*.

c. Schools?

No Impact: The proposed project will result in increase in residents to the City of Fresno, however the City anticipates the potential of increasing the number of students in the school district. There are two schools, Harvest Elementary and Glacier Point Middle School, located within 0.25 miles of the project site. Due to its close proximity, the listed schools will be

sufficient to serve the additional population from this development. Therefore, there is *no impact*.

d. Parks?

Less than Significant Impact: The proposed project will be constructing a 1.74 acre park within the project site that is to be public and maintained by the Fresno Community Facilities District (CFD). There will also be a linear park/trail, which will be a part of the City's Bicycle, Pedestrians and Trails Master Plan. Therefore, there would be a *less than significant impact*.

e. Other public facilities?

No Impact: Other public facilities will not be required from this proposed project. There would be *no impact* on other public facilities.

In Conclusion, the Project will not result in any public services impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XV. PARKS AND RECREATION

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

There are 79 existing parks systems that are owned and operated by the City of Fresno. There are several existing parks within ¼ mile of the site.

The City of Fresno provides different types of parks and open space facilities, or park types, to meet park and open space recreation needs of the community. Park types include pocket parks, neighborhood parks, community parks, regional parks, special use parks, greenbelts/trails, and open space/natural areas. The Fresno General Plan identifies level of service (LOS) goals by park type, which are 3 acres per 1,000 residents for pocket parks, neighborhood parks, and community parks, and 2 acres per 1,000 residents for regional parks, open space/natural areas, and special use parks.

Regulatory Setting

City of Fresno General Plan: The General Plan establishes long-range concepts for the physical development of the city, with an emphasis on infill development. The Plan's Parks, Open Space and Schools Element analyzes Fresno's parks and recreation facilities and establishes goals and policies for future development of the parks and recreation system. The following features of the General Plan relate to parks and recreation facilities:

- Classification of park types and calculation of existing "city park space"/"city park land;"
- Level of Service (LOS) goal to provide 5 acres of city park space per 1,000 residents, including 3 acres of community, neighborhood and pocket parks and 2 acres of regional parks, greenways and trails;

- Parks and Open Space map indicating locations and service areas of existing and potential future parks.

2017 Fresno Parks Master Plan: In 1989, the City of Fresno adopted the “1989 Master Plan for Parks and Recreation” as a component of the City’s General Plan Open Space and Recreation Element. Although the population, demographics, development patterns, land use, and needs of Fresno residents have drastically changed since then, the Parks Master Plan had not been updated until 2017. The 2017 Parks Master Plan establishes an updated vision for improving the city’s park and recreation system in order to better serve current and future needs of the people of Fresno.

Downtown Neighborhoods Community Plan (2016): The Downtown Neighborhoods Community Plan further details land use and development characteristics, public facilities, and implementation strategies for Downtown and surrounding areas. The Downtown Neighborhoods Plan emphasizes the role of street trees in providing identity and supporting quality of life and sets a goal of putting all residents within a half mile of a park or publicly accessible open space. Strategies include partnering with schools, using city-owned vacant land for parks, and evaluating other underutilized parcels for potential parks.

Active Transportation Plan (2016): The Active Transportation Plan (ATP) analyzes conditions for walking and biking in Fresno, sets goals for the City to equitably improve the safety, convenience, access, and completeness of bike facilities, and recommends specific improvements. The ATP includes maps of existing and future bike and pedestrian networks.

Fresno Municipal Code: The following key provisions of the Fresno Municipal Code provide regulatory structure for creating new parks in connection with the development approval process:

- **Article 4.7:** Establishes the Park Facilities Fee and authorizes City Council to set the parameters, including the amount of land and the typical facilities to be included in parks.
- **Article 4.7 (Section 12-4.705):** Residential subdivisions with fewer than 50 parcels shall be responsible for paying the park fee but not for dedicating land. Subdivisions with 50 parcels or more shall pay the fee and dedicate 0.6 acres per 1,000 residents in the form of pocket parks.
- **Article 33:** The City may impose conditions of approval on subdivisions, as needed to achieve consistency with planning policies, design guidelines, ordinances or State law.
- **Article 37:** The process for requiring land to be dedicated and reserved for specified public purposes, including parks. The article enables the City to provide the option for a subdivider to pay a fee in lieu of land dedication.
- **Article 41:** Provides subdivision design standards, including standards for park location and design.
- **Article 59:** Describes the Planned Development process, which allows for variation from base zoning where the City finds that the proposed development is “demonstrably superior” in terms of community design, environmental preservation, and/or community benefit.

- **Article 61:** “Concept plans” are required when land designated for Low, Medium Low, or Medium Density Residential in the General Plan is proposed to be annexed. Concept plans must show how they will achieve “complete neighborhoods.”

Discussion

- a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Less than Significant Impact: The proposed project includes a construction of 318 single-family residential dwelling units, which would result in an increase of 976 residents. The City has established Park Facilities Fees for projects that have the potential to increase use of recreational facilities. Fresno City Council established that a Park Facilities Fee is needed in order to finance municipal public facilities and pay for construction and acquisition costs. The proposed project will also include a 1.74-acre public park (Outlot A), maintained by the City Parks and Recreation Department. An additional linear park/trail (Outlot G) is to be proposed a part of the City’s Bicycle, Pedestrian and Trails Master Plan. Therefore, with the incorporation of recreational areas within the proposed project and the Park Facilities Fees, there will be a *less than significant impact*.

- 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?**

Less than Significant Impact: Due to the addition of residents to the area, the project would create need for more local facilities. As specified above, Outlot A will be a 1.74-acre park that is to be public and maintained by the CFD. Outlot G, which is located under the power lines, will be a linear park/trail. Fresno City Council also required a Park Facilities Fee from the project applicant to finance such future amenities. There would be a *less than significant impact*.

In Conclusion, the Project will not result in any park and recreation impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XVI. TRANSPORTATION / TRAFFIC

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with the CEQA guidelines Section 15064.3, Subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

A Traffic Impact Analysis (TIA) was prepared by JLB Traffic Engineering, Inc. (JLB) for the proposed Westerra Tentative Tract 6258 Project located on the northwest quadrant of Hayes Avenue and Ashlan Avenue in the City of Fresno. The project proposes to develop up to 320 single-family residential units in two (2) phases. Phase I would construct 100 units and Phase II would construct the remaining 220 units. Based on information provided to JLB, the Project is consistent with the City of Fresno 2035 General Plan.

The purpose of this TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures, and identify any critical traffic issues that should be addressed in the on-going planning process. Level of Service (LOS) is a qualitative index of the performance of an element of the transportation system. LOS in this study describes the operating conditions for signalized and unsignalized intersections. LOS is a rating scale running from "A" to "F", with "A" indicating no congestion of any kind and "F" indicating unacceptable congestion and delays.

The TIA primarily focused on evaluating traffic conditions at study intersections that may potentially be impacted by the proposed Project. On April 25, 2019, a Draft Scope of Work for the preparation of a Traffic Impact Analysis for this Project was provided to the City of Fresno, County of Fresno and Caltrans for their review and comment. Any comments to the Draft Scope of Work were to be provided by May 16, 2019.

On April 26, 2019, the County of Fresno responded to the Draft Scope of Work. The County of Fresno requested to tentatively add the intersections of Bryan Avenue and Shaw Avenue and Bryan Avenue and Shields Avenue. The County of Fresno noted that these would be confirmed upon review of the Project's trip distribution. On May 13, 2019, JLB provided the Fresno COG Select Zone modeling plots to the County of Fresno. On May 14, 2019, the County of Fresno confirmed that the intersection of Bryan Avenue and Shields Avenue need not be included in the analysis. On April 30, 2019, the City of Fresno responded to the Draft Scope of Work. The City of Fresno requested that the intersection of Bryan Avenue and Shaw Avenue be included in the analysis. On May 24, 2019, the City of Fresno requested that the TIA include the analysis of the following locations: State Route 99 at Herndon Avenue Northbound and Southbound Ramps, State Route 99 at Shaw Avenue Northbound and Southbound Ramps, and State Route 99 at Ashlan Avenue Northbound and Southbound Ramps. On August 30, 2019, Caltrans approved the proposed Scope of Work as presented.

The TIA primarily focused on evaluating traffic conditions at study intersections and segments that may potentially be impacted by the proposed project. The Scope of Work was prepared via consultation with City of Fresno, County of Fresno and Caltrans staff. The complete TIA Report is located in Appendix D.

“Though not yet reflected in the TIA, the proposed project shall install a traffic signal with protected left-turn phasing per City of Fresno standards:

- At the intersection of Hayes Avenue and Ashlan Avenue prior to build-out of Phase 1 as shown in the TIA. The traffic signal shall be installed at the ultimate and may require the acquisition of ROW.”
- At the intersection of Hayes Avenue and Gettysburg Avenue prior to build-out of Phase 2 as shown in the TIA. The traffic signal shall be installed at the ultimate and may require the acquisition of ROW.”

Regulatory Setting

The Highway Capacity Manual (HCM) 6th Edition: This publication is the standard reference available by the Transportation Research Board and contains the specific criteria and methods to be used in assessing LOS. U-turn movements were analyzed using HCM 2000 methodologies and would yield more accurate results for the reason that HCM 6th Edition methodologies do not allow the analysis of U-turns. Synchro software was used to define LOS in this study. Details regarding these calculations are included in Appendix D.

Caltrans Guide for the Preparation of Traffic Impact Studies: Caltrans endeavors to maintain a target LOS at the transition between LOS C and D on State highway facilities consistent with the *Caltrans Guide for the Preparation of Traffic Impact Studies* dated December 2002. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. In this TIA, all study facilities within Caltrans jurisdiction utilize LOS D to evaluate the potential significance of LOS impacts to state facilities.

The City of Fresno General Plan: The Project is consistent with the following General Plan policies pertaining to public transit, bicycle or pedestrian facilities:

Policy UF-12-b: Activity Centers. Mixed-use designated areas along BRT and/or transit corridors are appropriate for more intensive concentrations of urban uses. Typical uses could include commercial areas; employment centers; schools; compact residential development; religious institutions; parks; and other gathering points where residents may interact, work, and obtain goods and services in the same place.

Policy UF-12-e: Access to Activity Centers. Promote adoption and implementation of standards supporting pedestrian activities and bicycle linkages from surrounding land uses and neighborhoods into Activity Centers and to transit stops. Provide for priority transit routes and facilities to serve the Activity Centers.

Policy MT-2-c: Reduce VMT through Infill Development. Provide incentives for infill development that would provide jobs and services closer to housing and multi-modal transportation corridors, and vice versa, in order to reduce citywide vehicle miles travelled.

Policy RC-2-a: Link Land Use to Transportation. Promote mixed-use, higher density infill development in multi-modal corridors. Support land use patterns that make more efficient use of the transportation system and plan future transportation investments in areas of higher intensity development. Discourage investment in infrastructure that would not meet these criteria.

Traffic Impact Zones (TIZ): The Fresno General Plan has established various degrees of acceptable LOS on its major streets, which are dependent on four (4) Traffic Impact Zones (TIZ) within the City. The standard LOS threshold for TIZ I is LOS F, that for TIZ II is LOS E, that for TIZ III is LOS D, and that for TIZ IV is LOS E. Additionally, the 2035 MEIR made findings of overriding consideration to allow a lower LOS threshold than that established by the underlying TIZ's. For those cases in which a LOS criterion for a roadway segment differs from that of the underlying TIZ, such criteria are identified in the roadway description. As all study facilities fall within TIZ III, LOS D is used to evaluate the potential significance of LOS impacts to intersections within this TIA pursuant to the City of Fresno 2035 General Plan.

Fresno Active Transportation Plan (ATP): The City of Fresno also prepared an Active Transportation Plan (ATP) in 2016, which envisions a complete, safe and comfortable network of trails, sidewalks and bikeways that serves all residents of Fresno. While there are no established trails associated with the site, as previously mentioned, the Project will provide pedestrian access from adjacent residential neighborhoods, will provide bicycle storage facilities and will not otherwise conflict with any policies or programs included in the ATP.

Discussion

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

Less than Significant Impact with Mitigation: Based on the three-year collision data contained within Statewide Integrated Traffic Records System (SWITRS), most study intersections have experienced a relatively low average number of collisions per year. After thorough review of the data contained within the collision reports for the three-year analysis period, JLB was unable to reach a conclusion that would explain any justification for the modification of lane geometrics or traffic controls at this intersection. Table I within the TIA summarizes the type of collision, severity, violations and if it involved another vehicle, a pedestrian/bicyclist or a fixed object. As a result, the number of correctable collisions experienced at the existing study intersections is considered less than significant.

The proposed project will not require any changes to existing transportation systems and will have no impact on any plans, ordinances, or policies related to the effectiveness or performance of the circulation system. Implementation of Mitigation Measures TRA-1 through TRA-3 will ensure that impacts to this checklist item will be *less than significant with mitigation* incorporation.

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

Less than Significant Impact: The proposed project would have impacts associated with vehicle miles traveled through its construction and operation, and is consistent with CEQA Guidelines Section 15064.3. Based off the following conclusions made through the TIA, there would be a *less than significant impact*.

Phase I: The proposed project under Phase I is estimated to generate a maximum of 944 daily trips, 74 AM peak hour trips and 99 PM peak hour trips. Under this scenario, all study intersections are projected to operate at an acceptable LOS during both peak periods.

Phase II: The proposed Project under Phase II is estimated to generate a maximum of 2,077 daily trips, 163 AM peak hour trips and 218 PM peak hour trips. Under this scenario, all study intersections are projected to operate at an acceptable LOS during both peak periods.

Existing (plus Project): Under this scenario, all study intersections are projected to operate at an acceptable LOS during both peak periods.

Near Term (plus Project) Buildout: The total trip generation for the Near Term Project is 51,118 daily trips, 4,233 AM peak hour trips and 4,864 PM peak hour trips. Under this scenario, the intersections of Hayes Avenue and Shaw Avenue, Bryan Avenue and Gettysburg Avenue, Bryan Avenue and Ashlan Avenue, Hayes Avenue and Ashlan Avenue, and Polk Avenue and Ashlan Avenue are projected to exceed their LOS threshold during one

or both peak periods. To improve the LOS at these intersections, it is recommended that the following improvements be implemented:

- Hayes Avenue / Shaw Avenue
 - Add a westbound left-turn lane;
 - Modify the westbound left-through lane to a through lane;
 - Modify the northbound left-right lane to a left-turn lane;
 - Add a northbound right-turn lane;
 - Signalize the intersection with protective left-turn phasing on all approaches; and
 - Modify the intersection to accommodate the added lanes.
- Bryan Avenue / Gettysburg Avenue
 - Modify the northbound through-right lane to a through lane; and
 - Add a northbound right-turn lane.
- Bryan Avenue / Ashlan Avenue
 - Modify the westbound through-right lane to a through lane;
 - Add a westbound right turn lane; and
 - Signalize the intersection with protective left-turn phasing on all approaches.
- Hayes Avenue / Ashlan Avenue
 - Add an eastbound left-turn lane;
 - Modify the eastbound left-through-right lane to a through-right lane;
 - Add a westbound left-turn lane;
 - Modify the westbound left-through-right lane to a through-right lane;
 - Add a northbound left-turn lane;
 - Modify the northbound left-through-right lane to a through-right lane;
 - Add a southbound left-turn lane;
 - Modify the southbound left-through-right lane to a through-right lane;
 - Signalize the intersection with protective left-turn phasing on all approaches; and
 - Modify the intersection to accommodate the added lanes.
- Polk Avenue / Ashlan Avenue
 - Signalize the intersection with protective left-turn phasing on all approaches.
 - It is worth noting that the City has required that this intersection be signalized by some other development projects and these have commenced the design of construction documents to signalize the intersection with protective left-turn phasing. It is anticipated that construction of the traffic signal will be completed within the next two (2) years.

Between the existing traffic conditions and the near term traffic conditions scenarios, the proposed project accounts for 5.6 percent of the daily trips, 5.3 percent of the AM peak hour trips and 6.1 percent of the PM peak hour trips of growth in traffic, while the rest can be attributable to the near term projects. Therefore, one can deduce that the majority of the mitigation measures presented under this scenario may not be necessary immediately upon completion of the proposed project. However, if the project is completed close to the completion date, the detailed recommended improvements presented under this scenario may be necessary in order to improve the LOS to the City's target LOS threshold.

Cumulative Year 2035 (plus Project) Buildout: Under this scenario, the intersections of Bryan Avenue and Shaw Avenue, Hayes Avenue and Shaw Avenue, State Route 99 Southbound Ramps and Shaw Avenue, State Route 99 Northbound Ramps and Shaw Avenue, Bryan Avenue and Gettysburg Avenue, Hayes Avenue and Gettysburg Avenue, Polk Avenue and Gettysburg Avenue, Bryan Avenue and Ashlan Avenue, Hayes Avenue and Ashlan Avenue, Polk Avenue and Ashlan Avenue, and State Route 99 Northbound Off-Ramp and Ashlan Avenue are projected to exceed their LOS threshold during one or both peak periods. To improve the LOS at these intersections, it is recommended that improvements found in the TIA on Appendix D (page 58) be implemented.

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

No Impact: The proposed project will not increase or create any hazards to the public roadway through its design features or incompatible uses. Since the project would not increase transportation-related hazards, there would be *no impact*.

d) Would the project result in inadequate emergency access?

No Impact: The proposed project will provide emergency access routes to the site along Hayes Ave and Ashlan Ave, and therefore will not result in inadequate emergency access. A network of local roads within the proposed project property provides full access onto and off of the project site. There is *no impact*.

Mitigation Measures for Impacts to Transportation/Traffic:

Mitigation Measure TRA-1: The proposed project shall implement a Class II Bike Lane along its frontage to Hayes Avenue and Ashlan Avenue.

Mitigation Measure TRA-2: The proposed project shall make necessary improvements and right-of-way and public easement dedication along adjacent public street(s) and within the site boundaries per City of Fresno requirements.

Mitigation Measure TRA-3: The proposed project shall provide pedestrian connectivity to the adjacent elementary and middle school, if not created by current roadway construction. It is recommended that a walkway path and high-visibility crosswalk will be installed across the intersection of Bryan Avenue and Gettysburg Avenue.

In Conclusion, the Project will not result in any transportation impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XVII. TRIBAL CULTURAL RESOURCES

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

Environmental Setting

Studies of the prehistory of Fresno County show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. The area has been occupied inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal for over 10,000 years. Of the main groups inhabiting the Fresno area, the Southern Valley Yokuts occupied the largest territory. The Yokuts numbered about 25,000, and were clustered into about fifty independent local sub-tribes. Historians believe approximately 22 villages stretched from Stockton northerly to the Tehachapi Mountains southerly. The Yokuts were recognized as having three major subgroups: the Northern Valley, the Foothill, and the Southern Valley. Ethnographic evidence suggests the city of Fresno is located in part of

the Southern Valley Yokuts territory. Prehistoric archaeological investigations are very limited in the Fresno area. Part of the challenge associated with archaeological preservation in this area is that the San Joaquin Valley has been farmed for over a century, which tends to destroy signatures of prehistoric sites.

The State of California requires lead agencies to note the potential effects of proposed projects and consult with California Native American tribes through the local planning process for the purpose of preserving Traditional Tribal Cultural Resources. Per the most recent census data, there are currently 109 recognized Indian tribes in California, with over 100 separate reservations (or Rancherias).

Cultural Resources Record Search: A Cultural Resources Records Search was conducted by the Southern San Joaquin Valley Information Center on August 19, 2019. According to the records search, there has been no previous cultural resource studies conducted within the project area. There have been seven studies within the one-half mile radius. There are no recorded cultural resources within the project area and it is unknown if any exist there. There are two recorded resources within a one-half mile radius. These consist of a historic era farm and historic era railroad. The full findings of the cultural records search can be found in Appendix C.

Native American Consultation: The City of Fresno contacted the Native American Heritage Commission requesting contact information of applicable Native American Tribes. Thereafter, letters were provided to each of the listed tribes on September 5, 2019, informing them of the proposed project and requesting consultation, if desired. The City did not receive any responses from the Tribes contacted.

Definitions

- **Historical Resources:** Historical resources are defined by CEQA as resources that are listed in or eligible for the California Register of Historical Resources, resources that are listed in a local historical resource register, or resources that are otherwise determined to be historical under California Public Resources Code Section 21084.1 or California Code of Regulations Section 15064.5. Under these definitions Historical Resources can include archaeological resources, Tribal cultural resources, and Paleontological Resources.
- **Archaeological Resources:** As stated above, archaeological resources may be considered historical resources. If they do not meet the qualifications under the California Public Resources Code 21084.1 or California Code of Regulations Section 15064.5, they are instead determined to be “unique” as defined by the CEQA Statute Section 21083.2. A unique archaeological resource is an artifact, object, or site that: (1) contains information (for which there is a demonstrable public interest) needed to answer important scientific research questions; (2) has a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

- **Tribal Cultural Resource (TCR):** Tribal Cultural Resources can include site features, places, cultural landscapes, sacred places, or objects, which are of cultural value to a Tribe. It is either listed on or eligible for the CA Historic Register or a local historic register, or determined by the lead agency to be treated as TCR.
- **Paleontological Resources:** For the purposes of this section, “paleontological resources” refers to the fossilized plant and animal remains of prehistoric species. Paleontological Resources are a limited scientific and educational resource and are valued for the information they yield about the history of the earth and its ecology. Fossilized remains, such as bones, teeth, shells, and leaves, are found in geologic deposits (i.e., rock formations). Paleontological resources generally include the geologic formations and localities in which the fossils are collected.

Regulatory Setting

National Historic Preservation Act: The National Historic Preservation Act was adopted in 1966 to preserve historic and archeological sites in the United States. The Act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation offices.

California Historic Register: The California Historic Register was developed as a program to identify, evaluate, register, and protect Historical Resources in California. California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, experimental, or other value. In order for a resource to be designated as a historical landmark, it must meet the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

California Native American Historical, Cultural, and Sacred Sites Act: The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The Act requires that upon discovery of human remains, construction or excavation activity cease and the County coroner be notified. If the remains are of a Native American, the coroner must notify NAHC, which notifies and has the authority to designate the most likely descendant of the deceased. The Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

City of Fresno General Plan: The Historic and Cultural Resources Element of the General Plan recognizes that connections to culture and history are essential characteristics of a city. This element serves to provide policy guidance to assist in protecting, preserving and enhancing the City of Fresno’s cultural

and historic resources. The following policies are related to tribal resources that may apply to the proposed project:

Policy HCR-2-d: Native American Sites. Work with local Native American tribes to protect recorded and unrecorded cultural and sacred sites, as required by State law, and educate developers and the community about the connections between Native American history and the environmental features that characterize the local landscape.

Policy HCR-2-f (Archaeological Resources): Consider State Office of Historic Preservation guidelines when establishing CEQA mitigation measures for archaeological resources.

Discussion

a) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**

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

Less Than Significant Impact: The project would not cause a substantial adverse change in the significance of a tribal cultural resource, nor is it listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. Based on the results of the records search, no previously recorded tribal cultural resources are located within the project site. In accordance to Assembly Bill (AB) 52 and Senate Bill (SB) 18, potentially affected Tribes were properly notified of the proposed project and given the opportunity to request consultation. The City did not receive any responses from the tribes contacted. Therefore, the Project has a *less than significant impact*.

ii. **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Less Than Significant Impact: The lead agency has not determined there to be any known tribal cultural resources located within the project area. Additionally, there are not believed to be any paleontological resources or human remains buried within the project area's vicinity. Tribes were properly notified of the proposed project and given the opportunity to request consultation. The City did not receive any responses from the tribes contacted. Therefore, the Project has a *less than significant impact*.

In Conclusion, the Project will not result in any tribal cultural resource impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XVIII. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relation of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Wastewater: The proposed project will be required to connect to wastewater services provided by the City of Fresno.

Solid Waste: The City of Fresno would also provide solid waste, recycling, and green waste collections services, as it does with all residential customers within the city limits.

Water: The proposed project will be required to connect to water and stormwater services provided by the City of Fresno.

Regulatory Setting

CalRecycle: California Code of Regulations, Title 14, Natural Resources – Division 7 contains all current CalRecycle regulations regarding nonhazardous waste management in the state. These regulations include standards for the handling of solid waste, standards for the handling of compostable materials, design standards for disposal facilities, and disposal standards for specific types of waste.

Central Valley RWQCB: The Central Valley RWQCB requires a Stormwater Pollution Prevention Plan (SWPPP) for projects disturbing more than one acre of total land area. Because the project is greater than one acre, a SWPPP to manage stormwater generated during project construction will be required.

The Central Valley RWQCB regulates Wastewater Discharges to Land by establishing thresholds for discharged pollutants and implementing monitoring programs to evaluate program compliance. This program regulates approximately 1500 dischargers in the region.

The Central Valley RWQCB is also responsible for implementing the federal program, the National Pollutant Discharge Elimination System (NPDES). The NPDES Program is the federal permitting program that regulates discharges of pollutants to surface waters of the U.S. Under this program, a NPDES permit is required to discharge pollutants into Water's of the U.S. There are 350 permitted facilities within the Central Valley Region.

Discussion

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

Less than Significant Impact with Mitigation: The Fresno Metropolitan Flood Control District has reviewed the proposed project, along with conditions and requirements pertaining to stormwater drainage facilities have been provided to the developer. The project will require drainage / grading plans, as identified in Mitigation Measure HYD-2 in Section X. Hydrology and Water Quality. The proposed project will require construction of new facilities to meet electric power, natural gas and telecommunication needs through the addition of this project but will follow all requirements pertaining to stormwater facilities. Therefore, there will be *less than significant impact with mitigation*.

Mitigation Measure HYD-2: Project-specific Mitigation Measure HYD-2. See attached project Fresno MEIR Mitigation Measure Monitoring Checklist.

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

Less than Significant Impact with Mitigation: Water services for the proposed project would be provided by the City of Fresno. The City of Fresno Department of Public Utilities Water Division has determined that new and expanded water supply facilities are necessary to serve the project. Project water demand has been determined using the City's adopted 2015 Urban Water Management Plan (UWMP) methodologies and was analyzed on the basis of the following calculations:

- *Residential units: 318 single-family units; historic water usages per capita adjusted for City Urban Water Management Plan assumptions regarding water conservation usage effects.*
- *318 dwelling units X 3.07 persons per dwelling unit = 3.07 persons X 247 GPCD = 241,136.22 total gallons per day X 365 days per year = 88,017,720.3 gallons per year (or ~270 acre/feet/year)*

Although the project would increase current level demands for water resources, the Project is anticipated to use less water than the water demand projects within the 2015 UWMP with respect to development of the proposed project. Proven through the City's UWMP, the proposed project would not negatively impact water supplies or deplete groundwater resources. The City of Fresno's UWMP contains an evaluation of existing water supply sources, conservation measures, projected future water demands, and development of new water supplies (i.e. grey water, surface water treatment, groundwater recharge, etc.). The UWMP as well as the City's General Plan contain measures intended to increase groundwater recharge through augmenting supply, conservation strategies, and mitigation measures. The proposed project will use water use reduction as the City of Fresno requires through measures identified in mitigation measure HYD-1.

The proposed project is also subject to minimum water pressure requirements, as stated in the City of Fresno Municipal Code Section 6-501. It states that estimated peak hour water demands shall be anticipated as 2.12 gallons per minute for single-family residential units. The Fire Protection Water Demand would also be added to the project's water demands, at 1,500 gallons per minute. The sum of the Peak Water Demand and Fire Protection Demands (in gallons per minute) will determine the total prompt water supply flow that would be required for the proposed project, inclusive of fire protection. The project applicant will be required to follow and maintain these standards in perpetuity.

The proposed project would require new and expanded water connections; however there would be sufficient water supply as indicated in the City utility master plan. The impacts will be *less than significant with mitigation*.

Mitigation Measure HYD-1: Project-specific Mitigation Measure HYD-1. See attached project MEIR Mitigation Measure Monitoring Checklist.

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

Less than Significant Impact: As previously discussed above, wastewater generated by the project would be collected and treated at the City's domestic wastewater treatment train (WWTT). All residential units for the proposed project will require a wastewater system that will be discharged into the City of Fresno's existing wastewater treatment system. The wastewater would be typical to urban and residential development consisting of kitchens, bathrooms, and other related features. Although the proposed project will increase in wastewater generation due to the addition of 318 single-family residential units, the wastewater produced would not exceed the City's WWTF treatment capacity of 60 mgd in the year 2020. There will be a *less than significant impact*.

- d) **Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

Less than Significant Impact: The City of Fresno will be the waste management provider for the proposed project. Solid waste is primarily sent to the American Avenue Landfill, located in Tranquility. The landfill is allowed to receive 2,200 tons per day, with the permitted capacity of 29.3 million cubic yards. And while the original closure date for the American Avenue Landfill was 2031, due to increased recycling efforts, the closure date has been extended to 2050.

Although solid waste is anticipated as a result of project implementation, the designated landfill has sufficient projected permitted capacity to accommodate the project's solid waste disposal needs. There would be a *less than significant impact*.

- e) **Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

Less than Significant Impact: This proposed project would conform to all applicable statutes and regulations related to solid waste disposal. The project would also comply with the adopted policies related to solid waste, and all applicable federal, state, and local statutes and regulations pertaining to disposal of solid waste, including recycling. Therefore, the proposed project would have a *less than significant impact*.

In Conclusion, with the mitigation incorporated, the Project will not result in any utility or service system impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XIX. 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 Incorporation	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

While the City of Fresno is close to high and very high fire hazard designated areas, the urbanized areas of the City are largely categorized as little to no threat or moderate fire hazard. Northern portions of the City of Fresno are classified as a high fire hazard area due to the steep terrain and vegetation along the San Joaquin River Bluff. While the City does have an adopted Emergency Operations Plan (EOP), the EOP does not designate evacuation routes. The City of Fresno does not expect to face any expected natural hazards from nearby sources or locations.

The proposed project is in an area of predominantly residential and urban uses, with the exception of vacant lots with previous agricultural uses. The project site consists of vacant parcels located north of West Ashlan Street and south of West Gettysburg Avenue, between North Hayes Street and North Bryan Street. There are multiple private residences along the east side of the project site, as well as housing developments constructed along the northwest corner.

Regulatory Setting

Fire Hazard Severity Zones: Geographical areas designated pursuant to California Public Resources Codes Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code, Sections 51175 through 51189.

Discussion

- a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?**

No Impact: The proposed project would not substantially impair the Fresno-Kings Unit Strategic Fire Plan or interfere with the City of Fresno's Emergency Preparedness Office's efforts. The project will also be reviewed by the City of Fresno Fire Chief to ensure it does not impair emergency response or emergency evacuation. Therefore, there would be *no impact*.

- b) Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

No Impact: The project is located on a flat area of land with little risk of fire. The project would not exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. There is *no impact*.

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

Less than Significant Impact: The proposed project would require the installation and maintenance of roads, fuel breaks, emergency water sources, power lines or other utilities required for housing developments. To receive building permits, the proposed project will be required to be in compliance with the adopted emergency response plan. As such, the fire risk to the project's structures and people living within the housing development to have a *less than significant impact*.

- d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes?**

Less than Significant Impact: The land surrounding the proposed project site is flat in nature, which would limit the risk of downslope flooding and landslides and decrease the chance of wildfire spread. Additionally, the proposed project site is not in a wildfire threat area as identified by the 2018 Fresno Multi-Jurisdictional Local Hazard Mitigation Plan. The surrounding properties predominately consist of residential dwellings and the area is routinely maintained for weed control. Installation

and maintenance of the project would result in a reduction of brush at the project site and would therefore reduce the threat of wildfire in the area. For these reasons, the proposed project would have a *less than significant impact*.

In Conclusion, the Project will not result in any wildfire impacts beyond those analyzed in MEIR SCH No. 202111015 prepared for the Fresno General Plan.

XX. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Does the project have the potential substantially to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

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

Less than Significant Impact with Mitigation: This initial study/mitigated negative declaration found the project could have significant impacts on biological, historical, and Tribal cultural

resources. However, implementation of the identified mitigation measures for each respective section would ensure that impacts are *less than significant with mitigation incorporation*.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

Less than Significant Impact: CEQA Guidelines Section 15064(h) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. The proposed project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc). Impacts would be *less than significant*.

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

Less than Significant Impact: The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the project design to reduce all potentially significant impacts to less than significant, which results in a *less than significant impact*.

3.6 MITIGATION MONITORING AND REPORTING PROGRAM

As required by Public Resources Code Section 21081.6, subd. (a)(1), a Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the project in order to monitor the implementation of the mitigation measures that have been adopted for the project. This Mitigation Monitoring and Reporting Program (MMRP) has been created based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Westerra Vesting Tentative Tract Map #6258 housing project in the City of Fresno. These project specific mitigation measures are in addition to the applicable mitigation measures from the City of Fresno MEIR.

The first column of the table identifies the mitigation measure. The second column names the party responsible for carrying out the required action. The third column, "Timing of Mitigation Measure" identifies the time the mitigation measure should be initiated. The fourth column, "Responsible Party for Monitoring," names the party ensuring that the mitigation measure is implemented. The last column will be used by the Irrigation District to ensure that the individual mitigation measures have been monitored.

Plan checking and verification of mitigation compliance shall be the responsibility of the City of Fresno.

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure BIO-1: Prior to the commencement of ground disturbance activities, a qualified biologist will evaluate the surrounding trees and the electrical towers for large stick nests belonging to SWHA, or other raptors. Active SWHA nests should be avoided by at least 150 feet during construction. All active nests should be monitored during Project activities for signs of activity and/or distress. If signs of distress are observed, Project activities should be adjusted to prevent further disturbance to the raptors.	Project Sponsor	Prior to the start of construction and ongoing during construction	City of Fresno	
Mitigation Measure BIO-2: A qualified biologist will survey the small mammal burrows within the Project footprint prior to the commencement of ground disturbance. If the biologist observes signs indicating the presence, or recent past presence for SJKF, monitoring efforts should be initiated and the feature location avoided by a buffer of 50 feet (or more) until it has been confirmed that no SJKF are present within the Project footprint.	Project Sponsor	Prior to the start of construction	City of Fresno	
Mitigation Measure BIO-3: Prior to the	Project Sponsor	Prior to the start	City of	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
commencement of ground disturbance activities, a qualified biologist will evaluate the small mammal burrows on the Project site by monitoring with cameras to confirm the presence or absence of American badger. If the biologist observes signs indicating the presence, or recent past presence for American badger, monitoring efforts should be initiated and the feature location avoided by a buffer of 50 feet (or more) until it has been confirmed that no American badger are present within the Project footprint.		of construction	Fresno	
<p>Mitigation Measure BIO-4: Project construction should be conducted outside of the nesting season (March 1 to September 15). If Project construction occurs during nesting season, a qualified biologist will conduct a preconstruction survey of the Project site and the surrounding habitat for nesting birds to avoid any adverse impacts leading to nest failure or abandonment. The preconstruction survey will be conducted no more than 30 days before the commencement of Project construction.</p> <p>Areas of particular importance are the eucalyptus and pine trees located on the eastern boundary aligning the private residential houses, and all of the Trees of Heaven within the Project site, as these provide ample nesting habitat for raptors and other Migratory Bird Treaty Act protected species. Active raptor nests should be avoided by at least 150 feet, and non-raptor nests should be avoided by at least 50 feet. All nests should be monitored during Project activities for signs of distress. If signs of distress are observed, Project activities should be adjusted to prevent further disturbance to the birds.</p>	Project Sponsor	Within 30 days prior to the start of construction and ongoing during construction	City of Fresno	
<p>Mitigation Measure CUL-1: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.</p>	Project Sponsor	Ongoing during construction	City of Fresno	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure CUL-2: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	Project Sponsor	Ongoing during construction	City of Fresno	
Mitigation Measure HYD-1: Prior to the issuance of any construction/grading permit and/or the commencement of any clearing, grading, or excavation, the Applicant shall submit a Notice of Intent (NOI) for discharge from the Project site to the California SWRCB Storm Water Permit Unit. <ul style="list-style-type: none"> • Prior to issuance of grading permits for Phase I the Applicant shall submit a copy of the NOI to the City. • The City shall review noticing documentation prior to approval of the grading permit. City monitoring staff will inspect the site during construction for compliance. 	Project Sponsor	Prior to the start of construction	City of Fresno	
Mitigation Measure HYD-2: The Applicant shall require the building contractor to prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to the City 45 days prior to the start of work for approval. The contractor is responsible for understanding the State General Permit and instituting the SWPPP during construction. A SWPPP for site construction shall be developed prior to the initiation of grading and implemented for all construction activity on the Project site in excess of one (1) acre, or where the area of disturbance is less than one acre but is part of the Project's plan of development that in total disturbs one or more	Project Sponsor	Prior to the start of construction and ongoing during construction	City of Fresno	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
<p>acres. The SWPPP shall identify potential pollutant sources that may affect the quality of discharges to storm water and shall include specific BMPs to control the discharge of material from the site. The following BMP methods shall include, but would not be limited to:</p> <ul style="list-style-type: none"> • Dust control measures will be implemented to ensure success of all onsite activities to control fugitive dust; • A routine monitoring plan will be implemented to ensure success of all onsite erosion and sedimentation control measures; • Provisional detention basins, straw bales, erosion control blankets, mulching, silt fencing, sand bagging, and soil stabilizers will be used; • Soil stockpiles and graded slopes will be covered after two weeks of inactivity and 24 hours prior to and during extreme weather conditions; and, • BMPs will be strictly followed to prevent spills and discharges of pollutants onsite, such as material storage, trash disposal, construction entrances, etc. 				
<p>Mitigation Measure GEO-1: The project applicant shall retain a registered geotechnical engineer to prepare a design level geotechnical analysis prior to the issuance of any grading and/or building permit. The design-level analysis shall address site preparation measures and foundation design requirements of the project. The design-level analysis shall be prepared to the satisfaction of the City of Fresno. Final design-level project plans shall be designed in accordance with the approved geotechnical analysis. This shall include certification of engineered fills and subgrade preparation through monitoring of earthwork and compaction testing by a geotechnical engineer during construction.</p>	Project Applicant	Prior to receiving grading or building permit	City of Fresno	

3.7 Supporting Information and Sources

1. AB 3098 List
2. City of Fresno General Plan
3. City of Fresno General Plan MEIR
4. Fresno Greenhouse Gas Reduction Plan
5. City of Fresno Zoning Ordinance
6. Engineering Standards, City of Fresno
7. SJVAPCD Regulations and Guidelines
8. Flood Insurance Rate Maps
9. California Air Resources Board's (CARB's) Air Quality and Land Use Handbook
10. 2019 California Environmental Quality Act CEQA Guidelines
11. California Building Code
12. California Stormwater Pollution Prevention Program (SWPPP)
13. "Construction Noise Handbook." U.S. Department of Transportation/Federal Highway Administration.
14. Government Code Section 65962.5
15. California Environmental Protection Agency (CEPA)
16. San Joaquin Valley Air Pollution Control District Mitigation Measures (<http://www.valleyair.org/transportation/Mitigation-Measures.pdf>)

Section 4

List of Preparers

City of Fresno

2600 Fresno Street
Fresno, CA 93721

SECTION 4

List of Preparers

Project Title: Westerra Tract 6258

List of Preparers

4-Creeks Inc.

- David Duda, AICP
- Molly McDonnell, Associate Planner
- Saba Asghary, Assistant Planner

Persons and Agencies Consulted

The following individuals and agencies contributed to this Initial Study:

Precision Engineering

- Urpi Arriola, PE- Civil Engineer

Wathen Castanos

- Eric Gibbons, Director of Forward Planning

City of Fresno

- Will Tackett, Supervising Planner

California Historic Resources Information System

- Celeste Thomson, Coordinator

Soar Environmental Consulting

- Patrick Sauls, AICP, Project Manager

Appendix A

CalEEMod Report

Westerra Tract 6258 - Phase I - Fresno County, Annual

Westerra Tract 6258 - Phase I

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	100.00	Dwelling Unit	11.48	180,000.00	286

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase I = 11.48 acres

Sequestration -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	32.47	11.48
tblWoodstoves	NumberCatalytic	11.48	0.00
tblWoodstoves	NumberNoncatalytic	11.48	0.00

2.0 Emissions Summary

Westerra Tract 6258 - Phase I - Fresno County, Annual

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	0.3565	3.3840	2.6442	4.8600e-003	0.2612	0.1740	0.4351	0.1146	0.1625	0.2771	0.0000	425.2239	425.2239	0.1030	0.0000	427.7985
2021	1.8069	1.0641	1.0362	1.8700e-003	0.0194	0.0550	0.0744	5.2500e-003	0.0516	0.0568	0.0000	163.7358	163.7358	0.0361	0.0000	164.6383
Maximum	1.8069	3.3840	2.6442	4.8600e-003	0.2612	0.1740	0.4351	0.1146	0.1625	0.2771	0.0000	425.2239	425.2239	0.1030	0.0000	427.7985

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	0.3565	3.3839	2.6442	4.8600e-003	0.2612	0.1740	0.4351	0.1146	0.1625	0.2771	0.0000	425.2235	425.2235	0.1030	0.0000	427.7981
2021	1.8069	1.0641	1.0362	1.8700e-003	0.0194	0.0550	0.0744	5.2500e-003	0.0516	0.0568	0.0000	163.7356	163.7356	0.0361	0.0000	164.6381
Maximum	1.8069	3.3839	2.6442	4.8600e-003	0.2612	0.1740	0.4351	0.1146	0.1625	0.2771	0.0000	425.2235	425.2235	0.1030	0.0000	427.7981

[illegible]

Westerra Tract 6258 - Phase I - Fresno County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	1.4788	1.4788
2	4-1-2020	6-30-2020	0.7462	0.7462
3	7-1-2020	9-30-2020	0.7544	0.7544
4	10-1-2020	12-31-2020	0.7551	0.7551
5	1-1-2021	3-31-2021	0.6702	0.6702
6	4-1-2021	6-30-2021	1.4146	1.4146
7	7-1-2021	9-30-2021	0.7927	0.7927
		Highest	1.4788	1.4788

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	0.8990	0.0460	0.7609	2.8000e-004		7.1200e-003	7.1200e-003		7.1200e-003	7.1200e-003	0.0000	44.5336	44.5336	2.0100e-003	7.9000e-004	44.8206
Energy	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Mobile	0.3967	4.7251	3.9269	0.0188	1.0610	0.0221	1.0832	0.2861	0.0210	0.3071	0.0000	1,744.095 1	1,744.095 1	0.1724	0.0000	1,748.406 2
Waste						0.0000	0.0000		0.0000	0.0000	20.9000	0.0000	20.9000	1.2352	0.0000	51.7787
Water						0.0000	0.0000		0.0000	0.0000	2.0670	0.0000	2.0670	0.2123	5.0100e-003	8.8685
Total	1.3098	4.8916	4.7391	0.0198	1.0610	0.0390	1.1000	0.2861	0.0378	0.3239	22.9670	1,928.149 7	1,951.116 7	1.6246	8.3600e-003	1,994.224 1

Westerra Tract 6258 - Phase I - Fresno County, Annual

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	0.8990	0.0460	0.7609	2.8000e-004		7.1200e-003	7.1200e-003		7.1200e-003	7.1200e-003	0.0000	44.5336	44.5336	2.0100e-003	7.9000e-004	44.8206
Energy	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Mobile	0.3967	4.7251	3.9269	0.0188	1.0610	0.0221	1.0832	0.2861	0.0210	0.3071	0.0000	1,744.095 1	1,744.095 1	0.1724	0.0000	1,748.406 2
Waste						0.0000	0.0000		0.0000	0.0000	20.9000	0.0000	20.9000	1.2352	0.0000	51.7787
Water						0.0000	0.0000		0.0000	0.0000	2.0670	0.0000	2.0670	0.2123	5.0100e-003	8.8685
Total	1.3098	4.8916	4.7391	0.0198	1.0610	0.0390	1.1000	0.2861	0.0378	0.3239	22.9670	1,928.149 7	1,951.116 7	1.6246	8.3600e-003	1,994.224 1

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Westerra Tract 6258 - Phase I - Fresno County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	2/11/2020	5	10	
3	Grading	Grading	2/12/2020	3/24/2020	5	30	
4	Building Construction	Building Construction	3/25/2020	5/18/2021	5	300	
5	Paving	Paving	5/19/2021	6/15/2021	5	20	
6	Architectural Coating	Architectural Coating	6/16/2021	7/13/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 364,500; Residential Outdoor: 121,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

Westerra Tract 6258 - Phase I - Fresno County, Annual

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

Trips and VMT

Westerra Tract 6258 - Phase I - Fresno County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	36.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386

Westerra Tract 6258 - Phase I - Fresno County, Annual

3.2 Demolition - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	6.5000e-004	4.1000e-004	4.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0379	1.0379	3.0000e-005	0.0000	1.0386
Total	6.5000e-004	4.1000e-004	4.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0379	1.0379	3.0000e-005	0.0000	1.0386

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385

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3.2 Demolition - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	6.5000e-004	4.1000e-004	4.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0379	1.0379	3.0000e-005	0.0000	1.0386
Total	6.5000e-004	4.1000e-004	4.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0379	1.0379	3.0000e-005	0.0000	1.0386

3.3 Site Preparation - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

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3.3 Site Preparation - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	3.9000e-004	2.5000e-004	2.5000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6227	0.6227	2.0000e-005	0.0000	0.6232
Total	3.9000e-004	2.5000e-004	2.5000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6227	0.6227	2.0000e-005	0.0000	0.6232

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

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3.3 Site Preparation - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	3.9000e-004	2.5000e-004	2.5000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6227	0.6227	2.0000e-005	0.0000	0.6232
Total	3.9000e-004	2.5000e-004	2.5000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6227	0.6227	2.0000e-005	0.0000	0.6232

3.4 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	0.0668	0.7530	0.4794	9.3000e-004	0.1301	0.0326	0.1627	0.0540	0.0300	0.0840	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872

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3.4 Grading - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.3000e-003	8.2000e-004	8.3400e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0758	2.0758	6.0000e-005	0.0000	2.0772
Total	1.3000e-003	8.2000e-004	8.3400e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0758	2.0758	6.0000e-005	0.0000	2.0772

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	0.0668	0.7530	0.4794	9.3000e-004	0.1301	0.0326	0.1627	0.0540	0.0300	0.0840	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871

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3.4 Grading - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.3000e-003	8.2000e-004	8.3400e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0758	2.0758	6.0000e-005	0.0000	2.0772
Total	1.3000e-003	8.2000e-004	8.3400e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0758	2.0758	6.0000e-005	0.0000	2.0772

3.5 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	0.2141	1.9378	1.7017	2.7200e-003		0.1128	0.1128		0.1061	0.1061	0.0000	233.9261	233.9261	0.0571	0.0000	235.3528
Total	0.2141	1.9378	1.7017	2.7200e-003		0.1128	0.1128		0.1061	0.1061	0.0000	233.9261	233.9261	0.0571	0.0000	235.3528

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3.5 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1500e-003	0.1377	0.0220	3.2000e-004	7.3600e-003	7.3000e-004	8.0900e-003	2.1300e-003	7.0000e-004	2.8300e-003	0.0000	29.9621	29.9621	3.7000e-003	0.0000	30.0547
Worker	0.0157	9.9600e-003	0.1011	2.8000e-004	0.0291	1.9000e-004	0.0293	7.7300e-003	1.7000e-004	7.9000e-003	0.0000	25.1589	25.1589	6.7000e-004	0.0000	25.1757
Total	0.0199	0.1476	0.1230	6.0000e-004	0.0364	9.2000e-004	0.0374	9.8600e-003	8.7000e-004	0.0107	0.0000	55.1210	55.1210	4.3700e-003	0.0000	55.2304

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	0.2141	1.9378	1.7017	2.7200e-003		0.1128	0.1128		0.1061	0.1061	0.0000	233.9258	233.9258	0.0571	0.0000	235.3526
Total	0.2141	1.9378	1.7017	2.7200e-003		0.1128	0.1128		0.1061	0.1061	0.0000	233.9258	233.9258	0.0571	0.0000	235.3526

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3.5 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1500e-003	0.1377	0.0220	3.2000e-004	7.3600e-003	7.3000e-004	8.0900e-003	2.1300e-003	7.0000e-004	2.8300e-003	0.0000	29.9621	29.9621	3.7000e-003	0.0000	30.0547
Worker	0.0157	9.9600e-003	0.1011	2.8000e-004	0.0291	1.9000e-004	0.0293	7.7300e-003	1.7000e-004	7.9000e-003	0.0000	25.1589	25.1589	6.7000e-004	0.0000	25.1757
Total	0.0199	0.1476	0.1230	6.0000e-004	0.0364	9.2000e-004	0.0374	9.8600e-003	8.7000e-004	0.0107	0.0000	55.1210	55.1210	4.3700e-003	0.0000	55.2304

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0932	0.8542	0.8122	1.3200e-003		0.0470	0.0470		0.0442	0.0442	0.0000	113.5023	113.5023	0.0274	0.0000	114.1868
Total	0.0932	0.8542	0.8122	1.3200e-003		0.0470	0.0470		0.0442	0.0442	0.0000	113.5023	113.5023	0.0274	0.0000	114.1868

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3.5 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6300e-003	0.0607	9.2400e-003	1.5000e-004	3.5700e-003	1.6000e-004	3.7300e-003	1.0300e-003	1.6000e-004	1.1900e-003	0.0000	14.3992	14.3992	1.7400e-003	0.0000	14.4426
Worker	7.0400e-003	4.3000e-003	0.0445	1.3000e-004	0.0141	9.0000e-005	0.0142	3.7500e-003	8.0000e-005	3.8300e-003	0.0000	11.7875	11.7875	2.9000e-004	0.0000	11.7948
Total	8.6700e-003	0.0650	0.0537	2.8000e-004	0.0177	2.5000e-004	0.0179	4.7800e-003	2.4000e-004	5.0200e-003	0.0000	26.1867	26.1867	2.0300e-003	0.0000	26.2374

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	0.0932	0.8542	0.8122	1.3200e-003		0.0470	0.0470		0.0442	0.0442	0.0000	113.5021	113.5021	0.0274	0.0000	114.1867
Total	0.0932	0.8542	0.8122	1.3200e-003		0.0470	0.0470		0.0442	0.0442	0.0000	113.5021	113.5021	0.0274	0.0000	114.1867

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3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6300e-003	0.0607	9.2400e-003	1.5000e-004	3.5700e-003	1.6000e-004	3.7300e-003	1.0300e-003	1.6000e-004	1.1900e-003	0.0000	14.3992	14.3992	1.7400e-003	0.0000	14.4426
Worker	7.0400e-003	4.3000e-003	0.0445	1.3000e-004	0.0141	9.0000e-005	0.0142	3.7500e-003	8.0000e-005	3.8300e-003	0.0000	11.7875	11.7875	2.9000e-004	0.0000	11.7948
Total	8.6700e-003	0.0650	0.0537	2.8000e-004	0.0177	2.5000e-004	0.0179	4.7800e-003	2.4000e-004	5.0200e-003	0.0000	26.1867	26.1867	2.0300e-003	0.0000	26.2374

3.6 Paving - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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3.6 Paving - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030
Total	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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3.6 Paving - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030
Total	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030

3.7 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	1.6917	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

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3.7 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681
Total	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681

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	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	1.6917	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

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3.7 Architectural Coating - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681
Total	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive 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	0.3967	4.7251	3.9269	0.0188	1.0610	0.0221	1.0832	0.2861	0.0210	0.3071	0.0000	1,744.095 ₁	1,744.095 ₁	0.1724	0.0000	1,748.406 ₂
Unmitigated	0.3967	4.7251	3.9269	0.0188	1.0610	0.0221	1.0832	0.2861	0.0210	0.3071	0.0000	1,744.095 ₁	1,744.095 ₁	0.1724	0.0000	1,748.406 ₂

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	952.00	991.00	862.00	2,767,701	2,767,701
Total	952.00	991.00	862.00	2,767,701	2,767,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.481390	0.032808	0.168621	0.127212	0.018382	0.004997	0.032622	0.122881	0.002369	0.001675	0.005261	0.001115	0.000667

5.0 Energy Detail

Historical Energy Use: N

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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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
NaturalGas Unmitigated	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.61452e+006	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Total		0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

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5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.61452e+006	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Total		0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	876074	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	876074	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8990	0.0460	0.7609	2.8000e-004		7.1200e-003	7.1200e-003		7.1200e-003	7.1200e-003	0.0000	44.5336	44.5336	2.0100e-003	7.9000e-004	44.8206
Unmitigated	0.8990	0.0460	0.7609	2.8000e-004		7.1200e-003	7.1200e-003		7.1200e-003	7.1200e-003	0.0000	44.5336	44.5336	2.0100e-003	7.9000e-004	44.8206

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.3800e-003	0.0374	0.0159	2.4000e-004		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003	0.0000	43.3207	43.3207	8.3000e-004	7.9000e-004	43.5782
Landscaping	0.0227	8.6200e-003	0.7450	4.0000e-005		4.1000e-003	4.1000e-003		4.1000e-003	4.1000e-003	0.0000	1.2129	1.2129	1.1800e-003	0.0000	1.2425
Total	0.8990	0.0460	0.7609	2.8000e-004		7.1200e-003	7.1200e-003		7.1200e-003	7.1200e-003	0.0000	44.5336	44.5336	2.0100e-003	7.9000e-004	44.8206

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.3800e-003	0.0374	0.0159	2.4000e-004		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003	0.0000	43.3207	43.3207	8.3000e-004	7.9000e-004	43.5782
Landscaping	0.0227	8.6200e-003	0.7450	4.0000e-005		4.1000e-003	4.1000e-003		4.1000e-003	4.1000e-003	0.0000	1.2129	1.2129	1.1800e-003	0.0000	1.2425
Total	0.8990	0.0460	0.7609	2.8000e-004		7.1200e-003	7.1200e-003		7.1200e-003	7.1200e-003	0.0000	44.5336	44.5336	2.0100e-003	7.9000e-004	44.8206

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.0670	0.2123	5.0100e-003	8.8685
Unmitigated	2.0670	0.2123	5.0100e-003	8.8685

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754	2.0670	0.2123	5.0100e-003	8.8685
Total		2.0670	0.2123	5.0100e-003	8.8685

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754	2.0670	0.2123	5.0100e-003	8.8685
Total		2.0670	0.2123	5.0100e-003	8.8685

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.9000	1.2352	0.0000	51.7787
Unmitigated	20.9000	1.2352	0.0000	51.7787

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96	20.9000	1.2352	0.0000	51.7787
Total		20.9000	1.2352	0.0000	51.7787

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96	20.9000	1.2352	0.0000	51.7787
Total		20.9000	1.2352	0.0000	51.7787

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	100.00	Dwelling Unit	15.46	180,000.00	286

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2023
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase I = 15.46 acres

Sequestration -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	32.47	15.46
tblWoodstoves	NumberCatalytic	15.46	11.48
tblWoodstoves	NumberNoncatalytic	15.46	11.48

2.0 Emissions Summary

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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	0.3565	3.3840	2.6442	4.8600e-003	0.2612	0.1740	0.4351	0.1146	0.1625	0.2771	0.0000	425.2239	425.2239	0.1030	0.0000	427.7985
2021	1.8069	1.0641	1.0362	1.8700e-003	0.0194	0.0550	0.0744	5.2500e-003	0.0516	0.0568	0.0000	163.7358	163.7358	0.0361	0.0000	164.6383
Maximum	1.8069	3.3840	2.6442	4.8600e-003	0.2612	0.1740	0.4351	0.1146	0.1625	0.2771	0.0000	425.2239	425.2239	0.1030	0.0000	427.7985

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	0.3565	3.3839	2.6442	4.8600e-003	0.2612	0.1740	0.4351	0.1146	0.1625	0.2771	0.0000	425.2235	425.2235	0.1030	0.0000	427.7981
2021	1.8069	1.0641	1.0362	1.8700e-003	0.0194	0.0550	0.0744	5.2500e-003	0.0516	0.0568	0.0000	163.7356	163.7356	0.0361	0.0000	164.6381
Maximum	1.8069	3.3839	2.6442	4.8600e-003	0.2612	0.1740	0.4351	0.1146	0.1625	0.2771	0.0000	425.2235	425.2235	0.1030	0.0000	427.7981

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	1.4788	1.4788
2	4-1-2020	6-30-2020	0.7462	0.7462
3	7-1-2020	9-30-2020	0.7544	0.7544
4	10-1-2020	12-31-2020	0.7551	0.7551
5	1-1-2021	3-31-2021	0.6702	0.6702
6	4-1-2021	6-30-2021	1.4146	1.4146
7	7-1-2021	9-30-2021	0.7927	0.7927
		Highest	1.4788	1.4788

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1327	0.0806	2.8833	7.2100e-003		0.3537	0.3537		0.3537	0.3537	46.4105	44.5336	90.9441	0.2190	7.9000e-004	96.6547
Energy	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Mobile	0.2858	3.2051	2.9501	0.0175	1.0610	9.3100e-003	1.0703	0.2860	8.7400e-003	0.2947	0.0000	1,629.4336	1,629.4336	0.1176	0.0000	1,632.3740
Waste						0.0000	0.0000		0.0000	0.0000	20.9000	0.0000	20.9000	1.2352	0.0000	51.7787
Water						0.0000	0.0000		0.0000	0.0000	2.0670	0.0000	2.0670	0.2123	5.0100e-003	8.8685
Total	1.4325	3.4062	5.8846	0.0255	1.0610	0.3728	1.4338	0.2860	0.3722	0.6582	69.3775	1,813.4881	1,882.8656	1.7867	8.3600e-003	1,930.0260

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1327	0.0806	2.8833	7.2100e-003		0.3537	0.3537		0.3537	0.3537	46.4105	44.5336	90.9441	0.2190	7.9000e-004	96.6547
Energy	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Mobile	0.2858	3.2051	2.9501	0.0175	1.0610	9.3100e-003	1.0703	0.2860	8.7400e-003	0.2947	0.0000	1,629.4336	1,629.4336	0.1176	0.0000	1,632.3740
Waste						0.0000	0.0000		0.0000	0.0000	20.9000	0.0000	20.9000	1.2352	0.0000	51.7787
Water						0.0000	0.0000		0.0000	0.0000	2.0670	0.0000	2.0670	0.2123	5.0100e-003	8.8685
Total	1.4325	3.4062	5.8846	0.0255	1.0610	0.3728	1.4338	0.2860	0.3722	0.6582	69.3775	1,813.4881	1,882.8656	1.7867	8.3600e-003	1,930.0260

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	1/28/2020	5	20	
2	Site Preparation	Site Preparation	1/29/2020	2/11/2020	5	10	
3	Grading	Grading	2/12/2020	3/24/2020	5	30	
4	Building Construction	Building Construction	3/25/2020	5/18/2021	5	300	
5	Paving	Paving	5/19/2021	6/15/2021	5	20	
6	Architectural Coating	Architectural Coating	6/16/2021	7/13/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 364,500; Residential Outdoor: 121,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	36.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Demolition - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386

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3.2 Demolition - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	6.5000e-004	4.1000e-004	4.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0379	1.0379	3.0000e-005	0.0000	1.0386
Total	6.5000e-004	4.1000e-004	4.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0379	1.0379	3.0000e-005	0.0000	1.0386

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385

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3.2 Demolition - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	6.5000e-004	4.1000e-004	4.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0379	1.0379	3.0000e-005	0.0000	1.0386
Total	6.5000e-004	4.1000e-004	4.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0379	1.0379	3.0000e-005	0.0000	1.0386

3.3 Site Preparation - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

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3.3 Site Preparation - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	3.9000e-004	2.5000e-004	2.5000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6227	0.6227	2.0000e-005	0.0000	0.6232
Total	3.9000e-004	2.5000e-004	2.5000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6227	0.6227	2.0000e-005	0.0000	0.6232

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

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3.3 Site Preparation - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	3.9000e-004	2.5000e-004	2.5000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6227	0.6227	2.0000e-005	0.0000	0.6232
Total	3.9000e-004	2.5000e-004	2.5000e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6227	0.6227	2.0000e-005	0.0000	0.6232

3.4 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	0.0668	0.7530	0.4794	9.3000e-004	0.1301	0.0326	0.1627	0.0540	0.0300	0.0840	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872

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3.4 Grading - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.3000e-003	8.2000e-004	8.3400e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0758	2.0758	6.0000e-005	0.0000	2.0772
Total	1.3000e-003	8.2000e-004	8.3400e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0758	2.0758	6.0000e-005	0.0000	2.0772

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	0.0668	0.7530	0.4794	9.3000e-004	0.1301	0.0326	0.1627	0.0540	0.0300	0.0840	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871

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3.4 Grading - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.3000e-003	8.2000e-004	8.3400e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0758	2.0758	6.0000e-005	0.0000	2.0772
Total	1.3000e-003	8.2000e-004	8.3400e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0758	2.0758	6.0000e-005	0.0000	2.0772

3.5 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	0.2141	1.9378	1.7017	2.7200e-003		0.1128	0.1128		0.1061	0.1061	0.0000	233.9261	233.9261	0.0571	0.0000	235.3528
Total	0.2141	1.9378	1.7017	2.7200e-003		0.1128	0.1128		0.1061	0.1061	0.0000	233.9261	233.9261	0.0571	0.0000	235.3528

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3.5 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1500e-003	0.1377	0.0220	3.2000e-004	7.3600e-003	7.3000e-004	8.0900e-003	2.1300e-003	7.0000e-004	2.8300e-003	0.0000	29.9621	29.9621	3.7000e-003	0.0000	30.0547
Worker	0.0157	9.9600e-003	0.1011	2.8000e-004	0.0291	1.9000e-004	0.0293	7.7300e-003	1.7000e-004	7.9000e-003	0.0000	25.1589	25.1589	6.7000e-004	0.0000	25.1757
Total	0.0199	0.1476	0.1230	6.0000e-004	0.0364	9.2000e-004	0.0374	9.8600e-003	8.7000e-004	0.0107	0.0000	55.1210	55.1210	4.3700e-003	0.0000	55.2304

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	0.2141	1.9378	1.7017	2.7200e-003		0.1128	0.1128		0.1061	0.1061	0.0000	233.9258	233.9258	0.0571	0.0000	235.3526
Total	0.2141	1.9378	1.7017	2.7200e-003		0.1128	0.1128		0.1061	0.1061	0.0000	233.9258	233.9258	0.0571	0.0000	235.3526

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3.5 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1500e-003	0.1377	0.0220	3.2000e-004	7.3600e-003	7.3000e-004	8.0900e-003	2.1300e-003	7.0000e-004	2.8300e-003	0.0000	29.9621	29.9621	3.7000e-003	0.0000	30.0547
Worker	0.0157	9.9600e-003	0.1011	2.8000e-004	0.0291	1.9000e-004	0.0293	7.7300e-003	1.7000e-004	7.9000e-003	0.0000	25.1589	25.1589	6.7000e-004	0.0000	25.1757
Total	0.0199	0.1476	0.1230	6.0000e-004	0.0364	9.2000e-004	0.0374	9.8600e-003	8.7000e-004	0.0107	0.0000	55.1210	55.1210	4.3700e-003	0.0000	55.2304

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0932	0.8542	0.8122	1.3200e-003		0.0470	0.0470		0.0442	0.0442	0.0000	113.5023	113.5023	0.0274	0.0000	114.1868
Total	0.0932	0.8542	0.8122	1.3200e-003		0.0470	0.0470		0.0442	0.0442	0.0000	113.5023	113.5023	0.0274	0.0000	114.1868

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3.5 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6300e-003	0.0607	9.2400e-003	1.5000e-004	3.5700e-003	1.6000e-004	3.7300e-003	1.0300e-003	1.6000e-004	1.1900e-003	0.0000	14.3992	14.3992	1.7400e-003	0.0000	14.4426
Worker	7.0400e-003	4.3000e-003	0.0445	1.3000e-004	0.0141	9.0000e-005	0.0142	3.7500e-003	8.0000e-005	3.8300e-003	0.0000	11.7875	11.7875	2.9000e-004	0.0000	11.7948
Total	8.6700e-003	0.0650	0.0537	2.8000e-004	0.0177	2.5000e-004	0.0179	4.7800e-003	2.4000e-004	5.0200e-003	0.0000	26.1867	26.1867	2.0300e-003	0.0000	26.2374

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	0.0932	0.8542	0.8122	1.3200e-003		0.0470	0.0470		0.0442	0.0442	0.0000	113.5021	113.5021	0.0274	0.0000	114.1867
Total	0.0932	0.8542	0.8122	1.3200e-003		0.0470	0.0470		0.0442	0.0442	0.0000	113.5021	113.5021	0.0274	0.0000	114.1867

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3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6300e-003	0.0607	9.2400e-003	1.5000e-004	3.5700e-003	1.6000e-004	3.7300e-003	1.0300e-003	1.6000e-004	1.1900e-003	0.0000	14.3992	14.3992	1.7400e-003	0.0000	14.4426
Worker	7.0400e-003	4.3000e-003	0.0445	1.3000e-004	0.0141	9.0000e-005	0.0142	3.7500e-003	8.0000e-005	3.8300e-003	0.0000	11.7875	11.7875	2.9000e-004	0.0000	11.7948
Total	8.6700e-003	0.0650	0.0537	2.8000e-004	0.0177	2.5000e-004	0.0179	4.7800e-003	2.4000e-004	5.0200e-003	0.0000	26.1867	26.1867	2.0300e-003	0.0000	26.2374

3.6 Paving - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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3.6 Paving - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030
Total	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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3.6 Paving - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030
Total	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030

3.7 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	1.6917	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

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3.7 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681
Total	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681

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	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	1.6917	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

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3.7 Architectural Coating - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681
Total	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive 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	0.2858	3.2051	2.9501	0.0175	1.0610	9.3100e-003	1.0703	0.2860	8.7400e-003	0.2947	0.0000	1,629.4336	1,629.4336	0.1176	0.0000	1,632.3740
Unmitigated	0.2858	3.2051	2.9501	0.0175	1.0610	9.3100e-003	1.0703	0.2860	8.7400e-003	0.2947	0.0000	1,629.4336	1,629.4336	0.1176	0.0000	1,632.3740

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	952.00	991.00	862.00	2,767,701	2,767,701
Total	952.00	991.00	862.00	2,767,701	2,767,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.496766	0.030510	0.170483	0.111467	0.014688	0.004287	0.033704	0.127678	0.002360	0.001460	0.004966	0.001070	0.000562

5.0 Energy Detail

Historical Energy Use: N

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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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
NaturalGas Unmitigated	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.61452e+006	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Total		0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

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5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.61452e+006	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Total		0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	876074	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	876074	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1327	0.0806	2.8833	7.2100e-003		0.3537	0.3537		0.3537	0.3537	46.4105	44.5336	90.9441	0.2190	7.9000e-004	96.6547
Unmitigated	1.1327	0.0806	2.8833	7.2100e-003		0.3537	0.3537		0.3537	0.3537	46.4105	44.5336	90.9441	0.2190	7.9000e-004	96.6547

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2383	0.0721	2.1406	7.1700e-003		0.3496	0.3496		0.3496	0.3496	46.4105	43.3207	89.7312	0.2178	7.9000e-004	95.4126
Landscaping	0.0224	8.5600e-003	0.7427	4.0000e-005		4.1100e-003	4.1100e-003		4.1100e-003	4.1100e-003	0.0000	1.2129	1.2129	1.1700e-003	0.0000	1.2420
Total	1.1327	0.0806	2.8833	7.2100e-003		0.3537	0.3537		0.3537	0.3537	46.4105	44.5336	90.9441	0.2190	7.9000e-004	96.6547

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2383	0.0721	2.1406	7.1700e-003		0.3496	0.3496		0.3496	0.3496	46.4105	43.3207	89.7312	0.2178	7.9000e-004	95.4126
Landscaping	0.0224	8.5600e-003	0.7427	4.0000e-005		4.1100e-003	4.1100e-003		4.1100e-003	4.1100e-003	0.0000	1.2129	1.2129	1.1700e-003	0.0000	1.2420
Total	1.1327	0.0806	2.8833	7.2100e-003		0.3537	0.3537		0.3537	0.3537	46.4105	44.5336	90.9441	0.2190	7.9000e-004	96.6547

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.0670	0.2123	5.0100e-003	8.8685
Unmitigated	2.0670	0.2123	5.0100e-003	8.8685

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754	2.0670	0.2123	5.0100e-003	8.8685
Total		2.0670	0.2123	5.0100e-003	8.8685

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754	2.0670	0.2123	5.0100e-003	8.8685
Total		2.0670	0.2123	5.0100e-003	8.8685

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.9000	1.2352	0.0000	51.7787
Unmitigated	20.9000	1.2352	0.0000	51.7787

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96	20.9000	1.2352	0.0000	51.7787
Total		20.9000	1.2352	0.0000	51.7787

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96	20.9000	1.2352	0.0000	51.7787
Total		20.9000	1.2352	0.0000	51.7787

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	100.00	Dwelling Unit	13.96	180,000.00	286

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2021
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase III = 13.96 acres

Sequestration -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	32.47	13.96
tblWoodstoves	NumberCatalytic	13.96	15.46
tblWoodstoves	NumberNoncatalytic	13.96	15.46

2.0 Emissions Summary

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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					
2021	0.3249	3.0994	2.5742	4.8300e-003	0.2610	0.1524	0.4134	0.1146	0.1423	0.2569	0.0000	422.5745	422.5745	0.1018	0.0000	425.1201
2022	1.7959	0.9607	1.0286	1.8900e-003	0.0196	0.0468	0.0664	5.3000e-003	0.0439	0.0492	0.0000	164.5894	164.5894	0.0361	0.0000	165.4925
Maximum	1.7959	3.0994	2.5742	4.8300e-003	0.2610	0.1524	0.4134	0.1146	0.1423	0.2569	0.0000	422.5745	422.5745	0.1018	0.0000	425.1201

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					
2021	0.3249	3.0994	2.5742	4.8300e-003	0.2610	0.1524	0.4134	0.1146	0.1423	0.2569	0.0000	422.5740	422.5740	0.1018	0.0000	425.1197
2022	1.7959	0.9607	1.0286	1.8900e-003	0.0196	0.0468	0.0664	5.3000e-003	0.0439	0.0492	0.0000	164.5893	164.5893	0.0361	0.0000	165.4923
Maximum	1.7959	3.0994	2.5742	4.8300e-003	0.2610	0.1524	0.4134	0.1146	0.1423	0.2569	0.0000	422.5740	422.5740	0.1018	0.0000	425.1197

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	1.3752	1.3752
2	4-1-2021	6-30-2021	0.6771	0.6771
3	7-1-2021	9-30-2021	0.6846	0.6846
4	10-1-2021	12-31-2021	0.6850	0.6850
5	1-1-2022	3-31-2022	0.6027	0.6027
6	4-1-2022	6-30-2022	1.3041	1.3041
7	7-1-2022	9-30-2022	0.8530	0.8530
		Highest	1.3752	1.3752

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2139	0.0927	3.6213	9.6100e-003		0.4739	0.4739		0.4739	0.4739	62.5005	44.5336	107.0341	0.2942	7.9000e-004	114.6254
Energy	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Mobile	0.3612	4.4059	3.5696	0.0184	1.0610	0.0167	1.0777	0.2860	0.0158	0.3019	0.0000	1,712.9319	1,712.9319	0.1676	0.0000	1,717.1218
Waste						0.0000	0.0000		0.0000	0.0000	20.9000	0.0000	20.9000	1.2352	0.0000	51.7787
Water						0.0000	0.0000		0.0000	0.0000	2.0670	0.0000	2.0670	0.2123	5.0100e-003	8.8685
Total	1.5892	4.6190	7.2422	0.0288	1.0610	0.5003	1.5614	0.2860	0.4994	0.7855	85.4675	1,896.9865	1,982.4540	1.9119	8.3600e-003	2,032.7445

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2139	0.0927	3.6213	9.6100e-003		0.4739	0.4739		0.4739	0.4739	62.5005	44.5336	107.0341	0.2942	7.9000e-004	114.6254
Energy	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Mobile	0.3612	4.4059	3.5696	0.0184	1.0610	0.0167	1.0777	0.2860	0.0158	0.3019	0.0000	1,712.9319	1,712.9319	0.1676	0.0000	1,717.1218
Waste						0.0000	0.0000		0.0000	0.0000	20.9000	0.0000	20.9000	1.2352	0.0000	51.7787
Water						0.0000	0.0000		0.0000	0.0000	2.0670	0.0000	2.0670	0.2123	5.0100e-003	8.8685
Total	1.5892	4.6190	7.2422	0.0288	1.0610	0.5003	1.5614	0.2860	0.4994	0.7855	85.4675	1,896.9865	1,982.4540	1.9119	8.3600e-003	2,032.7445

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/28/2021	5	20	
2	Site Preparation	Site Preparation	1/29/2021	2/11/2021	5	10	
3	Grading	Grading	2/12/2021	3/25/2021	5	30	
4	Building Construction	Building Construction	3/26/2021	5/19/2022	5	300	
5	Paving	Paving	5/20/2022	6/16/2022	5	20	
6	Architectural Coating	Architectural Coating	6/17/2022	7/14/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 364,500; Residential Outdoor: 121,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	36.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400

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3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030
Total	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030

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	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400

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3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030
Total	6.0000e-004	3.7000e-004	3.7800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0023	1.0023	2.0000e-005	0.0000	1.0030

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0903	0.0102	0.1006	0.0497	9.4000e-003	0.0591	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530

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3.3 Site Preparation - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.2000e-004	2.2700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6014	0.6014	1.0000e-005	0.0000	0.6018
Total	3.6000e-004	2.2000e-004	2.2700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6014	0.6014	1.0000e-005	0.0000	0.6018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0903	0.0102	0.1006	0.0497	9.4000e-003	0.0591	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530

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3.3 Site Preparation - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.2000e-004	2.2700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6014	0.6014	1.0000e-005	0.0000	0.6018
Total	3.6000e-004	2.2000e-004	2.2700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6014	0.6014	1.0000e-005	0.0000	0.6018

3.4 Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7425	81.7425	0.0264	0.0000	82.4034
Total	0.0629	0.6960	0.4632	9.3000e-004	0.1301	0.0298	0.1599	0.0540	0.0274	0.0814	0.0000	81.7425	81.7425	0.0264	0.0000	82.4034

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3.4 Grading - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-003	7.3000e-004	7.5700e-003	2.0000e-005	2.4000e-003	1.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0047	2.0047	5.0000e-005	0.0000	2.0059
Total	1.2000e-003	7.3000e-004	7.5700e-003	2.0000e-005	2.4000e-003	1.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0047	2.0047	5.0000e-005	0.0000	2.0059

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7424	81.7424	0.0264	0.0000	82.4033
Total	0.0629	0.6960	0.4632	9.3000e-004	0.1301	0.0298	0.1599	0.0540	0.0274	0.0814	0.0000	81.7424	81.7424	0.0264	0.0000	82.4033

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3.4 Grading - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-003	7.3000e-004	7.5700e-003	2.0000e-005	2.4000e-003	1.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0047	2.0047	5.0000e-005	0.0000	2.0059
Total	1.2000e-003	7.3000e-004	7.5700e-003	2.0000e-005	2.4000e-003	1.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0047	2.0047	5.0000e-005	0.0000	2.0059

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1910	1.7519	1.6658	2.7100e-003		0.0963	0.0963		0.0906	0.0906	0.0000	232.7955	232.7955	0.0562	0.0000	234.1996
Total	0.1910	1.7519	1.6658	2.7100e-003		0.0963	0.0963		0.0906	0.0906	0.0000	232.7955	232.7955	0.0562	0.0000	234.1996

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3.5 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3400e-003	0.1244	0.0190	3.1000e-004	7.3300e-003	3.3000e-004	7.6600e-003	2.1200e-003	3.2000e-004	2.4400e-003	0.0000	29.5330	29.5330	3.5600e-003	0.0000	29.6221
Worker	0.0144	8.8100e-003	0.0912	2.7000e-004	0.0289	1.8000e-004	0.0291	7.6900e-003	1.7000e-004	7.8500e-003	0.0000	24.1765	24.1765	6.0000e-004	0.0000	24.1914
Total	0.0178	0.1333	0.1102	5.8000e-004	0.0363	5.1000e-004	0.0368	9.8100e-003	4.9000e-004	0.0103	0.0000	53.7095	53.7095	4.1600e-003	0.0000	53.8135

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	0.1910	1.7519	1.6658	2.7100e-003		0.0963	0.0963		0.0906	0.0906	0.0000	232.7952	232.7952	0.0562	0.0000	234.1993
Total	0.1910	1.7519	1.6658	2.7100e-003		0.0963	0.0963		0.0906	0.0906	0.0000	232.7952	232.7952	0.0562	0.0000	234.1993

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3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3400e-003	0.1244	0.0190	3.1000e-004	7.3300e-003	3.3000e-004	7.6600e-003	2.1200e-003	3.2000e-004	2.4400e-003	0.0000	29.5330	29.5330	3.5600e-003	0.0000	29.6221
Worker	0.0144	8.8100e-003	0.0912	2.7000e-004	0.0289	1.8000e-004	0.0291	7.6900e-003	1.7000e-004	7.8500e-003	0.0000	24.1765	24.1765	6.0000e-004	0.0000	24.1914
Total	0.0178	0.1333	0.1102	5.8000e-004	0.0363	5.1000e-004	0.0368	9.8100e-003	4.9000e-004	0.0103	0.0000	53.7095	53.7095	4.1600e-003	0.0000	53.8135

3.5 Building Construction - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0845	0.7730	0.8100	1.3300e-003		0.0401	0.0401		0.0377	0.0377	0.0000	114.7040	114.7040	0.0275	0.0000	115.3910
Total	0.0845	0.7730	0.8100	1.3300e-003		0.0401	0.0401		0.0377	0.0377	0.0000	114.7040	114.7040	0.0275	0.0000	115.3910

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3.5 Building Construction - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5300e-003	0.0581	8.6500e-003	1.5000e-004	3.6100e-003	1.4000e-004	3.7500e-003	1.0400e-003	1.4000e-004	1.1800e-003	0.0000	14.4073	14.4073	1.7000e-003	0.0000	14.4498
Worker	6.6000e-003	3.8800e-003	0.0410	1.3000e-004	0.0143	9.0000e-005	0.0143	3.7900e-003	8.0000e-005	3.8700e-003	0.0000	11.4801	11.4801	2.6000e-004	0.0000	11.4866
Total	8.1300e-003	0.0620	0.0496	2.8000e-004	0.0179	2.3000e-004	0.0181	4.8300e-003	2.2000e-004	5.0500e-003	0.0000	25.8873	25.8873	1.9600e-003	0.0000	25.9365

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	0.0845	0.7730	0.8100	1.3300e-003		0.0401	0.0401		0.0377	0.0377	0.0000	114.7039	114.7039	0.0275	0.0000	115.3909
Total	0.0845	0.7730	0.8100	1.3300e-003		0.0401	0.0401		0.0377	0.0377	0.0000	114.7039	114.7039	0.0275	0.0000	115.3909

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3.5 Building Construction - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.5300e-003	0.0581	8.6500e-003	1.5000e-004	3.6100e-003	1.4000e-004	3.7500e-003	1.0400e-003	1.4000e-004	1.1800e-003	0.0000	14.4073	14.4073	1.7000e-003	0.0000	14.4498
Worker	6.6000e-003	3.8800e-003	0.0410	1.3000e-004	0.0143	9.0000e-005	0.0143	3.7900e-003	8.0000e-005	3.8700e-003	0.0000	11.4801	11.4801	2.6000e-004	0.0000	11.4866
Total	8.1300e-003	0.0620	0.0496	2.8000e-004	0.0179	2.3000e-004	0.0181	4.8300e-003	2.2000e-004	5.0500e-003	0.0000	25.8873	25.8873	1.9600e-003	0.0000	25.9365

3.6 Paving - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895

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3.6 Paving - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669
Total	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895

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3.6 Paving - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669
Total	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669

3.7 Architectural Coating - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	1.6915	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

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3.7 Architectural Coating - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.5000e-004	1.6100e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4510	0.4510	1.0000e-005	0.0000	0.4512
Total	2.6000e-004	1.5000e-004	1.6100e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4510	0.4510	1.0000e-005	0.0000	0.4512

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	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	1.6915	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

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3.7 Architectural Coating - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.5000e-004	1.6100e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4510	0.4510	1.0000e-005	0.0000	0.4512
Total	2.6000e-004	1.5000e-004	1.6100e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4510	0.4510	1.0000e-005	0.0000	0.4512

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive 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	0.3612	4.4059	3.5696	0.0184	1.0610	0.0167	1.0777	0.2860	0.0158	0.3019	0.0000	1,712.9319	1,712.9319	0.1676	0.0000	1,717.1218
Unmitigated	0.3612	4.4059	3.5696	0.0184	1.0610	0.0167	1.0777	0.2860	0.0158	0.3019	0.0000	1,712.9319	1,712.9319	0.1676	0.0000	1,717.1218

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	952.00	991.00	862.00	2,767,701	2,767,701
Total	952.00	991.00	862.00	2,767,701	2,767,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.487139	0.031901	0.169199	0.121386	0.017033	0.004732	0.033028	0.124746	0.002366	0.001590	0.005154	0.001097	0.000629

5.0 Energy Detail

Historical Energy Use: N

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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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
NaturalGas Unmitigated	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.61452e+006	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Total		0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

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5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.61452e+006	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Total		0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	876074	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	876074	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2139	0.0927	3.6213	9.6100e-003		0.4739	0.4739		0.4739	0.4739	62.5005	44.5336	107.0341	0.2942	7.9000e-004	114.6254
Unmitigated	1.2139	0.0927	3.6213	9.6100e-003		0.4739	0.4739		0.4739	0.4739	62.5005	44.5336	107.0341	0.2942	7.9000e-004	114.6254

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.3195	0.0841	2.8772	9.5700e-003		0.4698	0.4698		0.4698	0.4698	62.5005	43.3207	105.8212	0.2930	7.9000e-004	113.3831
Landscaping	0.0226	8.5900e-003	0.7441	4.0000e-005		4.1000e-003	4.1000e-003		4.1000e-003	4.1000e-003	0.0000	1.2129	1.2129	1.1800e-003	0.0000	1.2423
Total	1.2139	0.0927	3.6213	9.6100e-003		0.4739	0.4739		0.4739	0.4739	62.5005	44.5336	107.0341	0.2942	7.9000e-004	114.6254

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.3195	0.0841	2.8772	9.5700e-003		0.4698	0.4698		0.4698	0.4698	62.5005	43.3207	105.8212	0.2930	7.9000e-004	113.3831
Landscaping	0.0226	8.5900e-003	0.7441	4.0000e-005		4.1000e-003	4.1000e-003		4.1000e-003	4.1000e-003	0.0000	1.2129	1.2129	1.1800e-003	0.0000	1.2423
Total	1.2139	0.0927	3.6213	9.6100e-003		0.4739	0.4739		0.4739	0.4739	62.5005	44.5336	107.0341	0.2942	7.9000e-004	114.6254

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.0670	0.2123	5.0100e-003	8.8685
Unmitigated	2.0670	0.2123	5.0100e-003	8.8685

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754	2.0670	0.2123	5.0100e-003	8.8685
Total		2.0670	0.2123	5.0100e-003	8.8685

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754	2.0670	0.2123	5.0100e-003	8.8685
Total		2.0670	0.2123	5.0100e-003	8.8685

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.9000	1.2352	0.0000	51.7787
Unmitigated	20.9000	1.2352	0.0000	51.7787

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96	20.9000	1.2352	0.0000	51.7787
Total		20.9000	1.2352	0.0000	51.7787

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96	20.9000	1.2352	0.0000	51.7787
Total		20.9000	1.2352	0.0000	51.7787

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	100.00	Dwelling Unit	8.42	180,000.00	286

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2022
Utility Company					
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase IV = 8.42 acres

Sequestration -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	32.47	8.42
tblWoodstoves	NumberCatalytic	8.42	13.96
tblWoodstoves	NumberNoncatalytic	8.42	13.96

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2596	2.4031	2.2895	4.3200e-003	0.1969	0.1154	0.3122	0.0944	0.1080	0.2024	0.0000	377.5012	377.5012	0.0859	0.0000	379.6486
2023	1.7196	0.2691	0.3400	6.0000e-004	5.3700e-003	0.0128	0.0182	1.4400e-003	0.0120	0.0135	0.0000	52.1964	52.1964	0.0125	0.0000	52.5078
Maximum	1.7196	2.4031	2.2895	4.3200e-003	0.1969	0.1154	0.3122	0.0944	0.1080	0.2024	0.0000	377.5012	377.5012	0.0859	0.0000	379.6486

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2596	2.4031	2.2895	4.3200e-003	0.1969	0.1154	0.3122	0.0944	0.1080	0.2024	0.0000	377.5008	377.5008	0.0859	0.0000	379.6483
2023	1.7196	0.2691	0.3400	6.0000e-004	5.3700e-003	0.0128	0.0182	1.4400e-003	0.0120	0.0135	0.0000	52.1964	52.1964	0.0125	0.0000	52.5077
Maximum	1.7196	2.4031	2.2895	4.3200e-003	0.1969	0.1154	0.3122	0.0944	0.1080	0.2024	0.0000	377.5008	377.5008	0.0859	0.0000	379.6483

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	0.8293	0.8293
2	4-1-2022	6-30-2022	0.6090	0.6090
3	7-1-2022	9-30-2022	0.6157	0.6157
4	10-1-2022	12-31-2022	0.6161	0.6161
5	1-1-2023	3-31-2023	1.9828	1.9828
		Highest	1.9828	1.9828

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1833	0.0881	3.3429	8.7100e-003		0.4286	0.4286		0.4286	0.4286	56.4364	44.5336	100.9700	0.2658	7.9000e-004	107.8524
Energy	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Mobile	0.3342	4.1463	3.2660	0.0180	1.0610	0.0150	1.0760	0.2860	0.0142	0.3002	0.0000	1,680.154 1	1,680.154 1	0.1625	0.0000	1,684.216 5
Waste						0.0000	0.0000		0.0000	0.0000	20.9000	0.0000	20.9000	1.2352	0.0000	51.7787
Water						0.0000	0.0000		0.0000	0.0000	2.0670	0.0000	2.0670	0.2123	5.0100e-003	8.8685
Total	1.5316	4.3549	6.6602	0.0275	1.0610	0.4533	1.5144	0.2860	0.4525	0.7385	79.4034	1,864.208 7	1,943.612 1	1.8784	8.3600e-003	1,993.066 2

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1833	0.0881	3.3429	8.7100e-003		0.4286	0.4286		0.4286	0.4286	56.4364	44.5336	100.9700	0.2658	7.9000e-004	107.8524
Energy	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Mobile	0.3342	4.1463	3.2660	0.0180	1.0610	0.0150	1.0760	0.2860	0.0142	0.3002	0.0000	1,680.154 1	1,680.154 1	0.1625	0.0000	1,684.216 5
Waste						0.0000	0.0000		0.0000	0.0000	20.9000	0.0000	20.9000	1.2352	0.0000	51.7787
Water						0.0000	0.0000		0.0000	0.0000	2.0670	0.0000	2.0670	0.2123	5.0100e-003	8.8685
Total	1.5316	4.3549	6.6602	0.0275	1.0610	0.4533	1.5144	0.2860	0.4525	0.7385	79.4034	1,864.208 7	1,943.612 1	1.8784	8.3600e-003	1,993.066 2

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/11/2022	5	10	
3	Grading	Grading	2/12/2022	3/11/2022	5	20	
4	Building Construction	Building Construction	3/12/2022	1/27/2023	5	230	
5	Paving	Paving	1/28/2023	2/24/2023	5	20	
6	Architectural Coating	Architectural Coating	2/25/2023	3/24/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 364,500; Residential Outdoor: 121,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	36.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Demolition - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

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3.2 Demolition - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669
Total	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669

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	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

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3.2 Demolition - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669
Total	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669

3.3 Site Preparation - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0903	8.0600e-003	0.0984	0.0497	7.4200e-003	0.0571	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

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3.3 Site Preparation - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	2.0000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5798	0.5798	1.0000e-005	0.0000	0.5801
Total	3.3000e-004	2.0000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5798	0.5798	1.0000e-005	0.0000	0.5801

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0903	8.0600e-003	0.0984	0.0497	7.4200e-003	0.0571	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

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3.3 Site Preparation - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	2.0000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5798	0.5798	1.0000e-005	0.0000	0.5801
Total	3.3000e-004	2.0000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5798	0.5798	1.0000e-005	0.0000	0.5801

3.4 Grading - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
Total	0.0195	0.2086	0.1527	3.0000e-004	0.0655	9.4100e-003	0.0749	0.0337	8.6600e-003	0.0423	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654

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3.4 Grading - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669
Total	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654
Total	0.0195	0.2086	0.1527	3.0000e-004	0.0655	9.4100e-003	0.0749	0.0337	8.6600e-003	0.0423	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654

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3.4 Grading - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669
Total	5.6000e-004	3.3000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9663	0.9663	2.0000e-005	0.0000	0.9669

3.5 Building Construction - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3115	243.3115	0.0583	0.0000	244.7688
Total	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3115	243.3115	0.0583	0.0000	244.7688

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3.5 Building Construction - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2500e-003	0.1232	0.0183	3.2000e-004	7.6500e-003	3.0000e-004	7.9500e-003	2.2100e-003	2.9000e-004	2.5000e-003	0.0000	30.5608	30.5608	3.6100e-003	0.0000	30.6511
Worker	0.0140	8.2200e-003	0.0869	2.7000e-004	0.0302	1.8000e-004	0.0304	8.0300e-003	1.7000e-004	8.2000e-003	0.0000	24.3517	24.3517	5.6000e-004	0.0000	24.3656
Total	0.0173	0.1314	0.1052	5.9000e-004	0.0379	4.8000e-004	0.0384	0.0102	4.6000e-004	0.0107	0.0000	54.9125	54.9125	4.1700e-003	0.0000	55.0167

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	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3112	243.3112	0.0583	0.0000	244.7685
Total	0.1792	1.6396	1.7182	2.8300e-003		0.0850	0.0850		0.0799	0.0799	0.0000	243.3112	243.3112	0.0583	0.0000	244.7685

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3.5 Building Construction - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2500e-003	0.1232	0.0183	3.2000e-004	7.6500e-003	3.0000e-004	7.9500e-003	2.2100e-003	2.9000e-004	2.5000e-003	0.0000	30.5608	30.5608	3.6100e-003	0.0000	30.6511
Worker	0.0140	8.2200e-003	0.0869	2.7000e-004	0.0302	1.8000e-004	0.0304	8.0300e-003	1.7000e-004	8.2000e-003	0.0000	24.3517	24.3517	5.6000e-004	0.0000	24.3656
Total	0.0173	0.1314	0.1052	5.9000e-004	0.0379	4.8000e-004	0.0384	0.0102	4.6000e-004	0.0107	0.0000	54.9125	54.9125	4.1700e-003	0.0000	55.0167

3.5 Building Construction - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183
Total	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183

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3.5 Building Construction - 2023**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	2.1000e-004	9.1700e-003	1.4200e-003	3.0000e-005	7.3000e-004	1.0000e-005	7.4000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	2.8395	2.8395	2.3000e-004	0.0000	2.8453
Worker	1.2400e-003	7.0000e-004	7.5600e-003	2.0000e-005	2.8800e-003	2.0000e-005	2.9000e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.2322	2.2322	5.0000e-005	0.0000	2.2334
Total	1.4500e-003	9.8700e-003	8.9800e-003	5.0000e-005	3.6100e-003	3.0000e-005	3.6400e-003	9.7000e-004	3.0000e-005	1.0000e-003	0.0000	5.0717	5.0717	2.8000e-004	0.0000	5.0787

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	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183
Total	0.0157	0.1439	0.1624	2.7000e-004		7.0000e-003	7.0000e-003		6.5800e-003	6.5800e-003	0.0000	23.1805	23.1805	5.5100e-003	0.0000	23.3183

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3.5 Building Construction - 2023**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	2.1000e-004	9.1700e-003	1.4200e-003	3.0000e-005	7.3000e-004	1.0000e-005	7.4000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	2.8395	2.8395	2.3000e-004	0.0000	2.8453
Worker	1.2400e-003	7.0000e-004	7.5600e-003	2.0000e-005	2.8800e-003	2.0000e-005	2.9000e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.2322	2.2322	5.0000e-005	0.0000	2.2334
Total	1.4500e-003	9.8700e-003	8.9800e-003	5.0000e-005	3.6100e-003	3.0000e-005	3.6400e-003	9.7000e-004	3.0000e-005	1.0000e-003	0.0000	5.0717	5.0717	2.8000e-004	0.0000	5.0787

3.6 Paving - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888

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3.6 Paving - 2023**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	5.2000e-004	2.9000e-004	3.1500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9301	0.9301	2.0000e-005	0.0000	0.9306
Total	5.2000e-004	2.9000e-004	3.1500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9301	0.9301	2.0000e-005	0.0000	0.9306

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888

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3.6 Paving - 2023**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	5.2000e-004	2.9000e-004	3.1500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9301	0.9301	2.0000e-005	0.0000	0.9306
Total	5.2000e-004	2.9000e-004	3.1500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9301	0.9301	2.0000e-005	0.0000	0.9306

3.7 Architectural Coating - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	1.6914	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

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3.7 Architectural Coating - 2023**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.4000e-004	1.4700e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4341	0.4341	1.0000e-005	0.0000	0.4343
Total	2.4000e-004	1.4000e-004	1.4700e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4341	0.4341	1.0000e-005	0.0000	0.4343

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	1.6895					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	1.6914	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

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3.7 Architectural Coating - 2023**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.4000e-004	1.4700e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4341	0.4341	1.0000e-005	0.0000	0.4343
Total	2.4000e-004	1.4000e-004	1.4700e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4341	0.4341	1.0000e-005	0.0000	0.4343

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive 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	0.3342	4.1463	3.2660	0.0180	1.0610	0.0150	1.0760	0.2860	0.0142	0.3002	0.0000	1,680.154 1	1,680.154 1	0.1625	0.0000	1,684.216 5
Unmitigated	0.3342	4.1463	3.2660	0.0180	1.0610	0.0150	1.0760	0.2860	0.0142	0.3002	0.0000	1,680.154 1	1,680.154 1	0.1625	0.0000	1,684.216 5

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	952.00	991.00	862.00	2,767,701	2,767,701
Total	952.00	991.00	862.00	2,767,701	2,767,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.492212	0.031147	0.169820	0.116157	0.015815	0.004502	0.033398	0.126328	0.002363	0.001519	0.005062	0.001083	0.000594

5.0 Energy Detail

Historical Energy Use: N

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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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
NaturalGas Unmitigated	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.61452e+006	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Total		0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

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5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.61452e+006	0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501
Total		0.0141	0.1205	0.0513	7.7000e-004		9.7400e-003	9.7400e-003		9.7400e-003	9.7400e-003	0.0000	139.5210	139.5210	2.6700e-003	2.5600e-003	140.3501

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	876074	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	876074	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1833	0.0881	3.3429	8.7100e-003		0.4286	0.4286		0.4286	0.4286	56.4364	44.5336	100.9700	0.2658	7.9000e-004	107.8524
Unmitigated	1.1833	0.0881	3.3429	8.7100e-003		0.4286	0.4286		0.4286	0.4286	56.4364	44.5336	100.9700	0.2658	7.9000e-004	107.8524

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2889	0.0796	2.5996	8.6700e-003		0.4245	0.4245		0.4245	0.4245	56.4364	43.3207	99.7572	0.2647	7.9000e-004	106.6103
Landscaping	0.0225	8.5700e-003	0.7433	4.0000e-005		4.1100e-003	4.1100e-003		4.1100e-003	4.1100e-003	0.0000	1.2129	1.2129	1.1700e-003	0.0000	1.2421
Total	1.1833	0.0881	3.3429	8.7100e-003		0.4286	0.4286		0.4286	0.4286	56.4364	44.5336	100.9700	0.2658	7.9000e-004	107.8524

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2889	0.0796	2.5996	8.6700e-003		0.4245	0.4245		0.4245	0.4245	56.4364	43.3207	99.7572	0.2647	7.9000e-004	106.6103
Landscaping	0.0225	8.5700e-003	0.7433	4.0000e-005		4.1100e-003	4.1100e-003		4.1100e-003	4.1100e-003	0.0000	1.2129	1.2129	1.1700e-003	0.0000	1.2421
Total	1.1833	0.0881	3.3429	8.7100e-003		0.4286	0.4286		0.4286	0.4286	56.4364	44.5336	100.9700	0.2658	7.9000e-004	107.8524

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.0670	0.2123	5.0100e-003	8.8685
Unmitigated	2.0670	0.2123	5.0100e-003	8.8685

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754	2.0670	0.2123	5.0100e-003	8.8685
Total		2.0670	0.2123	5.0100e-003	8.8685

Westerra Tract 6258 - Phase IV - Fresno County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	6.5154 / 4.10754	2.0670	0.2123	5.0100e-003	8.8685
Total		2.0670	0.2123	5.0100e-003	8.8685

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.9000	1.2352	0.0000	51.7787
Unmitigated	20.9000	1.2352	0.0000	51.7787

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96	20.9000	1.2352	0.0000	51.7787
Total		20.9000	1.2352	0.0000	51.7787

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	102.96	20.9000	1.2352	0.0000	51.7787
Total		20.9000	1.2352	0.0000	51.7787

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Appendix B

Biological Evaluation

Habitat Assessment Report

Fresno Vesting Tract Map No. 6258

Fresno, California



Prepared for

4Creeks, Inc.

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Modesto, CA 95354

Prepared by



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Fresno, CA 93721

September 9, 2019

1. Executive Summary

Wathen Castanos Homes has tasked 4Creeks, Inc. (4Creeks) with conducting a California Environmental Quality Act (CEQA) Initial Study for Vesting Tentative Tract Map No. 6258 (Project) within the City of Fresno (City). The proposed Project is comprised of 320 lots on approximately 48.86 acres and is located in northwest Fresno. The Project is bounded to the north by West Gettysburg Avenue, to the east by North Hayes Avenue, to the south by West Ashlan Avenue, and to the west by North Bryan Avenue. The Project site is comprised of portions of Assessor Parcel Numbers 512-070-07, -39, -48, -50, -60, -61; 512-174-18; and 512-181-09. Soar Environmental Consulting, Inc. (Soar Environmental) prepared this Habitat Assessment Report for 4Creeks, in support of the CEQA requirements.

On August 30, 2019, Soar Environmental biologist Danielle Gutierrez performed a thorough Habitat Assessment of the Project site. The Project site is located on the United States Geological Survey Herndon 7.5-minute quadrangle at an elevation of approximately 290 feet above mean sea level.

The purpose of this Habitat Assessment of the Project site is to search for the potential presence of Fresno kangaroo rat (FKR), San Joaquin kit fox (SJKF), blunt-nosed leopard lizard (BNLL), giant garter snake (GGS), California red-legged frog (CARF), California tiger salamander (CTS), vernal pool fairy shrimp (VPFS), Swainson's hawk (SWHA), great blue heron, yellow-headed blackbird, double-crested cormorant, valley elderberry longhorn beetle (VELB), American badger, western pond turtle, and hairy Orcutt grass (HOG).

During the field survey, none of the listed species were observed, although, Soar Environmental observed potential habitat features for SJKF, SWHA, and American badger within the Project footprint. Other notable observations include potential habitat for raptors in the Eucalyptus trees on adjacent property along the Project southeastern and eastern boundaries. The biologist observed a Red-tailed Hawk in the Project vicinity, however, the biologist did not observe a nest associated with the hawk on the Project site. Potential nesting areas for raptors also include the electrical transmission towers crossing the northeast boundary.

Soar Environmental recommends that a biologist provide further assessment of the following features prior to the commencement of ground disturbance activities: burrows of 4 inches or greater for SJKF or American badger; the trees within and surrounding the Project site for nesting raptors and other Migratory Bird Treaty Act protected species; and the electrical towers crossing the northeast boundary. If construction activities are proposed during the nesting season (March 1 to September 15), Soar Environmental recommends the performance of preconstruction surveys for listed species, prior to commencement of ground disturbance. In addition, it is recommended that active raptor nests be avoided by a buffer of at least 150 feet and non-raptor nests be avoided by at least 50 feet; and, avoid all potential SJKF dens (with openings greater than 4-inches) be avoided by 50 feet until it can be determined that no SJKF are present.



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2. Introduction

Wathen Castanos Homes has tasked 4Creeks, Inc. (4Creeks) to conduct a California Environmental Quality Act (CEQA) Initial Study for Vesting Tentative Tract Map No. 6258 (Project) within the City of Fresno (City). Soar Environmental Consulting, Inc. (Soar Environmental) prepared this Habitat Assessment Report for 4Creeks, in support of the CEQA requirements. The proposed Project is comprised of 320 lots on approximately 48.86 acres and is located in northwest Fresno (**Figure 1**). The Project is bounded on the north by West Gettysburg Avenue, to the east by North Hayes Avenue, to the south by West Ashlan Avenue, and to the west by North Bryan Avenue (**Figure 2**). The Project site is comprised of portions of Assessor Parcel Numbers 512-070-07, -39, -48, -50, -60, -61; 512-174-18; and 512-181-09.

The project site was historically used for agricultural purposes, mainly consisting of vineyards and orchards, until the it was graded for development between March 2007 and June 2009. The land features to the north of the Project site are an open grassy field and residential development construction. The land features west of the Project site are comprised of existing private residences, residential construction, and open grassy field. The land features to the south side of the Project footprint is West Ashlan Avenue. The land features to the east of the Project footprint are comprised of vacant, grassy fields and private single-family residences.

On August 30, 2019, Soar Environmental biologist Danielle Gutierrez performed a habitat assessment of the Project site. The Project site presently consists entirely of ruderal habitat. The plant community on the Project site is comprised largely of non-native grasses and plants such as Jimsonweed (*Datura wrightii*), Doveweed (*Croton setigerus*), Rescue grass (*Bromus catharticus*), Tumbleweed (*Amaranthus albus*), Reedgrass (*Phragmites australis*), Horseweed (*Erigeron canadensis*), Slender Russian-thistle (*Kali collina*), Porcelain berry (*Ampelopsis heterophylla*), Prickly lettuce (*Lactuca serriola*), Great brome (*Bromus diandrus*), Yellow star-thistle (*Centaurea solstitialis*), Common puncturevine (*Tribulus terrestris*), Vinegar weed (*Trichostema lanceolatum*), and Bermuda grass (*Cynodon dactylon*). Scattered occurrences of non-native Tree of Heaven (*Ailanthus altissima*) were observed on the Project site. Common tree species observed near the Project site included Eucalyptus (*Eucalyptus* spp.), and Oak (*Quercus* spp.).

During the habitat assessment, the biologist noted construction activities occurring along the north and eastern borders.

Figure 1 – Project Location

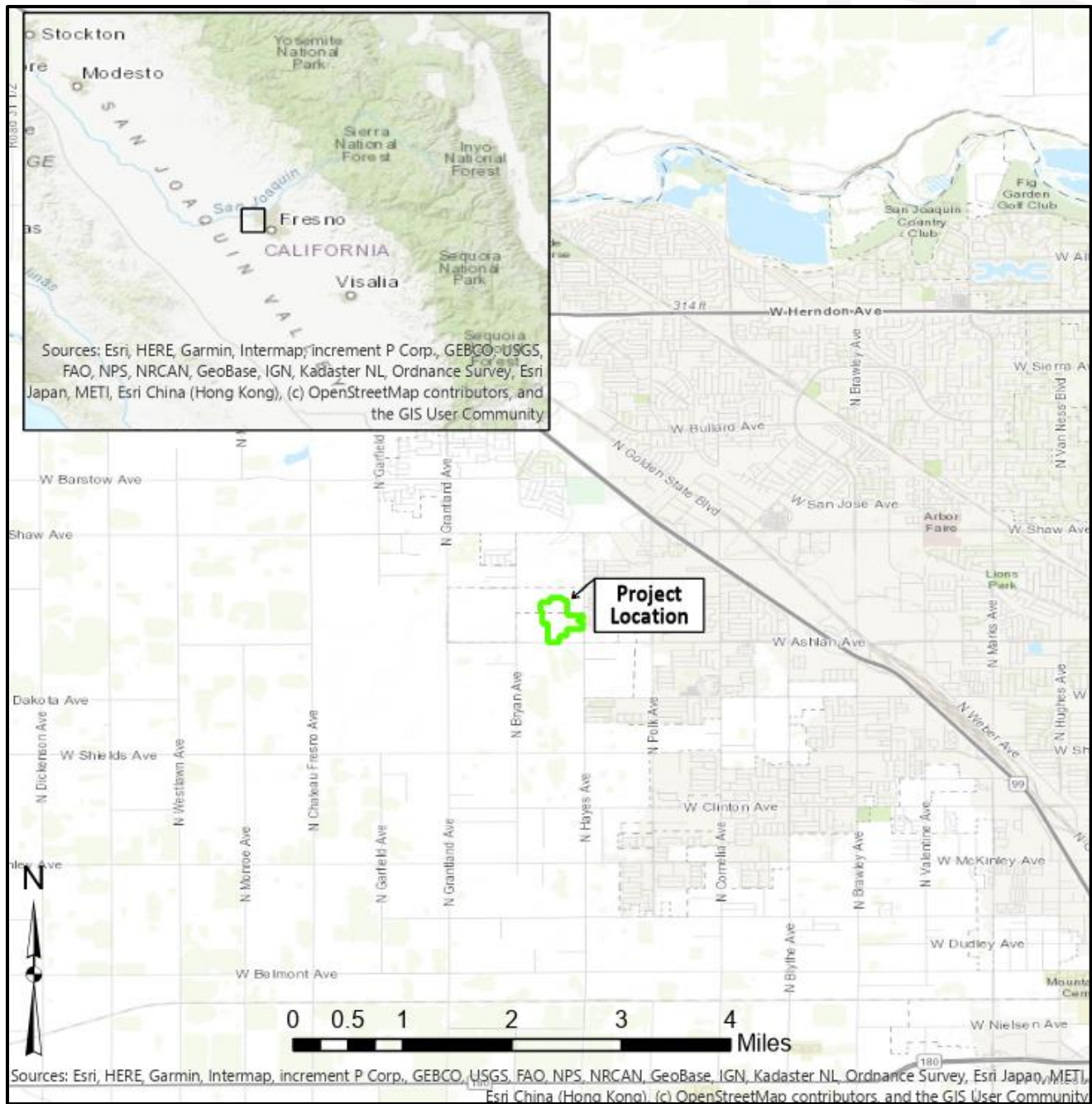


Figure 2 – Habitat Assessment Boundary

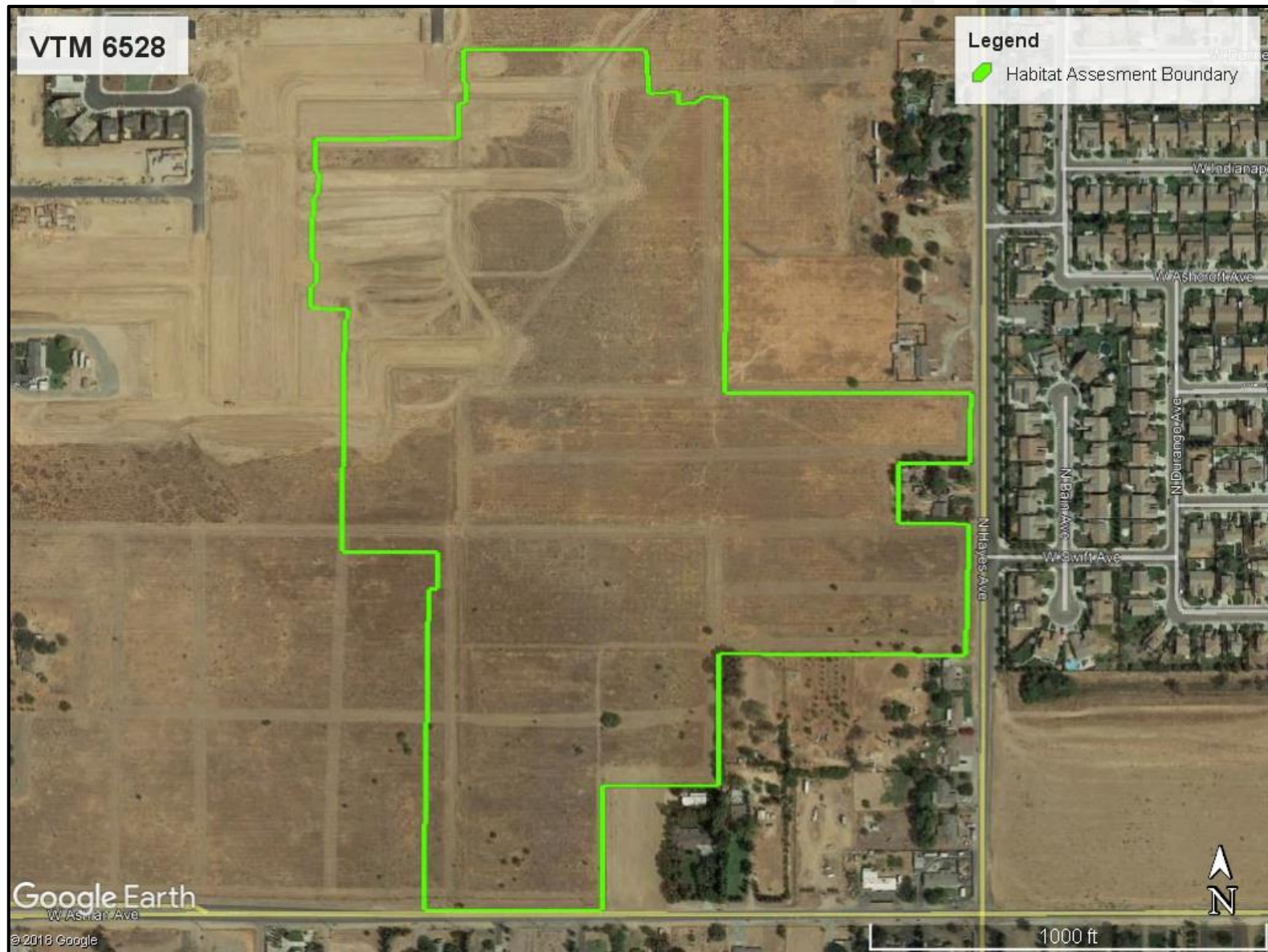
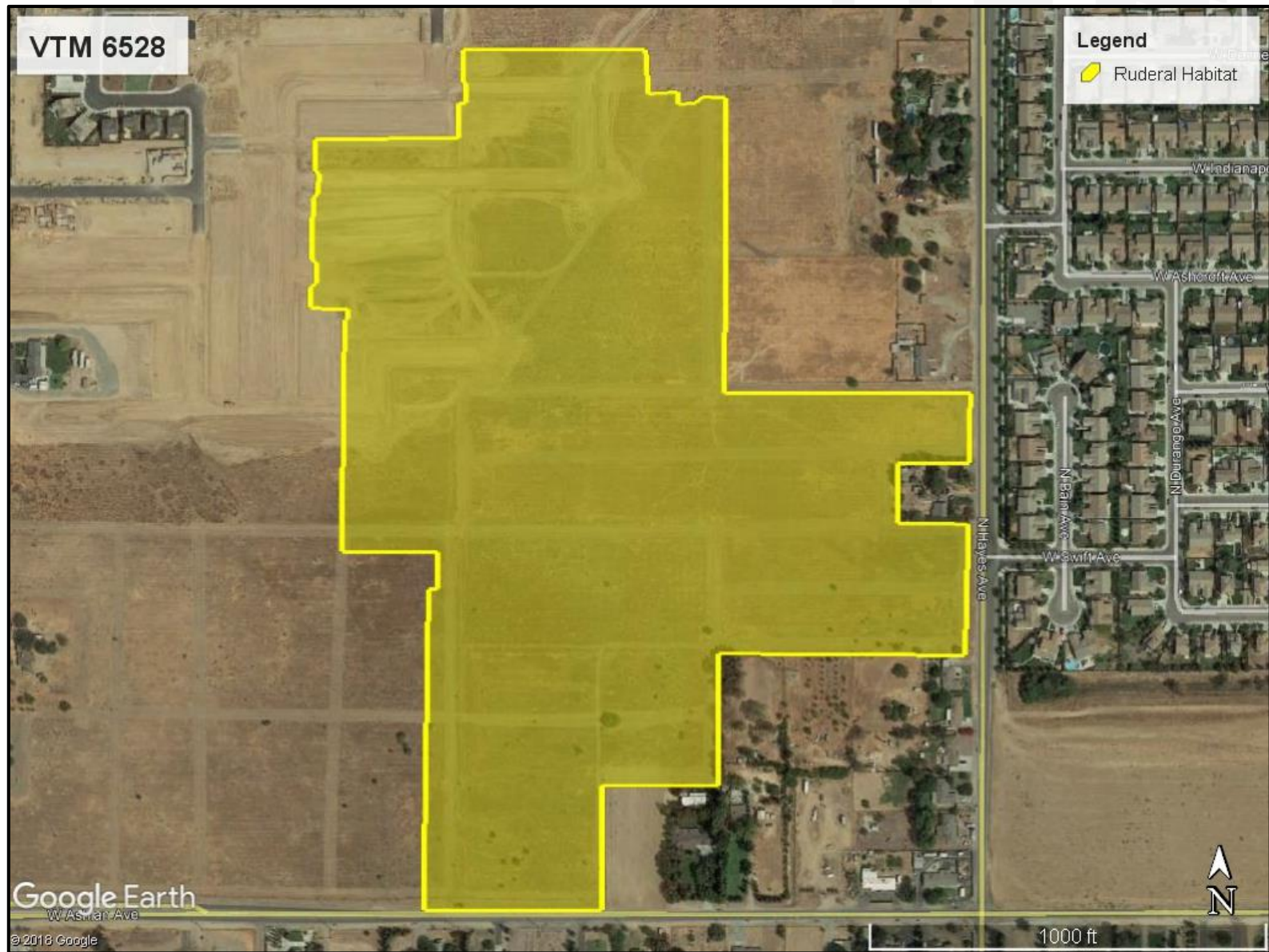


Figure 3 – Habitat Map



3. Methodology

3.1. Literature Review

Prior to performing the habitat assessment, Soar Environmental conducted a review of the California Natural Diversity Database (CNDDB) and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), as well as the City of Fresno General Plan. The CNDDB and IPaC search indicated that the State-and/or Federally-listed sensitive species most likely to occur within or near the Project site are:

Fresno kangaroo rat (FKR, *Dipodomys nitratooides exilis*), San Joaquin kit fox (SJKF, *Vulpes macrotis mutica*), blunt-nosed leopard lizard (BNLL, *Gambelia sila*), giant garter snake (GGS, *Thamnophis gigas*), California red-legged frog (CARF, *Rana draytonii*), California tiger salamander (CTS, *Ambystoma californiense*), vernal pool fairy shrimp (VPFS, *Branchinecta lynchi*), Swainson's hawk (SWHA, *Buteo swainsoni*), great blue heron (*Ardea herodias*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), double-crested cormorant (*Dipodomys nitratooides brevinasus*), valley elderberry longhorn beetle (VELB, *Desmocerus californicus dimorphus*), American badger (*Taxidea taxus*), western pond turtle (*Actinemys marmorata*), and hairy Orcutt grass (HOG, *Orcuttia pilosa*).

Soar Environmental performed additional research on each of these species to ascertain life history strategies and habitat requirements, and for survey protocol recommendations set forth by USFWS or the California Department of Fish and Wildlife (CDFW) for any of these sensitive species.

3.2. Habitat Survey

On August 30, 2019, Soar Environmental biologist Danielle Gutierrez arrived at the Project site. Ms. Gutierrez began the pedestrian survey by entering the Project site through the southwest corner along Ashlan Avenue. Ms. Gutierrez walked along the boundary heading east while noting the vegetation species and terrain description. The ground was graded and tilled with approximately 5% vegetative cover. Small clusters of Tree of Heaven were located on the south side of the Project site. After reaching the southeast corner of the Project site, Ms. Gutierrez headed north towards Gettysburg Avenue.

The eastern boundary borders a residential home with mature Eucalyptus and Pine trees along the fence line (**Figure 4**). The biologist observed a Red-tailed Hawk flying from the Eucalyptus trees along the northeast side of the Project site into the electrical towers crossing the Project site. Ms. Gutierrez scanned the bordering trees using 10x magnification binoculars searching for bird nests but did not observe any nests. Ms. Gutierrez proceeded north, scanning for signs of burrowing species.

Figure 4 – Eastern Boundary with Eucalyptus Trees



Approximately one-third of the way heading north on the Project site, vegetative coverage changed from approximately 5% to approximately 80% (**Figure 5**). Common weeds covered approximately 80% of the ground and the soil was tilled. The biologist observed two small burrows with a 3 to 4-inch opening, but due to the lack of matted vegetation and prey remains at the entrances, these burrows appeared to have been excavated by California ground squirrels and not SJKF.

Figure 5 – Change of Vegetation Cover Within Project Site



Ms. Gutierrez walked further north into the northeastern portion of the Project site, then headed west towards the northwestern corner. The biologist observed numerous burrows with openings ranging from 3 to 8 inches, and rabbit pellets near the entrances and along the wildlife trails (**Figure 6**).

Figure 6 – Eight Inch Diameter Burrow



An earthen berm was present along the western boundary with numerous California ground squirrel burrows (**Figure 7**). Ms. Gutierrez walked south towards the southwestern corner, where a large soil stockpile, most likely created from construction activities, presented potential habitat for SJKF burrows, though none were detected. Fewer small mammal burrows were present as the biologist approached the southwestern border as the vegetative cover was reduced and the soil was tilled.

Figure 7 – Earthen Berm with California ground squirrel burrows



4. Results

During the field survey, Soar Environmental observed no signs of FKR, SJKF, BNLL, GGS, CARF, CTS, VPFS, SWHA, great blue heron, yellow-headed blackbird, double-crested cormorant, VELB, American badger, western pond turtle, or HOG within the Project footprint.

Ms. Gutierrez noted potentially suitable habitat features for SJKF, SWHA, and American badger which may require further evaluation by a qualified biologist prior to the commencement of Project activities. Other notable habitat features requiring evaluation prior to ground breaking are the numerous large trees surrounding the Project footprint on the southeast portion, the electrical towers crossing the Project site, and the multiple Trees of Heaven within the Project site, all of which may provide suitable habitat for nesting raptors and other Migratory Bird Treaty Act (MBTA) protected species.

4.1. Fresno Kangaroo Rat

The FKR is one of three subspecies of the San Joaquin kangaroo rat and is limited in distribution to the flat floor of the San Joaquin Valley, from Merced County to the Kern County, California. This subspecies is listed as Endangered at the Federal and State level. They have a head and body length of approximately 10 centimeters (4 inches). The preferred FKR habitat is elevated grassy patches on alkali plains or in grassy terrain with scattered alkali patches (USFWS 2010). Rapid urbanization, and agricultural developments have extirpated this species from much of its historical range.

No potential FKR burrows were observed on the Project site or the surrounding areas, nor was any suitable habitat for the species observed. The CNDDDB revealed no record for FKR observations exist in the Herndon 7.5-minute quadrangle. The most recent record of the species in Fresno County is from August 2003, in the Jamesan 7.5-minute quadrangle, approximately 17 miles to the southeast.

4.2. San Joaquin Kit Fox

The SJKF is listed as Threatened at the Federal level and Endangered at the State level. SJKF are petite, light-colored canids, approximately 50 centimeters (20 inches) in length, with bushy, black-tipped tails, large ears, and pointed snouts. SJKF are fond of alkali meadows, playas, grassland communities, scrubland, and wetland communities in the San Joaquin Valley and adjoining foothills. SJKF have adapted to human habitation and can also be found in more developed areas such as golf courses, airports, and residential areas.

SJKF are denning mammals. A typical SJKF den is anywhere from four to 10 inches in diameter, and is taller than it is wide, often with a keyhole shape. SJKF dens usually have dirt berms and matted vegetation adjacent to the entrances, and tracks and prey remains will normally be detected nearby. SJKF may also utilize man-made structures such as pipes and culverts as dens.

During the field survey, the biologist observed no signs of SJKF in the Project footprint or surrounding areas. However, potentially suitable habitat features exist on site for this species, such as the large soil stockpile on the northwestern boundary, and the more densely covered vegetated grassland and weeds portion within the northern and center of the Project footprint. Ms. Gutierrez observed numerous small mammal burrows within the Project footprint meeting the four to 10-inch size criteria (**Figure 6**) preferred by SJKF. However, these burrows were round and did not exhibit the keyhole shape of typical SJKF burrows. It is probable that these burrows were excavated and are actively being used by California ground squirrels as numerous individuals were present in the vicinity of the burrows during the site visit. A search of the CNDDDB revealed that the most recent record of SJKF in Fresno County occurred in August 2006 in the Mercey Hot Springs 7.5-minute Quadrangle, approximately 50 miles to the west.

4.3. Blunt-nosed Leopard Lizard

BNLL is listed as Endangered on the Federal and the State level. BNLL have a light background with dark gray-brown spotting, giving it an almost Giraffe-like appearance. The body length of the BNLL ranges from seven to 12 centimeters (2.5 to 5 inches), with a tail typically longer than the body. BNLL are found in the southern San Joaquin Valley and surrounding foothills and valleys, and prefer flat areas with open space for running, including semi-arid grasslands, alkali flats, and washes. BNLL will utilize shrubs and small mammal burrows for cover and shelter, and typically avoid densely vegetated areas.

The habitat on the Project site is unsuitable for BNLL due to the scarcity of shrubs and/or small mammal burrows to provide shelter and cover for the species, and in most areas, the grass and weeds are too dense. No record of species observation has been recorded for the Herndon 7.5-minute quadrangle in the CNDDDB. The most recent CNDDDB record for this species in Fresno County is from May 2005, in the Mercey Hot Springs 7.5-minute quadrangle, approximately 50 miles to the west.

4.4. Giant Garter Snake

GGs are listed as Threatened on the Federal and the State level. GGs are at least 162 centimeters (64 inches) long, with a brownish olive background, a yellow stripe down the center of the back, and a light-colored stripe on either side. GGs historically ranged from Kern County to Butte County, but due to habitat degradation, this species is thought to have been extirpated south of Fresno County. GGs are found primarily in marshes, sloughs, drainage canals, and irrigation ditches, and prefer locations with vegetation close to water for basking. GGs use small mammal burrows and vegetation piles for cover during hotter weather.

The habitat on the Project site is unsuitable for GGs as there are no marshes, drainage or irrigation ditches, or water present for a long enough duration on the Project footprint. There are no CNDDDB records for this species in the Herndon 7.5-minute quadrangle. The most recent CNDDDB record for this species in Fresno County is from August 2008, in the Tranquility 7.5-minute quadrangle, approximately 22 miles to the southwest.

4.5 California Red-legged Frog

CRLF is listed as Threatened on the Federal level and is considered a Species of Special Concern in California. CRLF are medium-sized frogs from 4.4-13.3 centimeters (1.75 to 5.5 inches) long, with a slim waist, long legs, reddish brown, gray, or olive color with black flecks, dark mask on the head, and red on hind legs and lower belly. In the San Joaquin Valley, CRLF are prevalent in Fresno County. CRLF prefer lowlands and foothills, primarily near ponds in humid forests, woodlands, grasslands, and coastal scrub, and prefer streamside locations with vegetative cover.

The habitat on the Project site is not suitable for CRLF as there are no ponds, wetlands, or streamside locations present on the Project footprint. There are no CNDDDB records for this species in the Herndon 7.5-minute quadrangle. The most recent CNDDDB record for this species in Fresno County is from February 2009, in the Laguna Seca Ranch 7.5-minute quadrangle, approximately 40 miles to the west.

4.6 California Tiger Salamander

CTS is listed as Endangered in Santa Barbara and Sonoma Counties, and Threatened in the Central San Joaquin Valley. Adult CTS range in size from 15-22 centimeters (6 to 9 inches) long and have a dark background color with distinctive yellow spots. Juvenile CTS look much like adults but lack the yellow spots. Larval CTS are grayish green in color and have the appearance of tadpoles with obvious, external gills. CTS eggs are clear and are typically laid singly or in groups of three or four in shallow ponds. This endemic California species is typically found in grasslands, oak savannah woodlands, edges of mixed woodland, lower elevations of coniferous forests, and in heavily grazed fields along the Central California Coast and within the Central San Joaquin Valley, however, CTS may breed in ditches where water is present for a long enough duration for eggs and larvae to metamorphose into adults.

The habitat on the Project site is not suitable for CTS as there are no grasslands, woodlands, grazed fields, or shallow ponds present on the Project footprint. There are no CNDDDB records for this species in the Herndon 7.5-minute quadrangle. The most recent CNDDDB record for this species in Fresno County is from June 2017, in the Friant 7.5-minute quadrangle, approximately 11 miles to the northeast.

4.7 Vernal Pool Fairy Shrimp

VPFS is listed as Threatened on the Federal level and has no listing on the State level. VPFS are 2.5 centimeters (one inch) long, translucent crustaceans with 11 pairs of appendages. VPFS are limited to vernal pool habitats in Oregon and California and do not occur in riverine, marine, or other permanent bodies of water where fish are present. During the wet season, the females produce hardy resting eggs, called cysts, which survive the dry season and hatch when the rains come again.

The habitat on the Project site is not suitable for VPFS as there are no vernal pools present on the Project footprint. There are no CNDDDB records for this species in the Herndon 7.5-minute quadrangle. The most recent CNDDDB record for this species in Fresno County is from February 2011, in the Humphreys Station 7.5-minute quadrangle, approximately 24 miles to the northeast.

4.8 Swainson's Hawk

SWHA is listed as Threatened on the State level. SWHA favor open habitat for foraging such as agricultural fields, pastures, and row crops. They nest in scattered stands of eucalyptus, willow, oak, cottonwood, and conifers. On occasion, SWHA will nest on a power pole or transmission tower. Nests are constructed with loose bundles of sticks and debris items. Incubation period is approximately 35 days and nesting period is 17-22 days. The breeding season for this species begins in March and ends in September.

During the field survey, no signs of SWHA were observed in the Project footprint or surrounding areas. However, there are potentially suitable habitat features such as the Eucalyptus trees on the eastern boundary of the Project footprint and the electrical towers crossing the Project footprint. There are no CNDDDB records for this species in the Herndon 7.5-minute quadrangle. The most recent CNDDDB record for this species in Fresno County is from June 2018, in the Jamesan Station 7.5-minute quadrangle, approximately 13 miles to the southwest.

4.9 Great Blue Heron

Great blue heron is listed as Sensitive on the State level. This species lives in both freshwater and saltwater habitats, and forage in grasslands and agricultural fields where they eat frogs and small mammals. Great blue herons have breeding colonies that are located within 2 to 4 miles of feeding areas, often near lakes or ponding basins. Great blue heron typically nest in large colonies of 500 or more individual nests, with multiple nests in trees or sometimes on the ground.

The habitat on the Project site is unsuitable for great blue heron as there are not enough trees to sustain a colony of nests, and there is no standing water present on the Project footprint. There are no CNDDDB records of species observation in the Herndon 7.5-minute quadrangle nor in Fresno County. The most recent record of this species in neighboring counties is from February 1986 in the Woodlake 7.5-minute quadrangle, approximately 60 miles to the southeast.

4.10 Yellow-headed Blackbird

Yellow-headed blackbird is listed as a Species of Special Concern on the State level. Yellow-headed blackbird are found in wetlands, shallow areas of marshes, ponds, and rivers. This species nest in cattails, bulrushes, or reeds, and may occasionally forage in grasslands or savanna. Yellow-headed blackbird typically breed in dead vegetation, usually cattails, that overhangs the water.

The habitat on the Project site is unsuitable for Yellow-headed blackbird as there are no wetlands present on the Project footprint. There are no CNDDDB records of species observation in the Herndon 7.5-minute quadrangle. The most recent record of this species in Fresno County is from June 2002 in the Harris Ranch 7.5-minute quadrangle, approximately 40 miles to the southwest.

4.11 Double-crested Cormorant

Double-crested cormorant is listed on the Watch List on the State level. Double-crested Cormorant are found in aquatic bodies large enough to support their mostly fish diet. This species may breed in smaller ponds and fly to a different feeding area up to 40 miles away from the breeding colony. This species typically nest on rocks and atop trees near the water.

The habitat on the Project site is unsuitable for double-crested cormorant as there are no water features present on the Project footprint. There are no CNDDDB records of species observation in the Herndon 7.5-minute quadrangle. The most recent record of this species in Fresno County is from May 2012 in the Clovis 7.5-minute quadrangle, approximately 8 miles to the east.

4.12 Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle is listed as Threatened at the Federal level. VELB is found in the presence of red or blue elderberry in the San Joaquin Valley of California, often preferring larger (2-8 inch thick stem), stressed elderberry plants (CNDDDB). Breeding typically occurs between March and June when adults are most active.

The habitat on the Project site is unsuitable for Valley elderberry longhorn beetle as there are no host plant, red or blue valley elderberry, and no rivers or streams present within the Project footprint. There are no CNDDDB records of species observation in the Herndon 7.5-minute quadrangle. The most recent record of this species in Fresno County is from the Pine Flat Dam 7.5-minute quadrangle, approximately 30 miles to the east.

4.13 American Badger

The American badger is not listed on the Federal level and is listed as a Species of Special Concern on the State level. It has a flat body with short legs and a triangular face with a long, pointed, tipped-up nose. It has long brown or black fur with white stripes on its cheeks and one stripe running from its nose to the back of its head. It has small ears on the side of its head and long, sharp front claws. It can be found in open areas like plains and prairies, farmland, and the edges of woods. American badger burrows normally measure approximately 7 to 10 inches in diameter.

During the field survey, no signs of American badger were observed in the Project footprint or surrounding areas. However, there are potentially suitable habitat features on site for this species such as the complex of burrows located in the dirt mounds in the northwestern edge of the Project site. There are no CNDDDB

records of species observation in the Project footprint. The most recent record of this species in the Herndon 7.5-minute quadrangle is from April 1988 in the City of Fresno, approximately 2.9 miles to the northeast.

4.14 Western Pond Turtle

The western pond turtle is not listed on the Federal level and is listed as a Species of Special Concern on the State level. It is found throughout California west of the Pacific Crest, and along the Mojave River watershed, ranging from sea level to 4,500 feet. The western pond turtle's diet consists of both plant material and invertebrates, any life forms found near water sources. Mating typically occurs between April and May, but this species has been observed relocating to find new food sources or breeding locations between March and June. This species requires basking sites and suitable upland habitat for egg-laying.

The habitat on the Project site is not suitable for western pond turtle as there are no ponds, basins, canals, or ditches present on the Project footprint. There are no CNDDDB records of species observation in the Herndon 7.5-minute quadrangle. The most recent record of this species in Fresno County is from November 2016 in the Clovis 7.5-minute quadrangle, approximately 13.5 miles to the northeast.

4.15 Hairy Orcutt Grass

Hairy Orcutt grass is listed as Endangered on the Federal level and listed as Endangered on the State level. HOG is native to both Sacramento and San Joaquin valleys in California, growing in bunches up to 20 centimeters tall. It grows only in vernal pools, a highly threatened habitat. Blooming typically occurs between May and September.

The habitat on the Project site is not suitable for hairy Orcutt grass as there are no vernal pools present on the Project footprint. There are no CNDDDB records of species observation in the Project footprint. The most recent record of this species in the Herndon 7.5-minute quadrangle is from August 1986 in agricultural lands north of the San Joaquin River, approximately 5.2 miles to the northeast.

5. Presence of Potential Jurisdictional Waters or Wetlands

The presence of potential jurisdictional waters or wetlands is determined through researching references located in Federal Emergency Management Agency (FEMA) flood inundation maps, general and community plans, mitigation plans, and technical support documents for application of the Clean Water Rule.

No potential jurisdictional water features were observed on the Project site.

6. Findings and Recommendations

It is the finding of Soar Environmental Consulting that the Project site has no suitable habitat for FKR, BNLL, GGS, CARF, VPFS, great blue heron, yellow-headed blackbird, double-crested cormorant, VELB, western pond turtle, and HOG.

The Project site does, however, contain potential suitable habitat for SJFK, SWHA, and American badger.

None of the above referenced special status species were observed on the Project site.

The findings for this report are summarized in **Table 1** below.

Table 1 – Special Status Species Findings

Species Name	Species Observed on Project Site	Potential Habitat on Project Site
Fresno kangaroo rat (<i>Dipodomys nitratooides exilis</i>)	No	No
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	No	Yes
blunt-nosed leopard lizard (<i>Gambelia sila</i>)	No	No
giant garter snake (<i>Thamnophis gigas</i>)	No	No
California red-legged frog (<i>Rana draytonii</i>)	No	No
California tiger salamander (<i>Ambystoma californiense</i>)	No	No
vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	No	No
Swainson's hawk (<i>Buteo swainsoni</i>)	No	Yes
great blue heron (<i>Ardea herodias</i>)	No	No
yellow-headed blackbird (<i>Xanthocephalus xanthocephalus</i>)	No	No
double-crested cormorant (<i>Dipodomys nitratooides brevinasus</i>)	No	No
valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	No	No
American badger (<i>Taxidea taxus</i>)	No	Yes
western pond turtle (<i>Actinemys marmorata</i>)	No	No
hairy Orcutt grass (<i>Actinemys marmorata</i>)	No	No

Swainson's Hawk (SWHA) Recommendations

During the habitat assessment, potential habitat for SWHA was observed in eucalyptus and pines on the eastern boundary within the adjacent property. A Red-tailed Hawk was observed in the vicinity, but no nest was observed. There is a potential nesting area in the electrical towers crossing the northeast boundary. Prior to the commencement of ground disturbance activities, Soar Environmental recommends that a qualified biologist evaluate the surrounding trees and the electrical towers for large stick nests belonging to SWHA. Active SWHA nests should be avoided by at least 150 feet. All nests should be monitored during Project activities for signs of distress. If signs of distress are observed, Project activities should be adjusted to prevent further disturbance to the raptors.

San Joaquin kit fox (SJKF) Recommendations

Though it is unlikely that SJKF are present in the 48.86-acre Project site or surrounding area, Soar Environmental recommends that a biologist survey the small mammal burrows within the Project footprint prior to the commencement of ground disturbance. If the biologist observes signs indicating the presence, or recent past presence for SJKF, monitoring efforts should be initiated and the feature location avoided by a buffer of 50 feet (or more) until it has been confirmed that no SJKF are present within the Project footprint.

American Badger Recommendations

Potential habitat for American badger was observed on the northeast side of the Project footprint. Prior to the commencement of ground disturbance activities, Soar Environmental recommends that a qualified biologist evaluate the small mammal burrows by monitoring with cameras to confirm the presence or absence of American badger. If the biologist observes signs indicating the presence, or recent past presence for American badger, monitoring efforts should be initiated and the feature location avoided by a buffer of 50 feet (or more) until it has been confirmed that no American badger are present within the Project footprint.

Nesting Bird Recommendations

If Project activities commence during the nesting season, Soar Environmental recommends that the Project site and the surrounding habitat be surveyed for nesting birds to avoid any adverse impacts leading to nest failure or abandonment. Areas of particular importance are the eucalyptus and pines found on the eastern boundary aligning the private residential houses, and all of the Trees of Heaven within the Project site, as these provide ample nesting habitat for raptors and other MBTA protected species. Active raptor nests should be avoided by at least 150 feet, and non-raptor nests should be avoided by at least 50 feet. All nests should be monitored during Project activities for signs of distress. If signs of distress are observed, Project activities should be adjusted to prevent further disturbance to the birds.

7. Works Cited

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Appendix C

Cultural Records Search Results



To: Saba Asghary
4 Creeks, Inc.
324 S. Santa Fe St., Suite A
Visalia, CA 93292

Record Search 19-322

Date: August 19, 2019

Re: Westerra Tract 6258 Project – 6170 West Ashlan Avenue, Fresno, CA 93723

County: Fresno

Map(s): Herndon 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, Historic Property Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there have been no previous cultural resource studies conducted within the project area. There have been seven studies within the one-half mile radius, FR-00069, 00677, 01656, 01808, 01953, 02212, and 02227.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

There no recorded cultural resources within the project area, and it is not known if any exist there. There are two recorded resources within the one-half mile radius, P-10-003123 and P-10-003930. These resources consist of an historic era farm and an historic era railroad.

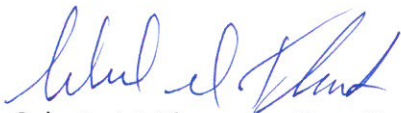
Resource P-10-003123 is the "Brewer Adobe 14," located at 5901 W. Shaw Ave. This resource has been given a National Register status code of 2S2, indicating it has been determined eligible for listing in the National Register of Historic Places by a consensus through the Section 106 process. It is also listed in the California Register of Historical Resources. There are no other recorded cultural resources within the project area that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of development of 318 single family residential lots on property previously used for agriculture. Please note that agriculture does not constitute previous development, as it does not destroy cultural resources, but merely moves them around within the plow zone. Because a cultural resources study has not been previously conducted on this property, it is unknown if any cultural resources are present. Therefore, prior to any ground disturbance activities, we recommend a qualified, profession consultant conduct a field survey of the entire property to determine if cultural resources are present. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:



Celeste M. Thomson, Coordinator

Date: August 19, 2019

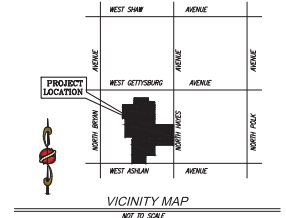
Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Appendix D

Vesting Tentative Subdivision Maps

VESTING TENTATIVE SUBDIVISION MAP TRACT MAP NO. 6258

A PHASED MAP
IN THE CITY OF FRESNO
FRESNO COUNTY, CALIFORNIA
PREPARED ON JULY 9, 2019
SHEET 1 OF 3



LEGAL DESCRIPTION

PARCEL 1
ADJUSTED PARCEL 8 OF 14A2019-....., AS DOC. NO.

THAT PORTION OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 13 SOUTH, RANGE 19 EAST, MOUNT SHILOH BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:

THE NORTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16, EXCEPTING THEREFROM THE EAST 215.00 FEET OF THE SOUTH 35.00 FEET THEREOF, ALSO EXCEPTING THEREFROM THE NORTH 30 FEET THEREOF.

TOGETHER WITH THE NORTH HALF OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16, EXCEPTING THEREFROM THE NORTH 35.00 FEET OF THE EAST 35.00 FEET THEREOF.

TOGETHER WITH THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16, EXCEPTING THEREFROM THE SOUTH 35.00 FEET THEREOF.

EXCEPTING THEREFROM THAT PORTION THEREOF LYING NORTH AND EAST OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT A POINT ON THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16, LYING 453.19 FEET SOUTH OF THE NORTHEAST CORNER THEREOF; THENCE NORTH BY 58° 44' EAST, ALONG A LINE THAT IS PARALLEL WITH THE NORTH LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 465.26 FEET; THENCE SOUTH BY 23° 03' EAST, A DISTANCE OF 112.57 FEET; THENCE NORTH BY 30° 03' EAST, A DISTANCE OF 75.00 FEET; THENCE SOUTH BY 23° 03' EAST, A DISTANCE OF 31.89 FEET; THENCE NORTH BY 30° 03' EAST, A DISTANCE OF 45.02 FEET; THENCE NORTH BY 45° 41' EAST, A DISTANCE OF 35.41 FEET; THENCE NORTH BY 57° 19' EAST, A DISTANCE OF 80.00 FEET; THENCE SOUTH BY 24° 03' EAST, A DISTANCE OF 142.80 FEET; THENCE SOUTH BY 00° 00' WEST, A DISTANCE OF 278.28 FEET TO A POINT ON THE NORTH LINE OF PARCEL 1 OF PARCEL MAP NO. 4474, ACCORDING TO THE MAP THEREOF RECORDED IN BOOK 31 OF PARCEL MAPS, PAGE 26, FRESNO COUNTY RECORDS, LYING 2.00 FEET EAST OF THE NORTHEAST CORNER THEREOF.

PARCEL 2
ADJUSTED PARCEL 4 OF 14A2019-....., AS DOC. NO.

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 13 SOUTH, RANGE 19 EAST, MOUNT SHILOH BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:

THE REMAINDER OF TRACT NO. 8217 ACCORDING TO THE MAP THEREOF RECORDED IN VOLUME 88 OF PLATS, PAGES 44 AND 45, FRESNO COUNTY RECORDS.

TOGETHER WITH THE SOUTH THREE-FOURTHS OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER AND THE WEST HALF OF THE SOUTH THREE-FOURTHS OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16, EXCEPTING THEREFROM THE SOUTH 35.00 FEET OF THE NORTH 35.00 FEET OF THE WEST 35.00 FEET OF THE SOUTH THREE-FOURTHS OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16, ALSO EXCEPTING THEREFROM THE SOUTH 35.00 FEET OF THE SOUTH THREE-FOURTHS OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16, ALSO EXCEPTING THEREFROM THE SOUTH 35.00 FEET OF THE EAST 35.00 FEET OF THE WEST HALF OF THE SOUTH THREE-FOURTHS OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16.

EXCEPTING THEREFROM THAT PORTION THEREOF LYING WEST OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT A POINT ON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 16, LYING 35.00 FEET SOUTH BY 57° 53' WEST, A DISTANCE OF 94.48 FEET FROM THE SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 16, THENCE NORTH BY 00° 00' WEST, A DISTANCE OF 80.51 FEET; THENCE NORTH BY 57° 53' EAST, A DISTANCE OF 24.50 FEET; THENCE NORTH BY 00° 00' EAST, A DISTANCE OF 91.89 FEET; THENCE SOUTH BY 57° 28' WEST, A DISTANCE OF 348.38 FEET; THENCE NORTH BY 03° 14' EAST, A DISTANCE OF 35.00 FEET.

PARCEL 3
THE MOST WESTERLY 680 FEET OF PARCEL 2 OF PARCEL MAP NO. 4474, RECORDED IN BOOK 31, PAGE 26 OF PARCEL MAPS, FRESNO COUNTY RECORDS.

APRM 512-070-60

THIS LEGAL IS MADE PURSUANT TO THAT CERTAIN COORDINATE APPROVING A LOT LINE ADJUSTMENT, CERTIFICATE NO. P-4 (04-10559), RECORDED MARCH 16, 2006, AS INSTRUMENT NO. 08-08814 OF OFFICIAL RECORDS.

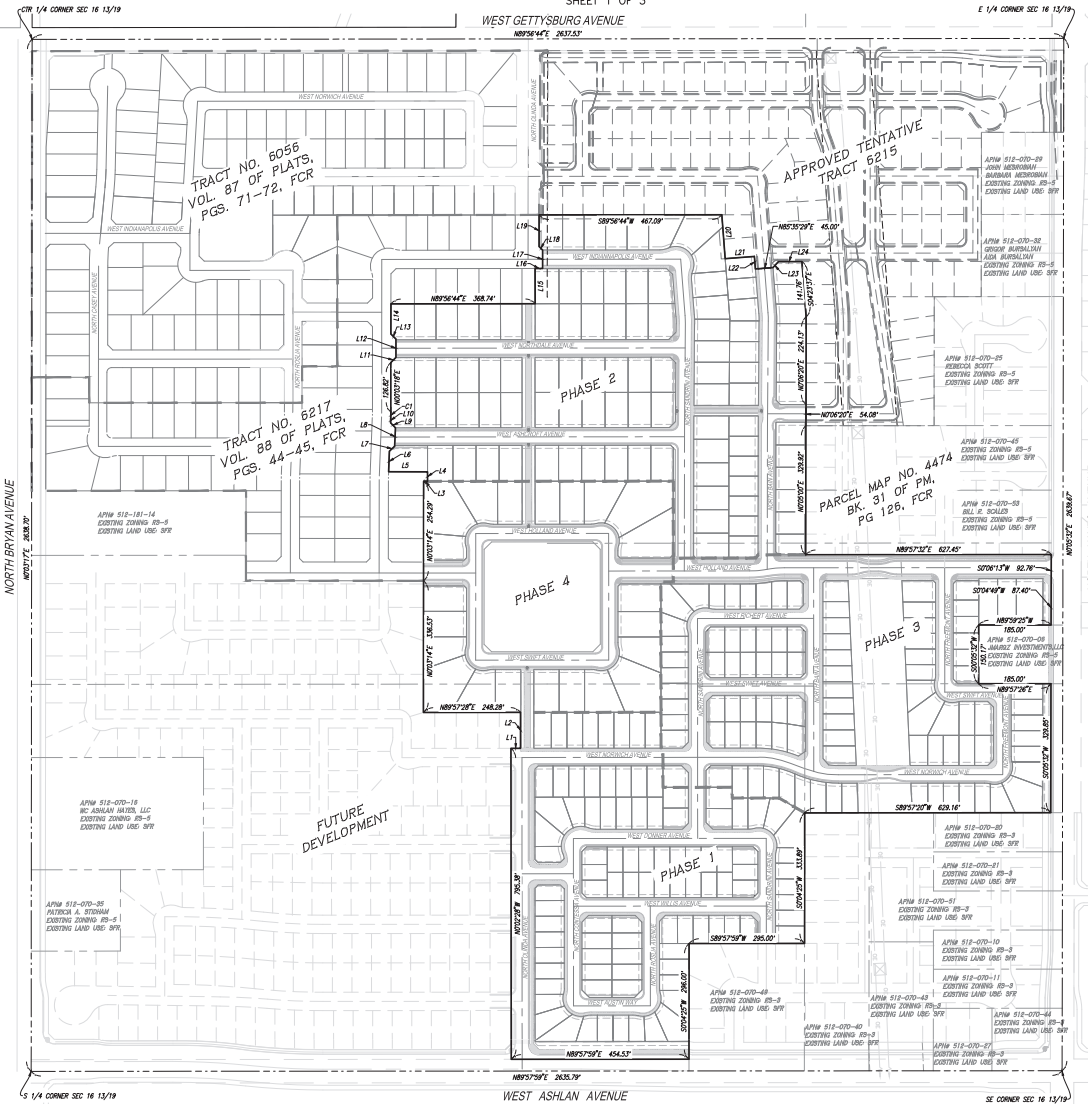
PARCEL 4
THE NORTH HALF OF THE NORTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 13 SOUTH, RANGE 19 EAST, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, MOUNT SHILOH BASE AND MERIDIAN.

EXCEPTING THEREFROM THE SOUTH 150 FEET OF THE EAST 215 FEET OF THE NORTH HALF OF THE NORTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 16.

APRM 512-070-61

PARCEL 5
THE SOUTH HALF OF THE NORTH HALF OF THE SOUTH HALF OF THE EAST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 13 SOUTH, RANGE 19 EAST, MOUNT SHILOH BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE UNITED STATES GOVERNMENT TOWNSHIP PLAT.

APRM 512-070-67



LEGEND

- PROPOSED SUBDIVISION BOUNDARY
- EXISTING SUBDIVISION BOUNDARY
- EXISTING PROPERTY LINE
- EXISTING SECTION LINE
- EXISTING POWER LINE
- PHASE LINE
- RECORDED MAPS
- FUTURE DEVELOPMENT
- APPROVED TENTATIVE MAP

LINE TABLE

LINE	BEARING	LENGTH
L1	N89°57'24"E	24.37'
L2	N00°00'00"E	91.89'
L3	N89°56'45"E	10.02'
L4	N00°03'45"E	24.46'
L5	N89°56'45"E	59.38'
L6	N02°11'45"E	52.59'
L7	N49°04'15"E	18.46'
L8	N02°32'35"E	47.05'
L9	N42°55'45"E	18.13'
L10	N02°11'45"E	14.07'

LINE TABLE CONT.

LINE	BEARING	LENGTH
L11	N49°04'15"E	18.39'
L12	N02°04'15"E	42.08'
L13	N00°02'15"E	16.38'
L14	N00°03'15"E	77.08'
L15	N00°03'15"E	90.00'
L16	N00°03'15"E	18.10'
L17	N00°03'15"E	47.00'
L18	N44°55'45"E	12.73'
L19	N00°04'25"E	80.85'
L20	S74°23'15"E	112.71'

LINE TABLE CONT.

LINE	BEARING	LENGTH
L21	N89°57'24"E	75.00'
L22	S74°23'15"E	31.87'
L23	N42°55'45"E	35.86'
L24	S89°56'45"E	60.02'

CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH
C1	0°08'30"	273.50'	10.22'



PREPARED BY:



A PHASED MAP
IN THE CITY OF FRESNO
FRESNO COUNTY, CALIFORNIA
PREPARED ON JULY 9, 2019
SHEET 2 OF 3

GENERAL PLANT DEMONSTRATION
EXISTING MEDICAL RESIDENTIAL
MEDICAL DENSITY RESIDENTIAL
LAND USE
EXISTING MEDICAL RESIDENTIAL
MEDICAL DENSITY RESIDENTIAL
ZONING
M-150-00-150M
M-150-00-150M
M-150-00-150M
SITE AREA
1.00 AC. = 49,204 SQR. FEET
NET AREA = 68.64 ACRES
NUMBER OF LOTS
719
MINIMUM LOT AREA
2,300 SQR. FT.
MINIMUM LOT AREA
4,300 SQR. FT.
CHENIERE
EAST LALUCHE
SOURCE OF WATER
EAST OF POND
SOURCE OF WASTEWATER DISPOSAL
CITY OF TRENTON

PROJECT SITE ADDRESS
1572 WEST ARDEN, TRENTON NJ 08723
SITE LOCATION
WEST SIDE OF NORTH HAVEN
WEST NORTH ARDEN
ADJACENT PACE NUMBERS
512-070-0101 512-070-0128 512-070-0150
512-070-0152 512-070-0154 512-070-0156
512-177-0121 512-177-0123 512-177-0125
512-177-0127 512-177-0129 512-177-0140
PROPERTY OWNER
11446 TOLLANDS ROAD, SUITE 103
HALL TOLLANDS ROAD, SUITE 103
LALUCHE, NJ 08611
509-642-1042
BUILDER/CHENIERE
BRYNER CONSTRUCTION, LLC, SUITE 103
11446 TOLLANDS ROAD, SUITE 103
LALUCHE, NJ 08611
509-642-1042
SOURCE OF TELEPHONE
300
SOURCE OF GAS
BRYNER CONSTRUCTION
SOURCE OF CABLE TV
COMCAST

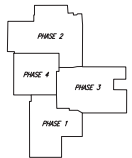
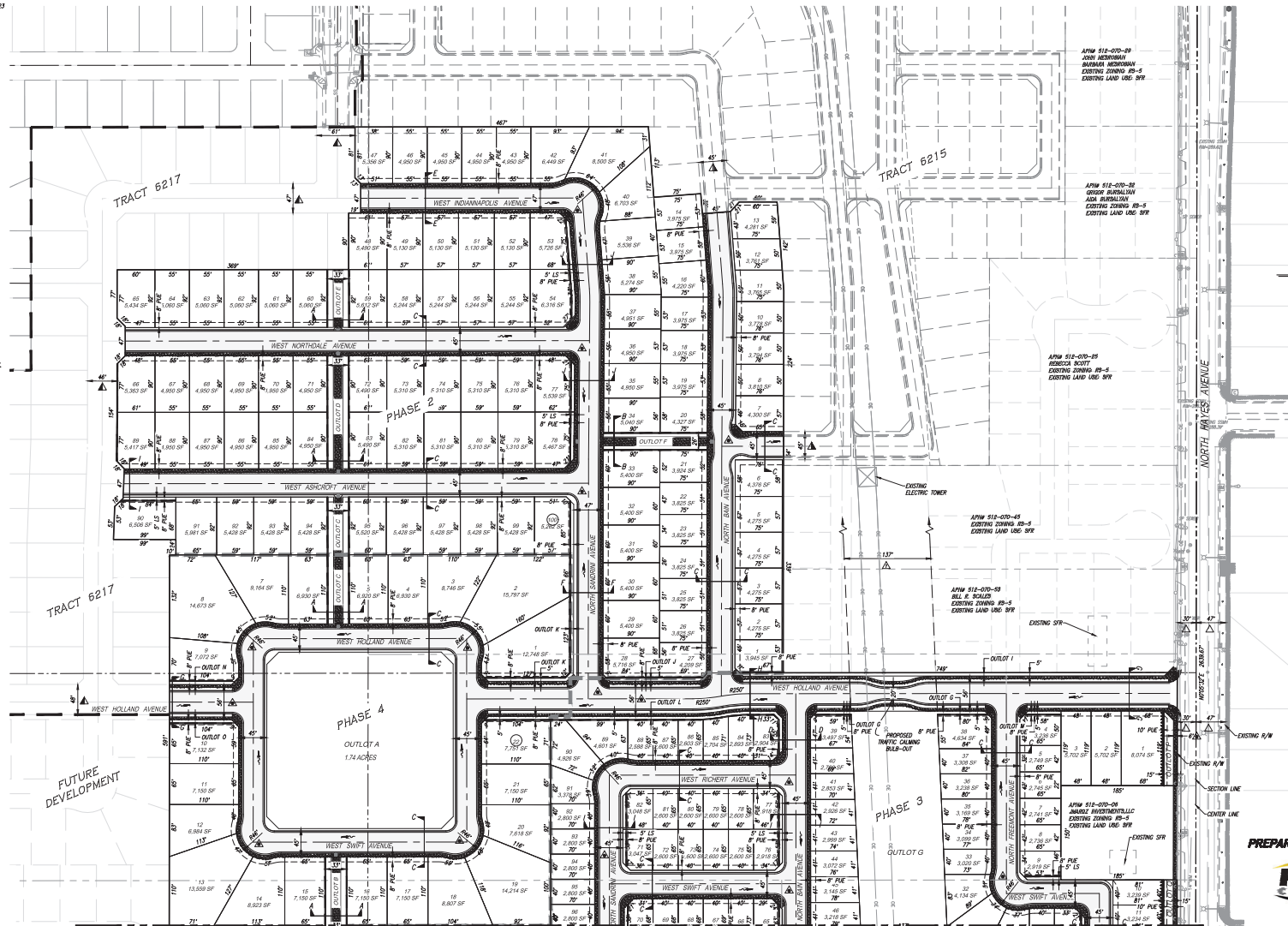
LOT SIZE	QUANTITY
40' X 65'	74
40' X 70'	122
50' X 75'	28
55' X 90'	72
60' X 110'	22
TOTAL	318

LEGEND

 PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
 INDICATES STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
 PROPOSED PUBLIC STREET PER TENTATIVE TRAC MAP #217
 PROPOSED PUBLIC STREET PER TENTATIVE TRAC MAP #215
 INDICATES RELINQUISHMENT OF DIRECT ACCESS RIGHTS
 LANDSCAPE EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
 PUBLIC UTILITY EASEMENT
 EASEMENT GRANTED TO PACIFIC GAS AND ELECTRIC COMPANY RECORDED
 NOVEMBER 16, 1981 IN BOOK 7816 OF OFFICIAL RECORDS, PAGE 506
 DIRECTION OF STORMWATER FLOW
 PROPOSED STREET BOUNDARY

2. RESIDENTIAL USE INTENDED ON ALL LOTS OF THE PROPOSED SUBDIVISION.
3. ALL BUILDING SETBACKS SHALL BE IN ACCORDANCE WITH THE CITY OF FRESNO ZONING CODES.
4. ALL PROPOSED UTILITIES SHALL BE UNDERGROUND.
5. ALL PROPOSED UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF FRESNO STANDARDS AND SPECIFICATIONS.
6. EACH INDIVIDUAL PAD SHALL SUBMIT FOR A BUILDING PERMIT.
7. THE PROPOSED PROJECT SHALL BE PHASED.
8. EXISTING TREES SHALL BE PRESERVED.
9. NO EXISTING UNDERGROUND FEATURES OR UTILITIES ARE IN THE SUBJECT PROPERTY.
10. ALL ON-SITE AND OFF-SITE IMPROVEMENTS SHALL CONFORM WITH THE DESIGN STANDARDS IN ACCORDANCE WITH THE CITY OF FRESNO STANDARDS AND SPECIFICATIONS.
11. PROPOSED SITE IMPROVEMENTS SHALL INCLUDE SITE GRADING AND DRAINAGE. UTILITY SERVICE AS INDICATED BY THE UTILITY ADDRESS, DRAINAGE FACILITIES AS REQUIRED AND CONSTRUCTED IN ACCORDANCE WITH THE CITY OF FRESNO STANDARDS AND SPECIFICATIONS.
12. NO GRADE DIFFERENCES OF 4' OR MORE EXIST ADJACENT TO THE PROPERTY.
13. THIS TRACT IS NOT WITHIN 200 FEET OF ANY AIRPORT, FREEDOM OF EXPRESSION.
14. NO UNDERGROUND WELLS OR SEPTIC TANKS EXIST ON SUBJECT PROPERTY.
15. NO CANNALS OR POND DETRIMENT EXIST ON SUBJECT PROPERTY.
16. THIS SUBDIVISION PROVIDES, TO THE EXTENT FEASIBLE, FOR PEST NEST NESTING OR COOLING OPPORTUNITIES AND OTHER MEASURES THAT CONSIDER THE VULNERABLE AND SENSITIVE AREAS. STATE OF THE LOTS ARE ORIENTED IN THE NORTH-SOUTH DIRECTION.

OUTLOT 1 TO BE DEDICATED IN FEE TO THE CITY OF FRESNO FOR TRAIL, OPEN SPACE, AND FUTURE RIGHT-OF-WAY PURPOSES SUBJECT TO CITY ACCEPTANCE OF DEVELOPER INSTALLED REQUIRED IMPROVEMENTS.



PHASE MAP

NOT TO SCALE



SCALE 1" = 80'

A horizontal scale bar with tick marks at 0, 40, 80, and 160 feet. The text "SCALE 1" = 80'" is centered above the bar.

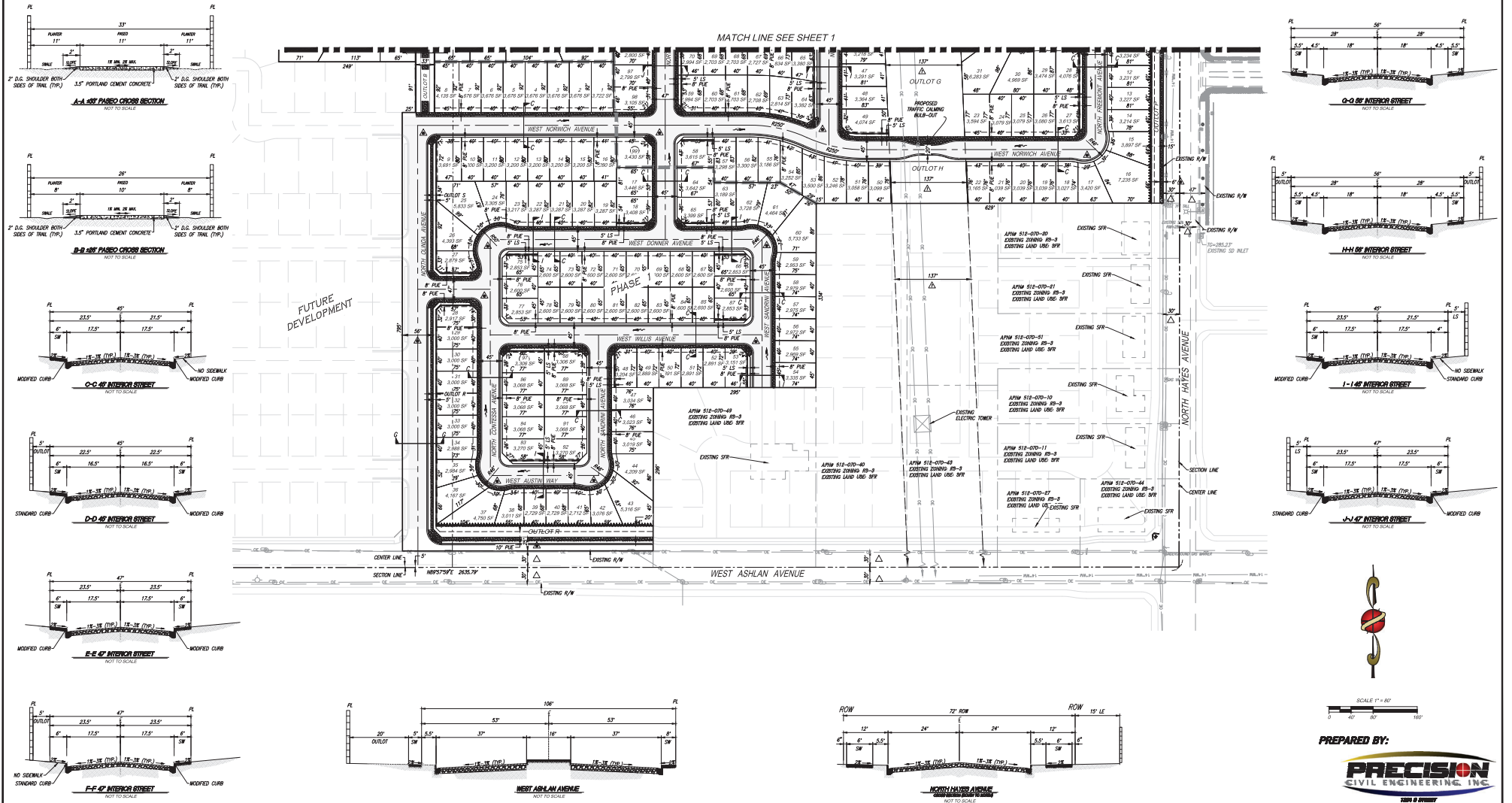
PREPARED BY:



1204 D STREET
FARMING, CA 90721
408 442-0822 FAX 408 442-0822

VESTING TENTATIVE SUBDIVISION MAP TRACT MAP NO. 6258

A PHASED MAP
IN THE CITY OF FRESNO
FRESNO COUNTY, CALIFORNIA
PREPARED ON JULY 9, 2019
SHEET 3 OF 3



Appendix E

Air Impact Assessment (AIA) Application Approval

APR 26 2018

Adrienne Burns
Wathen Castanos Homes, Inc.
1446 Tollhouse Road, Suite 103
Clovis, CA 93611

Re: Air Impact Assessment (AIA) Application Approval
ISR Project Number: C-20180122
Land Use Agency: City Of Fresno
Land Use Agency ID Number: Tentative Tract 6215

RECEIVED

APR 27 2018

Wathen Castanos Homes

Dear Ms. Burns:

The San Joaquin Valley Air Pollution Control District (District) has approved your Air Impact Assessment (AIA) for the Tract 6215 project located at 4417 North Hayes Avenue in Fresno, California. Pursuant to District Rule 9510, Section 8.4, the District is providing you with the following information:

- A notification of AIA approval (this letter)
- A statement of tentative rule compliance (this letter)
- A summary of project emissions and emission reductions
- A summary of the off-site fees
- An approved Monitoring and Reporting Schedule

Construction Fleet Summary

Since you have committed to use a clean construction fleet, you must submit a construction fleet summary to the District, per the enclosed Monitoring and Reporting Schedule, to verify construction emissions have been reduced by 20% for NOx and 45% for PM10. This analysis may result in additional processing fees.

Change in Developer Form

If all or a portion of the project changes ownership, a completed Change in Developer form must be submitted to the District within thirty (30) days following the date of transfer.

Additional Requirements

- Dust Control Plan. Please be aware that you may be required to submit a Construction Notification Form or submit and receive approval of a Dust Control

Seyed Sadredin

Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95358-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

Ms. Burns
Page 2

- Plan prior to commencing any earthmoving activities as described in District Rule 8021 – *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities*.
- Asbestos Requirements for Demolitions. If demolition is involved, a Certified Asbestos Consultant will need to perform an asbestos survey prior to the demolition of a regulated facility. Following the completion of an asbestos survey; the asbestos survey, Asbestos Notification, Demolition Permit Release, and the proper fees are to be submitted to the District 10 working days prior to the removal of the Regulated Asbestos Containing Material and/or the demolition when no asbestos is present.

To identify other District rules or regulations that apply to this project or to obtain information about District rules and permit requirements, the applicant is strongly encouraged to visit www.valleyair.org or contact the District's Small Business Assistance office nearest you:

Fresno office: (559) 230-5888
Modesto office: (209) 557-6446
Bakersfield office: (661) 392-5665

Thank you for your cooperation in this matter. If you have any questions, please contact Ms. Cherie A Clark at (559) 230-5940.

Sincerely,

Arnaud Marjollet
Director of Permit Services



Brian Clements
Program Manager

AM: cc

Enclosures

cc: Gary G. Giannetta
Bret Giannetta
1119 "S" Street
Fresno, CA 93721