Exhibit J

E202410000049

CITY OF FRESNO

NOTICE OF INTENT TO ADOPT A

MITIGATED NEGATIVE DECLARATION

Filed with the
FRESNO COUNTY CLERK
2220 Tulare Street, Fresno, CA 93721

FILED
FEB 16 2024 TIME 8:18am
By FRESNO COUNTY CLERK Cyan Edmisten DEPUTY
Cyan Edmisten

ENVIRONMENTAL ASSESSMENT NO. T-6411

Tentative Tract Map No. 6411

APPLICANT:

Brenda Ramirez
Central Valley Engineering and Surveying, Inc.
2511 Logan Street
Selma, CA 93662

PROJECT LOCATION:

Located on the northwest corner of West Church and South Thorne Avenues in the City and County of Fresno, California

APN(s): 477-060-05 and 477-060-06

Site Latitude: 36°42'54" N & Site Longitude: 119°48'54" W

Mount Diablo Base & Meridian, Township 14S, Range 20E, Section 17

The full Initial Study and the Fresno General Plan Program Environmental Impact Report (PEIR) are on file in the Planning and Development Department, Fresno City Hall, 3rd Floor, Room 3043, 2600 Fresno Street, Fresno, CA 93721.

E20241000049

PROJECT DESCRIPTION:

Tentative Tract Map No. 6411 was filed by Central Valley Engineering and Surveying, Inc. and pertains to approximately 7.95 acres of property. Tentative Tract Map No. 6411 proposes to subdivide the subject property into a 58-lot single-family conventional residential development.

The project will also require dedications for public street rights-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 proposed development of the subject property.

The subject property is located within the boundaries of the Fresno General Plan and Southwest Fresno Specific Plan.

The City of Fresno has prepared an Initial Study of the above-described project and proposes to adopt a Mitigated Negative Declaration. The environmental analysis contained in the Initial Study is tiered from the PEIR State Clearinghouse No. 2019050005 prepared for the Fresno General Plan pursuant to CEQA Guidelines § 15152 and incorporates the PEIR by reference pursuant to CEQA Guidelines § 15150.

Pursuant to the California Public Resources Code (PRC) §§ 21093 and 21094 and California Environmental Quality Act (CEQA) Guidelines §§ 15070 to 15075, 15150, and 15152, this project has been evaluated with respect to each item on the attached Appendix G/Initial Study Checklist to determine whether this project may cause any additional significant effect on the environment, which was not previously examined in the PEIR. After conducting a review of the adequacy of the PEIR pursuant to PRC § 21157.6(b)(1) and CEQA Guidelines §§ 15151 and 15179(b), the Planning and Development Department, as lead agency, finds that no substantial changes have occurred with respect to the circumstances under which the PEIR was certified and that no new information, which was not known and could not have been known at the time that the PEIR was certified as complete, has become available.

The completed Appendix G/Initial Study Checklist, its associated narrative, technical studies and mitigation measures reflect applicable comments of responsible and trustee agencies and research and analyses conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the project application and its related environmental assessment application, responses to requests for comment, checklist, Initial Study narrative, and any attachments thereto, combine to form a record indicating that an Initial Study has been completed in compliance with the State CEQA Guidelines and the CEQA.

All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this project toward cumulative impacts is not considered substantial or significant in itself and/or that cumulative impacts accruing from this project may be mitigated to less than significant with application of feasible mitigation measures.

With mitigation imposed under the PEIR and project specific mitigation, there is no substantial evidence in the record that this project may have additional significant, direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the PEIR. The

E202410000049

Planning and Development Department, as lead agency, finds that no substantial changes have occurred with respect to the circumstances under which the PEIR was certified and that no new information, which was not known and could not have been known at the time that the PEIR was certified as complete has become available.

Based upon the evaluation guided by the Appendix G/Initial Study Checklist,it was determined that there are project specific foreseeable impacts which require project level mitigation measures.

The Initial Study has concluded that the proposed project will not result in any adverse effects, which fall within the "Mandatory Findings of Significance" contained in § 15065 of the State CEQA Guidelines. The finding is, therefore, made that the proposed project will not have a significant adverse effect on the environment.

Public notice has been provided regarding staff's finding in the manner prescribed by § 15072 of the CEQA Guidelines and by § 21092 of the PRC Code (CEQA provisions).

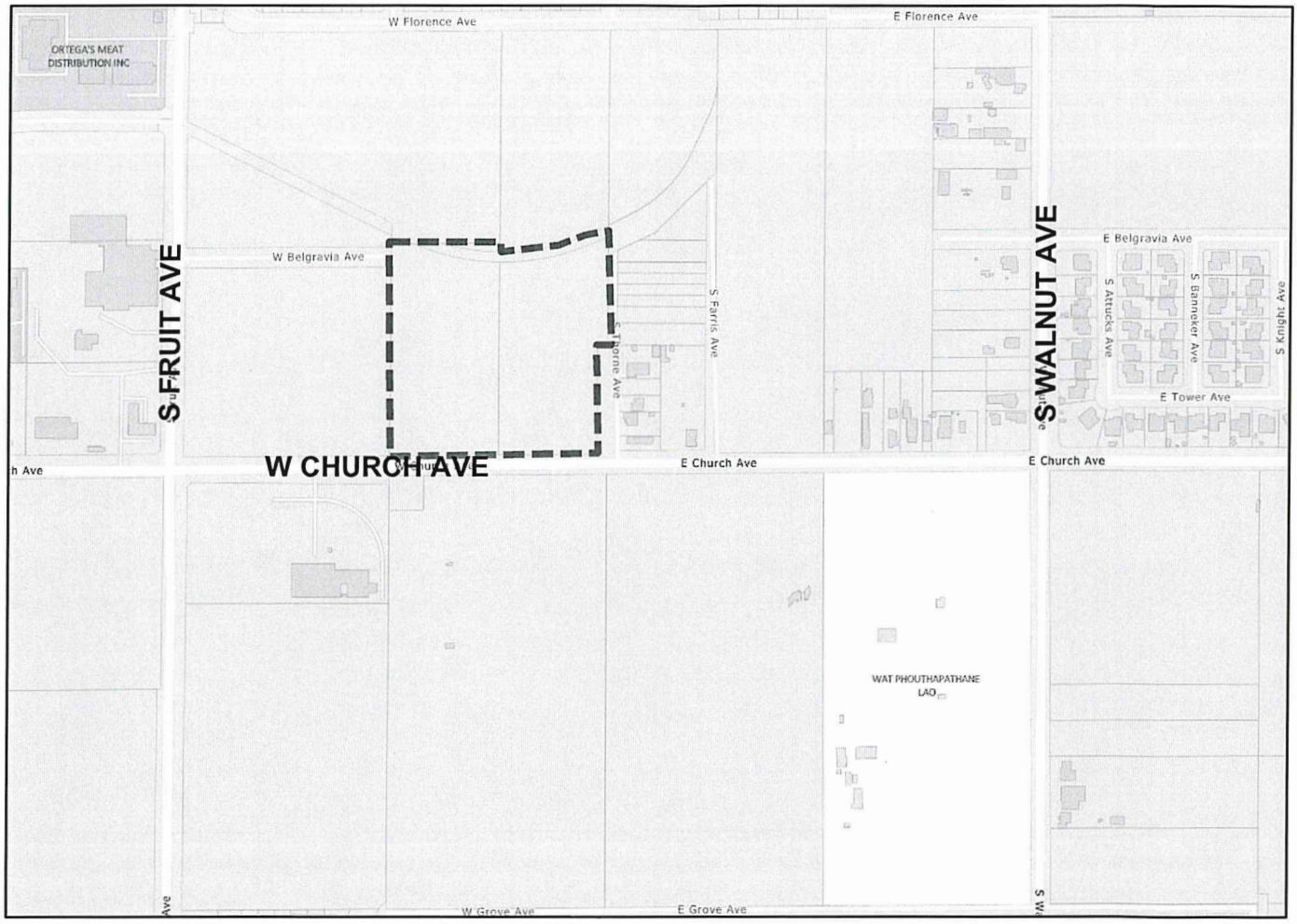
Additional information on the proposed project, including the PEIR, proposed environmental finding of a Mitigated Negative Declaration and the Initial Study may be obtained from the Planning and Development Department, Fresno City Hall, 2600 Fresno Street, 3rd Floor, Room 3043, Fresno, California 93721 3604. Please contact Rob Holt at (559) 621-8056 or via email at Robert.Holt@fresno.gov for more information.

ANY INTERESTED PERSON may comment on the proposed environmental finding. Comments must be in writing and must state (1) the commentor's name and address; (2) the commentor's interest in, or relationship to, the project; (3) the environmental determination being commented upon; and (4) the specific reason(s) why the proposed environmental determination should or should not be made. Any comments may be submitted at any time between the publication date of this notice and close of business on March 8, 2024. Please direct comments to Rob Holt, Supervising Planner, City of Fresno Planning and Development Department, City Hall, 2600 Fresno Street, Room 3043, Fresno, California, 93721-3604; or by email to Robert.Holt@fresno.gov.

INITIAL STUDY PREPARED BY: Rob Holt, Supervising Planner	SUBMITTED BY: Robert Holt Rob Holt, Supervising Planner CITY OF FRESNO PLANING AND DEVELOPMENT DEPARTMENT
DATE: February 16, 2024	
Attachments: Exhibit A – Vicinity Map	

E202410000049

Exhibit A – Vicinity Map



LEGEND

Subject Property

N
NW
NE
W
E
SW
SE
S

City of Fresno

2600 Fresno Street
Fresno CA 93721

SECTION 3
Evaluation of Environmental Impacts

Project Title: Churchwood Estates

This document is the Initial Study/Mitigated Negative Declaration for the proposed construction and operation of 58 single-family homes on approximately 7.95-acres in the City of Fresno. The City of Fresno will act as Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

3.1 PURPOSE

The purpose of this environmental document is to implement the California Environmental Quality Act (CEQA). Section 15002(a) of the CEQA Guidelines describes the basic purposes of CEQA as follows.

(1) Inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities.
(2) Identify the ways that environmental damage can be avoided or significantly reduced.
(3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
(4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

This Initial Study of environmental impacts has been prepared to conform to the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). 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.

3.2 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1. **Project Title:** Churchwood Estates (Tentative Tract Map No. 6411)

2. **Lead Agency:** City of Fresno, Planning and Development Department
   Contact Person: Rob Holt
   2600 Fresno Street
   Fresno, CA 93721
   Phone Number: (559) 621-8056

3. **Applicant:** Sher Singh
   Contact Person: Brenda Ramirez
   2511 Logan Street
   Selma, CA 93662
   (559) 891-8811 ex.1011

4. **Project Location:** The proposed project site is located within the City of Fresno, on West Church Avenue, approximately 2 miles southwest of the City of Fresno Downtown Core. The Project involves construction on approximately 7.95 acres within Assessor Parcel Nos. (APN) 477-060-05 & 06. The site is topographically flat and is bounded by agricultural uses to the south, a few single-family homes to the east, and vacant land uses to the west and north, as well as Hyde Park adjacent to the north. The site is zoned RS-5 by the City of Fresno Development Code and is designated as Medium Density Residential by the City of Fresno General Plan. The site is currently vacant and there are no existing above-ground structures or below-ground features within the project area.

5. **General Plan Designation:** The proposed project site is designated as Medium Density Residential by the City of Fresno General Plan.

6. **Zoning Designation:** The proposed project site is zoned by the City of Fresno as RS-5.

7. **Project Description:** The Project proposes 58 single-family lots to accommodate 58 new single-family homes and a pocket park on approximately 7.95 acres of land located on the northwest corner of West Church and South Thorne Avenues within the City of Fresno. The property is zoned RS-5 and planned for medium density residential uses. The Project would result in onsite and offsite infrastructure improvements including new utilities, new interior local streets, new curb, gutter and sidewalk, and a pocket park.

8. **Surrounding Land Uses and Settings:**
   North Open Space – Community Park
   South Residential – Medium Density
   East Residential – Low Density
   West Employment – Office

9. **Required Approvals:** The following discretionary approvals are required from the City of Fresno for the proposed project:

- City of Fresno Building and Encroachment Permits
- San Joaquin Valley Air Pollution Control District (SJVAPCD). The proposed project is within the jurisdiction of the SJVAPCD and will be required to comply with Rule VIII, 3135, 4101, and 9510.
- Central Valley Regional Water Quality Control Board, Storm Water Pollution Prevention Plan (SWPPP). The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB will require a SWPPP to prevent impacts related to stormwater as a result of project construction.
- Fresno Metropolitan Flood Control District (FMFCD)
- Fresno Irrigation District (FID)
- Washington Union Unified School District
- Pacific, Gas & Electric (PG&E)

10. **Native American Consultation:** The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)). According to the most recent census data, California is home to 109 currently recognized Indian tribes. Tribes in California currently have nearly 100 separate reservations or Rancherias. Fresno County has a number of Rancherias such as Table Mountain Rancheria, Big Sandy Rancheria, and Cold Springs Rancheria. These Rancherias are not located within the city limits.

    Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

11. **Parking and access:** Vehicular access to the project is available via West Church Avenue and South Thorne Avenue. Parking on site will consist of driveways for individual single-family lots as well as street parking. There are no designated parking lots or structures within the project area. During construction, workers will utilize existing parking areas and/or temporary construction staging areas for parking vehicles and equipment.

12. **Landscaping and Design:** The proposed project will include 5,056 square feet of open space, 1.3% of the project site. There will be a landscaped area at the southern border of the site and various trees throughout the site. The landscape and design plans will be required during building permit submittal.

13. **Utilities and Electrical Services:** The project would result in onsite and offsite infrastructure improvements including new and relocated utilities. All existing off-site overhead utilities within the limits of the application will be moved underground as per Fresno Municipal Code Section 15-2017 and Public Works Policy No. 260-01. All plans related to utilities will be submitted to the Public Works Department.

Acronyms

AIA	Air Impact Assessment
AIC	Archaeological Information Center
ATR	Active Transportation Plan
BMP	Best Management Practices
CAA	Clean Air Act
CARB	California Air Resources Board
CCR	California Code of Regulation
CDFW	California Department of Fish and Wildlife
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Environmental Species Act
CUPA	Certified Unified Program Agency
CWA	California Water Act
DOC	Department of Conservation
DTSC	Department of Toxic Substance Control
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FMBTA	Federal Migratory Bird Treaty Act
FMFCD	Fresno Metropolitan Flood Control District
FMMP	Farmland Mapping and Monitoring Program
HMP	Hazard Mitigation Plan
HSC	Health and Safety Code
ISMND	Initial Study Mitigated Negative Declaration
ISR	Indirect Source Review
LOS	Level of Service
MRZ	Mineral Resource Zone
MMRP	Mitigation Monitoring and Reporting Program
NAAQS	National Ambient Air Quality Standards
NAHC	National American Heritage Center
ND	Negative Declaration
NLR	Noise Level Reduction
NPDES	National Pollution Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PEIR	Program Environmental Impact Report
PM	Particulate Matter
RCRA	Resource Conservation and Recovery Act of 1976
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SCAMD	South Coast Air Quality Management District
SDFCMP	Storm Drainage and Flood Control Plan
SHPO	State Historic Preservation Office
SJVAB	San Joaquin Valley Air Basin

SJVAPCD	San Joaquin Valley Air Pollution Control District
SMARA	Surface Mining and Reclamation Act
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

Figure 3-1 Vicinity Map

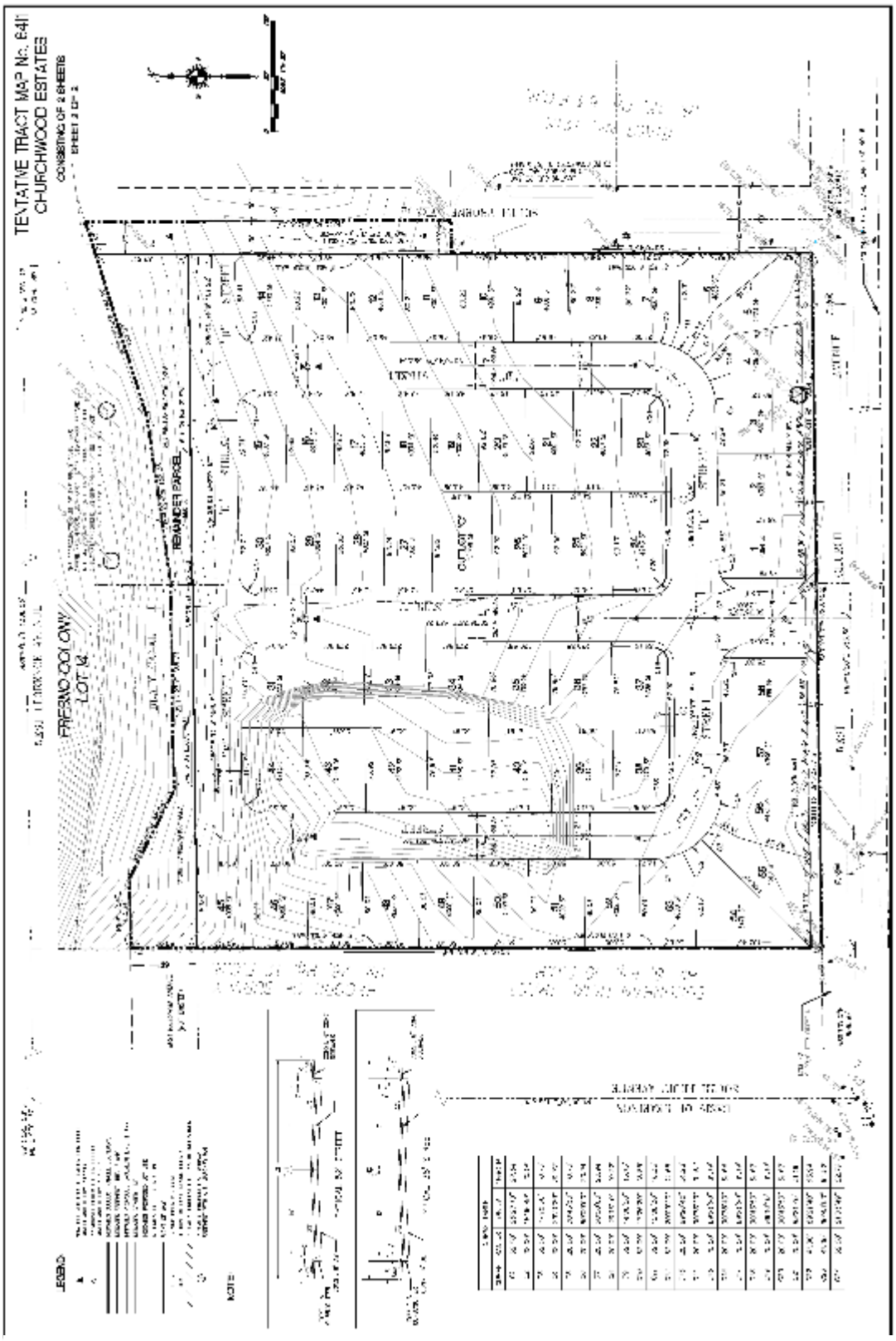


Figure 3-2 Site Plan

3.3 EVALUATION OF ENVIRONMENTAL IMPACTS

1. For purposes of this Initial Study, the following answers have the corresponding meanings:

    a. "No Impact" means the specific impact category does not apply to the project, or that the record sufficiently demonstrates that project specific factors or general standards applicable to the project will result in no impact for the threshold under consideration.
    b. "Less Than Significant Impact" means there is an impact related to the threshold under consideration, but that impact is less than significant.
    c. "Less Than Significant with Mitigation Incorporated" means there is a potentially significant impact related to the threshold under consideration, however, with the mitigation incorporated into the project, the impact is less than significant. For purposes of this Initial Study "mitigation incorporated into the project" means mitigation originally described in the GP PEIR and applied to an individual project, as well as mitigation developed specifically for an individual project.
    d. "Potentially Significant Impact" means there is substantial evidence that an effect may be significant related to the threshold under consideration.

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. A "No Impact" answer is adequately supported if the reference 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 (6) below, may be cross-referenced).

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

    - 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 an 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 the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

7. 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.

3.4 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture and Forest Resources	☐ Hazards & Hazardous Materials	☐ Recreation
☐ Air Quality	☐ Hydrology and Water Quality	☐ Transportation
☐ Biological Resources	☐ Land Use and Planning	☐ Tribal Cultural Resources
☐ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service System
☐ Energy	☐ Noise	☐ Wildfire
☐ Geology and soils	☐ Population	☐ Mandatory Findings of Significance

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

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

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

Robert Holt
SIGNATURE

02/16/2024
DATE

Robert Holt
PRINTED NAME

City of Fresno
AGENCY

3.5 ENVIRONMENTAL ANALYSIS

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

I. AESTHETICS

Except as provided in Public Resource Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within state scenic highway?	☐	☐	☐	☑
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?	☐	☐	☐	☑
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☑	☐	☐

Environmental Setting

Scenic Resources: Scenic resources include landscapes and features that are visually or aesthetically pleasing. They contribute positively to a distinct community or region. These resources provide a visual benefit to communities. The City of Fresno General Plan states that scenic resources within the Planning Area include landscaped open spaces such as parks and golf courses. Additional scenic resources within the Planning Area include areas along the San Joaquin River due to the topographic variation in the relatively flat San Joaquin Valley. The river bluffs provide a unique geological feature in the San Joaquin Valley. Historic structures in Downtown Fresno buildings also represent scenic resources because they provide a unique skyline.

Scenic Vistas: While the City of Fresno General Plan does not identify any scenic vistas, the City of Fresno General Plan states that some areas within the City of Fresno could provide distant views of natural landscape features such as the San Joaquin River along the northern boundary of the Planning Area and the foothills of the Sierra Nevada Mountain Range. The river bluffs provide distant views of the San Joaquin River as well as areas north of the river. The City of Fresno General Plan states that most of these views are from private property. There are limited views of the San Joaquin River from Weber Avenue,

Milburn Avenue, McCampbell Drive, Valentine Avenue, Palm Avenue, State Route 41, Friant Road, and Woodward Park.

Existing Visual Character: The following photos demonstrate the aesthetic character of the project area. As shown, the proposed project site is located in a relatively flat area characterized by vacant land.

Photo 1: View West
Source: Google Maps. May, 2022

Photo 2: View East
Source: Google Maps. May, 2022

Photo 3: View North
Source: Google Maps. May, 2022

Photo 4: View South
Source: Google Maps. May, 2022

Regulatory Setting

Scenic Roadways: The California Scenic Highway Program was established in 1963 by the state legislature for the purpose of protecting and enhancing the natural beauty of California highways and adjacent corridors through conservation strategies. The State Scenic Highway System includes a list of highways that have either been officially designated or are eligible for designation. State laws affiliated with governing the Scenic Highway Program can be found in sections 260-263 in the California Streets and Highways Code.

State Scenic Highways: According to the California Department of Transportation mapping of State Scenic Highways, the County of Fresno does not have officially designated State Scenic Highways, however Fresno County has three eligible State Scenic Highways. The nearest eligible highways are SR

180, approximately 7 miles east of the City boundary, and SR 168, 5 miles east of the City of Clovis.

City of Fresno Scenic Corridors and Boulevards: The Mobility and Transportation Element of the City of Fresno General Plan identifies the following as designated scenic corridors or boulevards:

- Van Ness Boulevard – Weldon to Shaw
- Van Ness Extension – Shaw to San Joaquin River Bluff
- Kearney Boulevard – Fresno Street to Polk
- Van Ness-Fulton couplet – Weldon to Divisadero
- Butler Avenue – Peach to Fowler
- Minnewawa Avenue – Belmont to Central Canal
- Huntington Boulevard – First to Cedar
- Shepard Avenue – Friant to Willow
- Audubon Drive – Blackstone to Herndon
- Friant Road – Audubon to Millerton Road
- Tulare Avenue – Sunnyside to Armstrong
- Ashlan Avenue – Palm to Maroa

City of Fresno General Plan. The approved General Plan is a set of policies and programs that form a blueprint for the physical development of the City. The following objectives and policies related to aesthetic resources are presented in various elements of the approved General Plan:

Policy D-3-d Undergrounding Utilities. Partner with utility companies to continue to pursue the undergrounding of overhead utilities as feasible.

Policy POSS-7-f River Bluffs. Preserve the river bluffs as a unique geological feature in the San Joaquin Valley by maintaining and enforcing the requirements of the "BP" Bluff Preservation Overlay Zone District, maintaining the bluff area setback for buildings, structures, decks, pools and spas (which may be above or below grade), fencing, and steps, and maintaining designated vista points.

Policy PU-9-d Facility Siting. Locate private or public waste facilities and recycling facilities in conformance with City zoning and State and federal regulations, so that the transportation, processing, and disposal of these materials are not detrimental to the public health, safety, welfare, and aesthetic well-being of the surrounding community.

Policy UF-1-f Complete Neighborhoods, Densities, and Development Standards. Use Complete Neighborhood design concepts and development standards to achieve the development of Complete Neighborhoods and the residential density targets of the General Plan.

OBJECTIVE MT-3 Identify, promote and preserve scenic or aesthetically unique corridors by application of appropriate policies and regulations.

Policy MT-3-a. Scenic Corridors. Implement measures to preserve and enhance scenic qualities along scenic corridors or boulevards, including:

- Van Ness Boulevard - Weldon to Shaw Avenues

- Van Ness Extension - Shaw Avenue to the San Joaquin River Bluff
- Kearney Boulevard - Fresno Street to Polk Avenue
- Van Ness/Fulton couplet - Weldon Avenue to Divisadero
- Butler Avenue - Peach to Fowler Avenues
- Minnewawa Avenue - Belmont Avenue to Central Canal
- Huntington Boulevard - First Street to Cedar Avenue
- Shepherd Avenue - Friant Road to Willow Avenue
- Audubon Drive - Blackstone to Herndon Avenues
- Friant Road - Audubon to Millerton Roads
- Tulare Avenue - Sunnyside to Armstrong Avenues
- Ashlan Avenue- Palm to Maroa Avenues

Policy MT-3-b. Preserve street trees lining designated scenic corridors or boulevards. Replace trees of the predominant type and in a comparable pattern to existing plantings if there is no detriment to public safety.

City of Fresno Zoning Ordinance: The Fresno Municipal Code Section 15 includes several standards that regulate the aesthetics of development, such as building height, setbacks, landscaping, frontage, etc., that the Project will be required to comply with. Some sections specifically relate to light and glare, such as:

15-2015 Outdoor Lighting and Illumination. This section applies standards to on-site lighting of residential and non-residential sites.

(B) Control and Illumination of Outdoor Artificial Light for Multiple-Unit Residential Buildings. Aisles, passageways, recesses, parking areas, carports, garages, etc., related to and within the building complex shall be illuminated with an intensity of at least 0.25 foot-candles at the ground level during the hours of darkness. Lighting devices shall be protected by weather and vandal-resistant covers.

15-2420 Parking Area Lighting. Parking areas designed to accommodate four or more vehicles shall be provided with light over the parking surface as follows:

A. Lighting design shall be coordinated with the landscape plan to ensure that vegetation growth will not substantially impair the intended illumination.
B. Parking lot lighting shall, to the maximum extent feasible, be designed and installed so that light and glare is not directed onto residential use areas or adjacent public rights-of way, consistent with Article 25, Performance Standards. Such parking lot illumination shall be no less than 0.5 foot-candles.
C. Carport lighting shall be integrated into carport structures, and there shall be no bare light bulbs.

15-2508 Lighting and Glare. (B) Lighting. Lights shall be placed to deflect light away from adjacent properties and public streets, and to prevent adverse interference with the normal operation or enjoyment of surrounding properties. Direct or sky-reflected glare from floodlights shall not be directed into any other property or street. Except for public streetlights and stadium lights, no light, combination of lights, or activity shall cast light onto a residentially zoned property, or any property containing residential uses, exceeding one half foot-candle.

Discussion

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

No Impact: The Fresno General Plan Program Environmental Impact Report State Clearinghouse No. 2019050005 ("PEIR") provides and recognizes that the City has not identified or designated scenic vistas within its General Plan. The river bluffs provide distant views of the San Joaquin River as well as areas north of the river. However, most of these views are from private properties. There are limited views of the San Joaquin River from Weber Avenue, Milburn Avenue, McCampbell Drive, Valentine Avenue, Palm Avenue, State Route (SR) 41, Friant Road, and Woodward Park. The San Joaquin River is approximately 9.5 miles north of the project site and is not visible from the project site due to the extensive urban development between the project site and these features. There is *no impact.*

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: The City of Fresno General Plan PEIR states that scenic resources within the City of Fresno include parks, golf courses, areas along the San Joaquin River, and historic structures in Downtown Fresno. The Project site is not within the vicinity of a State designated scenic highway. Therefore, the Project would have no impact associated with substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway. The Project will have *no impact.*

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?

No Impact: The proposed project site is located in an urbanized area within the City of Fresno. The Project does not conflict with objectives and policies in the General Plan related to urban form and urban design and the materials, signage, fencing, landscaping, and building materials used in the construction of Churchwood Estates will be selected based on their ability to improve the overall visual character of the area. The proposed project will comply with all applicable zoning and other regulations governing scenic quality. There is *no 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 Incorporated: The proposed project would result in new lighting sources on the project site consistent with adjacent residential development. New lighting sources would include interior lighting from residences, street lighting, security lighting, and headlights from resident vehicles. All street and landscape lighting will be consistent with the City's lighting standards, which are developed to minimize impacts related to excessive light and glare. The project will comply with the City of Fresno General Plan PEIR mitigation measures AES-4.1, AES-4.2, and AES-4.5, which establish guidelines for outdoor lighting systems and building materials. Although the project will introduce new light sources to the area, all lighting will be

consistent with adjacent residential land uses and the City's lighting standards. The impacts are *less than significant with mitigation incorporated.*

Mitigation Measures for Impacts to Aesthetic Resources Incorporated from the City of Fresno General Plan PEIR:

Mitigation Measure AES-4.1: Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences. (General Plan PEIR Mitigation Measures AES-4.1)

Mitigation Measure AES-4.2: Lighting systems for public facilities such as active play areas shall provide adequate illumination for the activity; however, low intensity light fixtures and shields shall be used to minimize spillover light onto adjacent properties. (General Plan PEIR Mitigation Measures AES-4.2)

Mitigation Measure AES-4.5: Materials used on building facades shall be non-reflective. (General Plan PEIR Mitigation Measures AES-4.5)

In conclusion, the Project will result in less than significant impacts with mitigation incorporated.

II. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☑
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned timberland Production (as defined by Government Code section 51104(g)?	☐	☐	☐	☑
d) Result in the loss of forestland or conversion of forest land to non-forest use?	☐	☐	☐	☑
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☑	☐

Environmental Setting

The proposed project is located within a primarily urbanized area within the City of Fresno. There is some agricultural activity located just south of the project site.

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 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. The California Land Conservation Act is overseen by the California Department of Conservation; however local governments are responsible for determining specific allowed uses and enforcing the contract.

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.

Objective RC-9. Preserve agricultural land outside of the area planned for urbanization under this General Plan.

> **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 of such a project 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, Land Use Regulations, or any other mitigation method that is in compliance with the requirements of CEQA. The Farmland Preservation Program may be modeled after some of the programs described by the California Council of Land Trusts.

However, these objectives and policies regarding farmland preservation in the Fresno General Plan do not apply to the proposed Project since they target preservation of agricultural land outside the City limits. No parcels within the Project Area are outside City limits.

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 does not involve construction on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Farmland Mapping and Monitoring Program. The project site is designated as Farmland of Local Importance, as shown in Figure 3-3. There is agricultural activity to the south of the project site that does contain Prime Farmland. However, development of the project would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural 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 project site is not zoned for agricultural use and is not under a Williamson Act Contract. There is *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, there is *no impact*.

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 the Public Resource Code or General Code, will occur as a result of the project and there is *no impact*.

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?

Less than Significant Impact: The project site is situated on the edge of the developed City area, with the surrounding environment to the west and south predominantly characterized by productive agricultural land, as evidenced by satellite imagery indicating the presence of operational agricultural activities. Additionally, the California Department of Conservation's Farmland Mapping & Monitoring Program classifies the project area as Farmland of Local Importance.

However, it is important to note that the City of Fresno Zoning Ordinance has classified the project area as RS-5 (Medium Density Residential), indicating that the project site has been planned for the conversion of farmland for non-agricultural uses. This zoning classification raises the possibility of the project resulting in the conversion of farmland to non-agricultural use. Moreover, the City of Fresno

PEIR provides mitigation measures for the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, not Farmland of Local Importance. Given these considerations and the zoning classification of the project area, there would be a *less than significant impact* on the conversion of farmland to non-agricultural use.

In conclusion, the Project will result in a *less than significant impact* to agriculture and forest resources.

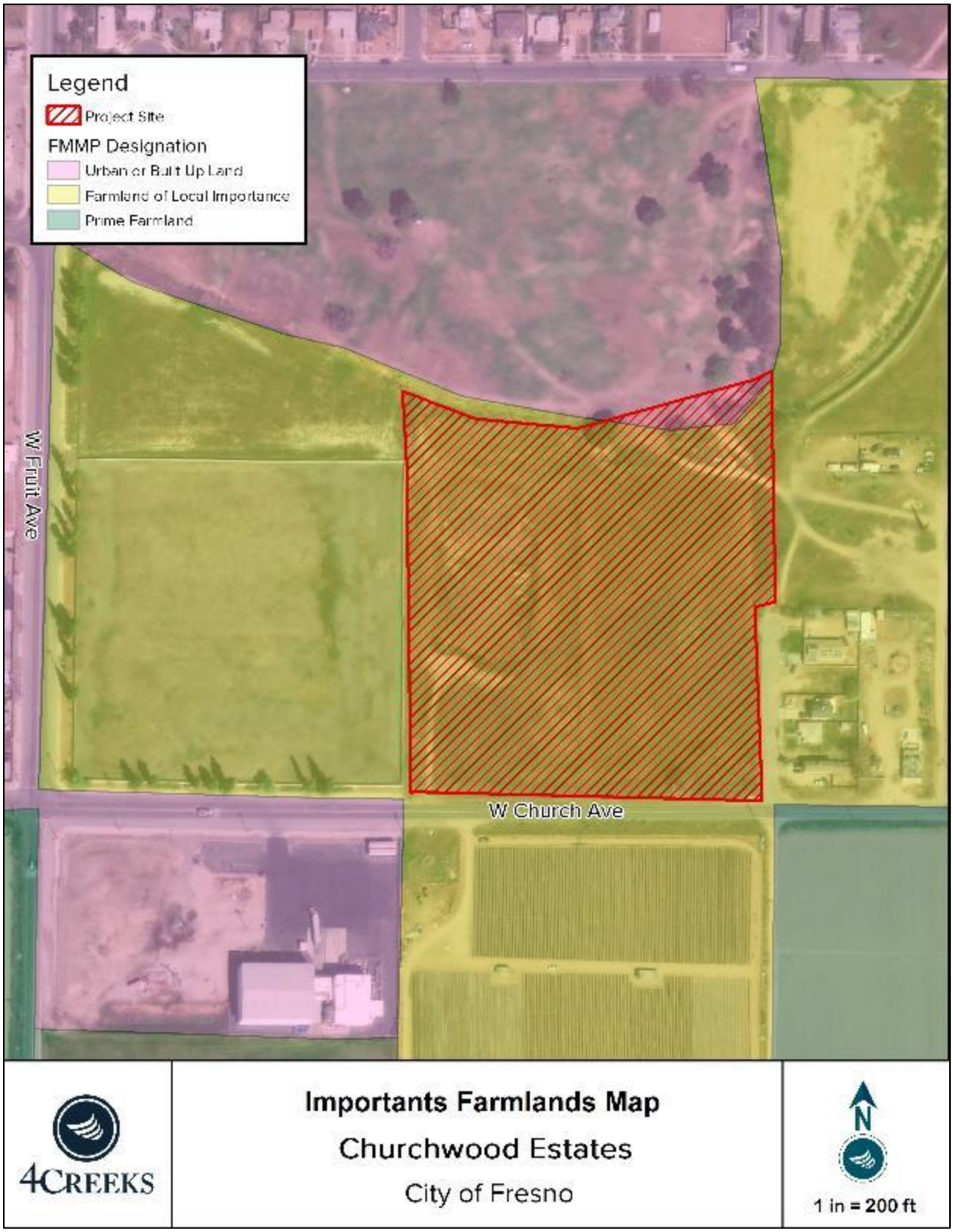


Figure 3-3 Important Farmlands Map

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

Environmental Setting

Air pollution is directly related to regional topography. Topographic features can either stimulate the movement of air or restrict air movement. California is divided into regional air basins based on topographic air drainage features. The proposed project site is within the San Joaquin Valley Air Basin (SJVAB), which is bordered by the Sierra Nevada Mountains to the east, Coastal Ranges to the west, and the Tehachapi Mountains to the south.

The mountain ranges surrounding the SJVAB restrict air movement and prevent the dispersal of pollution. As a result, 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 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 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

Valley Fever: Valley Fever is an illness caused by a fungus (*Coccidioides immitis* and *C. posadasii*) that grows in soils under certain conditions. Favorable conditions for the Valley Fever fungus include low rainfall, high summer temperatures, and moderate winter temperatures. In California, the counties with the highest incidence rate of Valley Fever are Fresno, Kern and Kings counties. When soils are disturbed by wind or activities like construction and farming, Valley Fever fungal spores can become airborne. The spores present a potential health hazard when inhaled. Individuals in occupations such as construction, agriculture, and archaeology have a higher risk of exposure due to working in areas of disturbed soils which may harbor the Valley Fever fungus.

Regulatory Setting

Federal Clean Air Act – The 1977 Federal Clean Air Act (CAA) authorized the establishment of National Ambient Air Quality Standards (NAAQS) and set deadlines for their attainment. The CAA 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 regulations. EPA's principal functions include setting NAAQS; establishing minimum national emission limits for major sources of pollution; and promulgating regulations.

California Clean Air Act – California Air Resources Board coordinates and oversees both state and federal air pollution control programs in California. As part of this responsibility, the California Air Resources Board monitors existing air quality, establishes California Ambient Air Quality Standards, 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 San Joaquin Valley Air Pollution Control District.

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 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 PM_{10} 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 (03)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	--		Ultraviolet 8 Hour Photometry

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
	8 Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)	Same as Primary Standard	
Respirable Particulate Matter (PM_{10})	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/m3		--		
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		
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/m3 (for certain areas)11	Same as Primary Standard	
	Rolling 3-Month Average	--		0.15 µg/m^3		

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
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			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

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.
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.
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.
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.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect public health.
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.
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.
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.
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.
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.
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.
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.

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
PM2.5	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.

City of Fresno General Plan: In regard to local measures and thresholds for air quality impacts, the Fresno General Resource and Conservation Element outlines goals, objectives, and policies for addressing air quality. A sample of applicable goals and policies are as follows:

Objective RC-4: In cooperation with other jurisdictions and agencies in the San Joaquin Valley Air Basin, take necessary actions to achieve and maintain compliance with State and federal air quality standards for criteria pollutants.

Policy RC-4-a: Support Regional Efforts. Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD's efforts to monitor and control air pollutants from both stationary and mobile sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.

Policy RC-4-b: Conditions of Approval. Develop and incorporate air quality maintenance requirements, compatible with Air Quality Attainment and Maintenance Plans, as conditions of approval for General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals.

Policy RC-4-c: Evaluate Impacts with Models. Continue to require the use of computer models used by SJVAPCD to evaluate the air quality impacts of plans and projects that require such environmental review by the City.

Objective LU-10: Promote regional cooperation and coordination on land use and planning issues among local jurisdictions.

LU-10-a Regional Land Use and Transportation Planning Program: Continue participation efforts in a coordinated Regional Land Use and Transportation Planning Program with the City of Clovis, Fresno and Madera counties, and other cities in the region to meet federal, State, and local air quality requirements.

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 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 Fresno County 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 ISR Rule in order to fulfill the District's emission reduction commitments in its PM10 and Ozone (Nox) attainment plans and has since determined that implementation and compliance with ISR would reduce the cumulative PM10 and Nox impacts anticipated in the air quality plans to a less than significant level.

Construction Phase. Project construction would generate pollutant emissions from the following construction activities: site preparation, grading, building construction, application of architectural coatings, and paving. The construction related emissions from these activities were calculated using CalEEMod Version 2020.4.0. The full CalEEMod Report can be found in Appendix A. As shown in Table 3-4 below, project construction related emissions do not exceed the thresholds established by the SJVAPCD.

	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Emissions Generated from Project Construction	**1.4291**	**1.1116**	**0.0026**	**1.0931**	**0.2369**	**0.1351**
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; Source: SJVAPCD, CalEEMod Analysis (Appendix A)

Operational Phase. Implementation of the proposed project would result in long-term emissions associated with area sources, such as natural gas consumption, landscaping, applications of

architectural coatings, and consumer products, as well as mobile emissions. Operational emissions from these factors were calculated using CalEEMod Version 2020.4.0. The Full CalEEMod Report can be found in Appendix A. As shown in Table 3-5 below, the project's operational emissions do not exceed the thresholds established by the SJVAPCD.

	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Operational Emissions (Dry Years)	**2.7403**	**0.7708**	**0.00607**	**0.4761**	**0.6063**	**0.1708**
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; 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 and there is *a less than significant impact.*

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

Less Than Significant Impact: The SJVAPCD is responsible for bringing air quality in Fresno County 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, neither construction-related emissions nor operation-related emissions will exceed thresholds established by the SJVAPCD. As a result, there would not be a cumulatively considerable net increase in any criteria pollutant for which the project region is designated as non-attainment under applicable federal or state ambient air quality standards. The impact would be *less than significant.*

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

Less than Significant Impact: Sensitive receptors include those individuals who are sensitive to air pollution including children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The single-family residences located directly east of the project site are the closest sensitive receptors. Additionally, Computech Middle School, Edison High School, West Fresno Center City College, and Hyde Park are within a .5-mile radius of the project site. The project site is also located 6,600 feet from State Route 99. According to CARB's Air Quality and Land Use Handbook, the association of traffic related emissions with adverse health impacts can be seen within 1,000 feet and strongest within 300 feet. The project does not include any project components identified by the California Air Resources Board that could potentially impact any

sensitive receptors. These include heavily traveled roads, distribution centers, fueling stations, and drycleaning operations. The project would not expose sensitive receptors to substantial pollutant concentrations because the project is located 6,600 feet from State Route 99 which is not within the 1,000 feet buffer stated in CARB's Air Quality and Land Use Handbook. The impact would be *less than significant.*

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

Less Than Significant Impact: The City of Fresno has many sources with the potential to generate odors including wastewater treatment facilities, landfills, transfer stations, recycling centers, manufacturing plants, food processors, painting operations, and rendering plants. The project is the development of 58 single-family houses and is not identified as a source with the potential to generate odors. While the project will create temporary localized odors during project construction, the proposed project will not introduce a conflicting land use (surrounding land includes residential neighborhoods) to the area and will not have any component that would typically emit odors. The project would not create objectionable odors affecting a substantial number of people. Therefore, the impact is *less than significant.*

In conclusion, the Project will not result in any air quality impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

IV. BIOLOGICAL RESOURCES

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

Environmental Setting

The project site is in an urban environment in the southwest region of the City of Fresno. The surrounding area consists of residential, recreational, agricultural, and vacant land uses. The topography of the area is relatively flat, there is one depression approximately 300 feet in diameter located on the western border of the site. Existing vegetation consists of a few small trees, no shrubs, ruderal grasses, and invasive weeds. A records search was conducted for threatened or endangered species that could potentially occur in the vicinity of the Project Area. The records search included a review of the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) and the California Native Plant Society (CNPS) Online Rare Plant Inventory. From these sources a list of special-status plant and animal species was generated.

The IPaC search revealed 6 additional Federally listed sensitive wildlife species likely to occur within or near the Project Site which include:

- Fresno Kangaroo Rat (*Dipodomys nitratoides exilis*)
- San Joaquin Kit Fox (*Vulpes macrotis mutica*)
- Blunt-nosed Leopard Lizard (*Gambelia silus*)
- California Tiger Salamander (*Ambystoma californiense*)
- Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)

The California Native Plant Society (CNPS) Online Rare Plant Inventory identified the following 2 special-status plant species likely to occur within or proximate to the Project Site:

- California jewelflower (*Caulanthus californicus*)
- Madera leptosiphon (*Leptosiphon serrulatus*)

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 United States Fish and Wildlife Service (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, the 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): 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 Planning Area contains 11 vegetation communities, two (2) special-status natural communities, and 29 special-status species (including 12 plant species and 17 wildlife species). The General Plan identified objectives and policies regarding the preservation and conservation of wildlife species that would be applicable to the Project:

OBJECTIVE POSS-5. Provide for long-term preservation, enhancement, and enjoyment of plant, wildlife, and aquatic habitat.

Policy POSS-5-a. Habitat Area Acquisition. Support federal, State, and local programs to acquire significant habitat areas for permanent protection and/or conjunctive educational and recreational use.

Policy POSS-5-b. Habitat Conservation Plans. Participate in cooperative, multijurisdictional approaches for area-wide habitat conservation plans to preserve and protect rare, threatened, and endangered species.

Policy POSS-5-c. Buffers for Natural Areas. Require development projects, where appropriate and warranted, to incorporate natural features (such as ponds, hedgerows, and wooded strips) to serve as buffers for adjacent natural areas with high ecological value. Policy POSS-5-d Guidelines for Habitat Conservation. Establish guidelines for habitat conservation and mitigation programs, including:

- Protocols for the evaluation of a site's environmental setting and proposed design and operating parameters of proposed mitigation measures.
- Methodology for the analysis depiction of land to be acquired or set aside for mitigation activities.
- Parameters for specification of the types and sources of plant material used for any revegetation, irrigation requirements, and post-planting maintenance and other operational measures to ensure successful mitigation.
- Monitoring at an appropriate frequency by qualified personnel and reporting of data collected to permitting agencies.

Policy POSS-5-e. Pursue development of conjunctive habitat and recreational trail uses in flood control and drainage projects.

Policy POSS-5-f. Regional Mitigation and Habitat Restoration. Coordinate habitat restoration programs with responsible agencies to take advantage of opportunities for a coordinated regional mitigation program.

OBJECTIVE POSS-6. Maintain and restore, where feasible, the ecological values of the San Joaquin River corridor.

City of Fresno Municipal Code (Section 13-305-Tree Preservation). The City of Fresno Municipal Code Section 13-305 protects all public trees in the City, including but not limited to trees that are affecting surface improvements or underground facilities or which are diseased, or located where construction is being considered or will occur. No person, except authorized City personnel, shall remove, destroy, deface or injure any tree on public property by any means including but not limited to: pouring material on or immediately adjacent to any tree, attaching any sign or notice to a tree without supervision of the Director, causing or encouraging fire around any tree, or covering the ground within a 4-foot radius around any tree with concrete or other unnatural surface. Any removal of trees shall be conducted only after an evaluation and inspection by the Director, and written authorization.

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?

Less than Significant Impact with Mitigation: The project site was previously disturbed and is currently vacant with a few small trees which have the potential to provide suitable habitat for special status species. A records search was conducted for threatened or endangered species that could potentially occur in the vicinity of the Project Area. The records search included a review of the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) and the California Native Plant Society (CNPS) Online Rare Plant Inventory. From these sources a list of special-status plant and animal species was generated.

The IPaC search revealed 6 additional Federally listed sensitive wildlife species likely to occur within or near the Project Site which include:

- Fresno Kangaroo Rat (*Dipodomys nitratoides exilis*)
- San Joaquin Kit Fox (*Vulpes macrotis mutica*)
- Blunt-nosed Leopard Lizard (*Gambelia silus*)
- California Tiger Salamander (*Ambystoma californiense*)
- Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)

The California Native Plant Society (CNPS) Online Rare Plant Inventory identified the following special-status plant species likely to occur within or proximate to the Project Site:

- California jewelflower (*Caulanthus californicus*)

There is potential for special-status species to occur in the vicinity of the Project Site. Therefore, a pre-construction survey for these species shall be conducted prior to construction activities as described in (Mitigation Measure BIO-1.1). If the pre-construction survey identifies any special-status species located within the project area, construction shall not proceed without the implementation of Mitigation Measures BIO-1.2 and BIO-1.3. If possible, construction should not occur between February and August, if that schedule is not feasible a pre-construction survey needs to be conducted specific to nesting birds. (Mitigation Measure BIO-1.4). There is a *less than significant impact with mitigation* incorporated.

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?

No Impact: The project site does not contain any riparian habitats or other sensitive natural communities, nor would they be impacted by the activities associated with the construction and operation of the Project and therefore there is *no impact*.

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: According to the US Fish and Wildlife Service National Wetlands Inventory Mapper, there are no federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) on or near the Project site. Hence, no wetlands would be impacted by any activities associated with implementation of the Project and therefore there is *no impact.*

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: Wildlife movement corridors are habitats that connect two or more areas of significant wildlife habitats. These corridors typically include vegetation and topography that facilitate the movements of wild animals. The project site does interfere with the movement of any native or migratory fish or wildlife species, migratory wildlife corridors, or impede the use of native wildlife nursery sites. There is *no impact*.

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

Less than Significant Impact: Section 13-305 of the City of Fresno Municipal Code requires inspection by the Director and written authorization prior to the removal of any public trees in the city. The proposed project does not anticipate the removal of any trees; however, the project will comply with this ordinance if any trees are to be removed. In addition, there are only three trees within the project area, and they are located along the northern and southern borders of the site. The project would not conflict with any local policies or ordinances protecting biological resources. There is *less than significant 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?

Less than Significant Impact: The project falls within the jurisdiction of the 2008 PG&E Operation and Maintenance (O&M) Habitat Conservation Plan (HCP). Upon careful evaluation, it appears that the project is consistent with the goals and policies outlined in this conservation plan. As such, there is no indication of conflict with the provisions of an adopted habitat conservation plan, and the project aligns with the established habitat conservation objectives in the region. There is a *less than significant impact.*

Mitigation Measures for Impacts to Biological Resources Incorporated from PEIR

Mitigation Measure BIO-1.1: Construction of a proposed project shall avoid, where possible, vegetation communities that provide suitable habitat for a special-status species known to occur within the Planning Area. If construction within potentially suitable habitat must occur, the presence/absence of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If a special-status species are determined to occupy any portion of a project site, avoidance and minimization measures shall be incorporated into the construction phase of a project to avoid direct or incidental take of a listed species to the greatest extent feasible.

Mitigation Measure BIO-1.2: Direct or incidental take of any state or federally listed species shall be avoided to the greatest extent feasible. If construction of a proposed project will result in the direct or incidental take of a listed species, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the CDFW 2081 and USFWS Section 7 or Section 10 permitting processes shall take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation.

Mitigation Measure BIO-1.3: Development within the Planning Area shall avoid, where possible, special-status natural communities and vegetation communities that provide suitable habitat for special-status species. If a proposed project will result in the loss of a special-status natural community or suitable habitat for special-status species, compensatory habitat-based mitigation is required under CEQA and CESA. Mitigation shall consist of preserving on-site habitat, restoring similar habitat or purchasing off-site credits from an approved mitigation bank. Compensatory mitigation shall be determined through consultation with the City and/or resource agencies. An appropriate mitigation strategy and ratio shall be agreed upon by the developer and lead agency to reduce project impacts to special-status natural communities to a less than significant level. Agreed-upon mitigation ratios shall depend on the quality of the habitat and presence/absence of a special-status species. The specific mitigation for project level impacts shall be determined on a case-by-case basis.

Mitigation Measure BIO-1.4: Proposed projects within the Planning Area should avoid, if possible, construction within the general nesting season of February through August for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey shall be conducted by a qualified biologist to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor shall be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer shall be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor. Prior to commencement of grading activities and issuance of any building permits, the Director of the City of Fresno Planning and Development Department, or designee, shall verify that all proposed project grading and construction plans include specific documentation regarding the requirements of the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503, that

preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field.

In conclusion, the Project will not result in any impacts to biological resources beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☑	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☑	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☑	☐	☐

Environmental Setting

The Yokuts were the first residents of the Fresno area, with small tribes occupying the floodplains of the Big Dry Creek and the Little Dry Creek. Ethnographic evidence suggests the City of Fresno is located in part of the Southern Valley Yokuts territory.

European settlement did not occur until the 1760's, as land-based expeditions originating from Spanish Mexico into Southern California started to occur. European-American settlement of this region began in 1851 with the building of Fort Miller on the San Joaquin River. In 1856, Fresno County was created, and the first county seat was located in the foothill community of Millerton. The City of Fresno became the county seat in 1874 and was incorporated as a city in 1885.

A Cultural Resources Records Search was conducted by the Southern San Joaquin Valley Information Center on March 6, 2023. The records search stated there have been two previous cultural resource studies completed within the project area, FR-02140 and FR-02175. There have been five additional cultural resource studies conducted within the one-half mile radius: FR-02076, FR-02105, FR-02213, FR-02719, and FR-02987. All these reports are greater than five years of age and should be considered out of date for current studies. However, Table Mountain Rancheria and Dumna Wo Wah Tribal Government have both been sent tribal consult letters for this project and will notify the lead agency if there are more recent resources on or around the project site.

According to the records search, there are no recorded cultural resources within the project area. However, within a one-half mile radius, there are two recorded historic resources. These resources consist of a historic era single-family residence and a historic era church, respectively. The full findings of the records search can be found in Appendix B.

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 (SHPO).

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 General Plan identifies policies related to historic and cultural resources including:

Policy HCR-2-c Project Development. Prior to project approval, continue to require a project site and its Area of Potential Effects (APE), without benefit of a prior historic survey, to be evaluated and reviewed for the potential for historic and/or cultural resources by a professional who meets the Secretary of Interior's Qualifications. Survey costs shall be the responsibility of the project developer. Council may, but is not required, to adopt an ordinance to implement this policy.

Policy HCR-2-d Native American Sites. Work with local Native Ameri Native American Sites. can tribes to protect recorded and unrecorded cultural and sacred sites, as required by State law, and educate developers and the community-at-large about the connections between Native American history and the environmental features that characterize the local landscape. Commentary: Development on archaeologically sensitive sites requires on-site monitoring by appropriate Native American consultant(s) and a qualified archaeologist for all grading, excavation, and site preparation activities that involve earth-moving operations.

Policy HCR-2-g Demolition Review. Review all demolition permits to determine if the resource scheduled for demolition is potentially eligible for listing on the Local Register of Historic Resources. Consistent with the Historic Preservation Ordinance, refer potentially eligible resources to the Historic Preservation Commission and as appropriate to the City Council.

City of Fresno Historic Preservation Ordinance: The City of Fresno has established a Historic Preservation Commission and a Local Register of Historic Resources (Fresno Municipal Code, Chapter 12, Article 16). First established in 1979, the Ordinance was last updated in 1999. The Ordinance is used to provide local levels of control over the historical aesthetics of cultural resources within the city, and to ensure that the potential impact to locally significant historical resources that may be the subject of redevelopment are given reasonable consideration. The purpose of the Ordinance is to "continue to preserve, promote and improve the historic resources and districts of the City of Fresno for educational, cultural, economic and general welfare of the public; to continue to protect and review changes to these resources and districts which have a distinctive character or a special historic, architectural, aesthetic or cultural value to this City, state and nation; to continue to safeguard the heritage of this city by preserving and regulating its historic buildings, structures, objects, sites and districts which reflect elements of the City's historic, cultural, social, economic, political and architectural history; to continue to preserve and enhance the

environmental quality and safety of these landmarks and districts; to continue to establish, stabilize and improve property values and to foster economic development." (Article 16 Section 12-1602(a).) The Ordinance provides legislative mechanisms to protect certain historical resources. Local registers of identified historical resources are known, including:

1. Heritage Properties. These are defined as a resource which is worthy of preservation because of its historical, architectural or aesthetic merit but which is not proposed for and is not designated as an Historic Resource under the ordinance.
2. Historic Resources. These are defined as any building, structure, object or site that has been in existence more than fifty years and possesses integrity of location, design, setting, materials, workmanship, feeling and association, and is associated with events that have made a significant contribution to the broad patterns of City history, or is associated with the lives of persons significant in our past, or embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master or possesses high artistic values; or has yielded, or may be likely to yield, important information in prehistory or history; and has been designated as such by the Council pursuant to the provisions of the Ordinance.
3. Local Historic Districts. These are defined as any finite group of resources related to one another in a clearly distinguishable way or any geographically definable area which possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. The Local Historic District must be significant as well as identifiable and it must meet the Local Register Criteria for listing on that Register. Contributors to Historic Districts are defined as any Historic Resource that contributes to the significance of the specific Local Historic District or a proposed National Register Historic District under the criteria set forth in the Ordinance.
4. National Register Historic Districts, which shall mean any finite group of resources related to one another in a clearly distinguishable way or any geographically definable area which possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. A National Register Historic District must be significant as well as identifiable and it must meet the National Register Criteria for listing on that Register. Contributors to a National Register Historic District are defined as any individual Historic Resource which contributes to the significance of a National Register Historic District under the criteria set forth in the Ordinance.

Discussion

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

Less Than Significant Impact with Mitigation: A records search was conducted on behalf of the Applicant at the Southern San Joaquin Valley Information Center (SSJVIC), 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 there have been two previous cultural resource studies in the project area. There have been five additional cultural resource studies within a one-half mile radius. All these reports are greater than five years of age and should be considered out of date for current studies.

The Table Mountain Rancheria Tribe and the Dumna Wo Wah were invited to consult under AB 52 and will notify the lead agency if there are more recent resources on or around the project site.

There are no recorded resources within the project area and there are two recorded resources within the one-half mile radius. These resources consist of a historic era single family residence and a historic era church, respectively. There are no recorded cultural resources within the project area or radius 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.

Although no other cultural resources were identified, the presence of remains or unanticipated cultural resources under the ground surface is possible. Implementation of Mitigation Measures CUL-1.1 will ensure that impacts to this checklist item will be *less than significant with mitigation incorporated*.

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 the City of Fresno PEIR Mitigation Measure CUL-1.1 and CUL-1.2 will ensure that potential impact to unknown archeological resources will be *less than significant with mitigation incorporated*.

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 project construction, there is a potential for a significant impact. As such, implementation of GP PEIR Mitigation Measures CUL-1.1, CUL 1.2, CUL-2.1, and CUL-3.1 will ensure that impacts remain *less than significant with mitigation incorporated.*

Mitigation Measures for Impacts to Cultural Resources Incorporated from PEIR

Mitigation Measure CUL-1.1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall

be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Mitigation Measure CUL-1.2: Prior to approval of any discretionary project that could result in an adverse change to a potential historic and/or cultural resource, the City shall require a site-specific evaluation of historic and/or cultural resources by a professional who meets the Secretary of Interior's Qualifications. The evaluation shall provide recommendations to mitigate potential impacts to historic and/or cultural resources and shall be approved by the Director of Planning and Development.

Mitigation Measure CUL-2.1: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for prehistoric archaeological resources shall be conducted. The following procedures shall be followed.

- If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines Section 15064.5. If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any prehistoric archaeological artifacts recovered as a result of mitigation shall be provided to a City approved institution or person who is capable of providing long term preservation to allow future scientific study.

- If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated for significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist. If additional prehistoric archaeological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

Mitigation Measure CUL-3.1: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to

Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains.

Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

In conclusion, the Project will not result in any cultural resource impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

VI. ENERGY

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

Environmental Setting

Pacific Gas and Electric (PG&E) provides electricity services within the City of Fresno. PG&E serves approximately 16 million people throughout a 70,000 square mile service area in northern and central California. PG&E 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 2021 as compared to the statewide average.

Fuel Type		PG&E Power Mix	California Power Mix
Coal		0%	3%
Large Hydroelectric		4%	9%
Natural Gas		9%	38%
Nuclear		39%	9%
Other (Oil/Petroleum Coke/Waste Heat)		0%	<1%
Unspecified Sources of Power[1]		2%	7%
Eligible Renewables	Biomass	4%	2%
	Geothermal	5%	5%
	Small Hydro	2%	1%
	Solar	26%	14%
	Wind	11%	11%
	Total Eligible Renewable	**48%**	**34%**
1. "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.			

Table 3-6. 2021 PG&E and State average power resources; Source: California Energy Commission

PG&E also provides natural gas services to the project area, however natural gas will not be required to operate the proposed project.

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. Title 24 requirements are enforced locally by the City of Selma Building Department.

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.

City of Fresno General Plan: Chapter 7: Resource Conservation and Resilience of the City of Fresno General Plan contains the following objectives and policies that are applicable to the Project:

Policy RC-2. Promote land uses that conserve resources.

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.

Policy RC-2-b. Provide Infrastructure for Mixed-Use and Infill. Promote investment in the public infrastructure needed to allow mixed-use and denser infill development to occur in targeted locations, such as expanded water and wastewater conveyance systems, complete streetscapes, parks and open space amenities, and trails. Discourage investment in infrastructure that would not meet these criteria.

Policy RC-8. Reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources.

Policy RC-8-a. Existing Standards and Programs. Continue existing beneficial energy conservation programs, including adhering to the California Energy Code in new construction and major renovations.

Policy RC-8-b. Energy Reduction Targets. Strive to reduce per capita residential electricity use to 1,800 kWh per year and non-residential electricity use to 2,700 kWh per year per capita by developing and implementing incentives, design and operation standards, promoting alternative energy sources, and cost-effective savings.

Policy RC-8-c. Energy Conservation in New Development. Consider providing an incentive program for new buildings that exceed California Energy Code requirements by fifteen percent.

Policy RC-8-d. Incentives. Establish an incentive program for residential developers who commit to building all of their homes to ENERGY STAR performance guidelines.

Policy RC-8-e. Energy Use Disclosure. Promote compliance with State law mandating disclosure of a building's energy data and rating of the previous year to prospective buyers and lessees of the entire building or lenders financing the entire building.

Policy RC-8-f. City Heating and Cooling. Reduce energy use at City facilities by updating heating and cooling equipment and installing "smart lighting" where feasible and economically viable.

Policy RC-8-g. Revolving Energy Fund. Create a City Energy Fund which uses first year savings and rebates from completed City-owned energy efficiency projects to provide resources for additional energy projects. Dedicate this revolving fund to the sole use of energy efficiency projects that will pay back into the fund.

Policy RC-8-h. Solar Assistance. Identify and publicize information about financial mechanisms for private solar installations and provide over-the counter permitting for solar installations meeting specified standards, which may include maximum size (in kV) of units that can be so approved.

Policy RC-8-i. Renewable Target. Adopt and implement a program to increase the use of renewable energy to meet a given percentage of the city's peak electrical load within a given time frame.

Policy RC-8-j. Alternative Fuel Network. Support the development of a network of integrated charging and alternate fuel station for both public and private vehicles, and if feasible, open up municipal stations to the public as part of network development.

Policy RC-8-k. Energy Efficiency Education. Provide long-term and on-going education of homeowners and businesses as to the value of energy efficiency and the need to upgrade existing structures on the regular basis as technology improves and structures age.

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 the construction and operation of single-family homes. During project construction there would be an increase in energy consumption related to worker trips and operation of construction equipment. This increase in energy use would be temporary and limited to the greatest extent possible through compliance with local, state, and federal regulations. Vehicle fuel consumption during project construction was estimated based on the assumed construction schedule, vehicle trip lengths, and the number of workers per construction phase as provided by CalEEMod, and Year 2022 gasoline/diesel MPG factors provided by the EMFAC2014. To simplify the estimation process, it was assumed that all worker vehicles used gasoline as a fuel source and all vendor vehicles used diesel as a fuel source. This simplification serves to streamline the estimation process, aligns with typical industry practices in our region, and promotes a conservative estimation approach. Additionally, it enhances transparency where specific vehicle

data may be limited. It is important to note that these assumptions have been made for simplification and may be adjusted as more accurate data becomes available during the project's progression, with any updates documented and communicated as necessary. Table 3-7, below, provides gasoline and diesel fuel used by on-road sources during each phase of project construction.

Construction Phase	# of Days	Daily Worker Trips[1]	Daily Vendor Trips[1]	Gasoline Fuel Use (gallons)[2]	Diesel Fuel Use (gallons)[2]
Demolition	20	15	0	110.8	0
Site Preparation	10	18	0	66.5	0
Grading	20	15	0	110.8	0
Building Construction	230	39	13	3314.3	2589.2
Paving	20	15	0	110.8	0
Architectural Coating	20	8	0	59.1	0
Total	**320**	**N/A**	**N/A**	**3772.4**	**2589.2**

1. Data provided by CalEEMod (Appendix A)
2. See Appendix C

Table 3-7. On-Road Mobile Fuel Use Generated by Construction Activities. Source: CalEEMod (v. 2020.4.0); EMFAC2014

During project construction there would be an increase in energy consumption related to worker trips and operation of construction equipment (Table 3-7). This energy use would be limited to the greatest extent possible through compliance with local, state, and federal regulations. Since construction-related energy use would be temporary and limited to the greatest extent feasible through compliance with local, state and federal policies related to energy conservation, and operation of the project is not anticipated to increase energy consumption beyond existing conditions, the project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

Housing Units	Population[1]	Electricity Usage (MWh/yr)[1]	Electricity Usage per Capita (MWh/yr)	Natural Gas Usage (Therm/yr)[1]	Natural Gas Usage per Capita (Therm/yr)
58	**166**	**462.5**	**2.79**	**13,941.8**	**83.99**

1. Data provided by CalEEMod (Appendix A)

Table 3-8. Energy Use Generated by Operational Activities. Source CalEEMod (v. 2020.4.0); EMFAC2014

The California Energy Commission estimates Fresno County residential uses consumed approximately 3.21 million MWh of electricity and 107 million Therms of natural gas in 2021. According to the U.S. Energy Information Administration, California residential uses consumed approximately 100 million MWh of electricity and approximately 4.6 billion Therms of natural gas in 2021. Per capita, the Project's estimated electricity demand is higher than California's demand (2.41 MWh/yr) and the City of Fresno's demand (2.61 MWh/yr). However, the project would comply with all energy efficiency standards required under Title 24, and would not result in the inefficient, wasteful, or unnecessary consumption of energy. According to the City of Fresno PEIR, residential uses consume 1.42 million MWh of electricity annually meaning the proposed project would only increase the total residential electricity demand by 0.03%. Per capita, the Project's estimated natural gas demand is lower than

both California's demand (116 Therm/yr) and the City of Fresno's (138 Therm/yr). The City of Fresno residential uses alone consume 75 million Therms of natural gas annually, meaning the Project is estimated to increase the City of Fresno's natural gas consumption by 0.02%. The Project will comply with the City's energy efficiency policies, including General Plan Policies RC-8-a through RC-8-k, to ensure energy consumption is reduced as much as possible during project construction and operation. These policies are listed in the regulatory section above.

The operation of the Project would also result in the consumption of vehicle fuel from residents and visitors leaving and coming to the site, increasing the vehicle miles traveled (VMT) generated by the project. VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto roads, the project may cause a significant transportation impact. For the proposed Project, Peters Engineering Group prepared a VMT analysis. The analysis found that the City of Fresno VMT Thresholds Section 3.0 contains a list of conditions that would allow for the presumption that a development project will have a less-than-significant impact. These conditions may be size, location, proximity to transit, or trip-making potential. The proposed Project is located within a green area in the City of Fresno - Existing VMT per Capita Map, meaning the project is within an area that is known to generate low VMT per Capita. Therefore, no additional analyses are required, and it is presumed that there is *a less than significant impact.*

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

No Impact: As discussed previously, the construction and operation of the Project would be subject to compliance with energy efficiency regulations including California Code of Regulations Title 20, California Code of Regulations Title 24, and the Fresno General Plan. The applicable regulations would be implemented to reduce energy waste from the Project.

Title 20: California Code of Regulations Title 20 establishes energy efficiency standards for appliance efficiency and incorporation. Specifically, it centers around the regulations set forth by the California Energy Commission (CEC) regarding energy conservation in various appliances, encompassing lighting fixtures, refrigerators, air conditioners, and water heaters. A product is deemed compliant with Title 20 if it meets the energy efficiency standards outlined by the CEC. The primary objective of these regulations is to institute and enforce standards that contribute to the reduction of energy consumption and the promotion of sustainable practices.

Title 24: California Code of Regulations Title 24, also known as the California Building Standards Code, contains regulations designed to ensure the energy efficiency, accessibility, and overall safety of buildings. Title 24 is intended to align with the state of California's commitment to environmental stewardship and reducing the carbon footprint of buildings. The code is divided into 12 parts, each containing regulations and standards pertaining to their respective topics.

Title 24, Part 11, (CALGreen Code): Part 11 of California Building Standards Code specifically focuses on green building standards and sustainable construction practices. CALGreen Code was established to promote environmental sustainability in the construction industry and to minimize the environmental impact of buildings. Regulations within this code pertain to energy efficiency, water conservation, and indoor environmental quality.

Fresno General Plan: The Resource Conservation and Resilience Element of the City of Fresno's General Plan establishes crucial objectives and policies dedicated to the preservation of natural resources within Fresno. This element encompasses various aspects, including air resources, water resources, energy resources, and land resources. To conserve these essential resources, the element includes regulations pertaining to energy efficiency and renewable energy, highlighting Fresno's commitment to sustainable practices and the reduction of its environmental footprint.

The application of these regulations is imperative to reduce energy waste stemming from the Project's construction and ongoing operation. They encompass various aspects such as building design, insulation, lighting, heating, and cooling systems, as well as the use of energy-efficient materials and equipment. Therefore, the proposed project will not conflict with or obstruct any state or local plans for renewable energy or energy efficiency. The proposed project will comply with all state and local policies related to energy efficiency and there is *no impact*.

VII. GEOLOGY AND SOILS

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

Environmental Setting

Geologic Stability and Seismic Activity

- **Seismicity**: Although there are several potentially active faults within and near Fresno County, and active seismic areas exist in the western areas of the County, the majority of the County, including the proposed project site, is considered to be at relatively low risk for seismic activity. The *Fresno County Multi-Jurisdictional Hazard Mitigation Plan* (2018 HMP) (May 2018) identifies the project site as having a 20-30% probability of shaking 2% in 50 years. Ground shaking can

result in other geological impacts, including liquefaction, landslides, lateral spreading, subsidence, or collapse.

- **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. In the event of strong earthquake shaking, the relatively rapid loss of soil shear strength creates a temporary, fluid-like behavior of the soil. This can result in landslides and lateral spreading. 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.

- **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 are caused by both natural and human-induced changes in slope stability and often accompany other natural hazard events, such as floods, wildfire, or earthquake. While western portions of the County are considered to be high landslide hazard areas, the majority of the County, including the proposed project site, is considered a moderate landslide hazard area. 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 2018 HMP states that occurrence of landslide events within populated areas of Fresno County is unlikely. The 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. The Fresno County Multi-Hazard Mitigation Plan states that minor landslides will likely continue to impact the area when heavy precipitation occurs.

- **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 as a result of groundwater, oil, and gas withdrawal. Although western portions of the County show signs of deep and shallow subsidence, the majority of the County, 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 two soil types. The properties of these soils are described briefly below:

- **Atwater sandy loam, 0 to 3 percent slopes:** The Atwater series consists of very deep, well drained soils formed in granitic alluvium. These soils are Well drained with moderately rapid permeability and slow runoff.
- **Greenfield sandy loam, moderately deep, 0 to 3 percent slopes:** The Greenfield series consists of deep, well drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. These soils are well drained; slow to medium runoff; moderately rapid permeability.

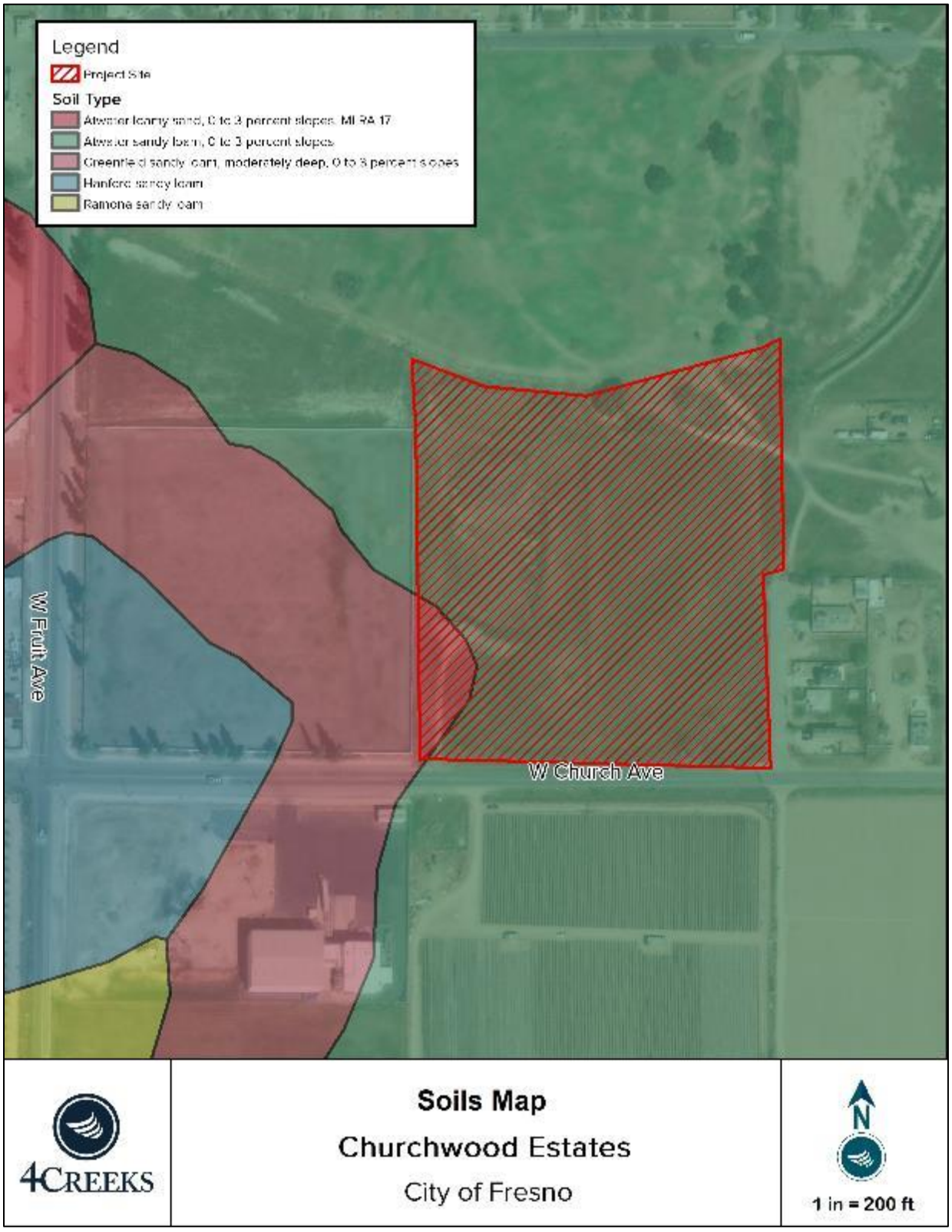


Figure *3-4 Soils Map*

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, 2019 Edition, as promulgated by the California Building Standards Commission, which incorporates the adoption of the 2018 edition of the of the International Building Code, as amended with necessary California amendments and the 2018 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 Chapter 9: Noise and Safety of the City of Fresno General Plan includes the following objectives and policies regarding geology and soils that are applicable to the Project:

Objective NS-2. Minimize risks of property damage and personal injury posed by geologic and seismic risks.

Policy NS-2-a. Seismic Protection. Ensure seismic protection is incorporated into new and existing construction, consistent with the Fresno Municipal Code.
Policy NS-2-b. Soil Analysis Requirement. Identify areas with potential geologic and/or soils hazards, and require development in these areas to conduct a soil analysis and mitigation plan by a registered civil engineer (or engineering geologist specializing in soil geology) prior to allowing on-site drainage or disposal for wastewater, stormwater runoff, or swimming pool/spa water.
Policy NS-2-c. Landfill Areas. Require proposed land uses on or near landfill areas to be designed and maintained to comply with California Code of Regulations, Title 27, Section 21190, Post Closure Land Use

Objective PU-6: Ensure the provision of adequate sewage treatment and disposal by utilizing the Fresno-Clovis Regional Wastewater Reclamation Facility as the primary facility, when economically feasible, for all existing and new development within the Metropolitan Area.

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.

Less than Significant 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 *a less than significant impact* related to the risk of loss, injury or death involving a rupture of a known earthquake fault.

ii. Strong seismic ground shaking?

Less than Significant Impact: According to the 2018 HMP, 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 *a less than significant impact.*

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact: No specific countywide assessment of liquefaction has been performed; however, the 2018 HMP 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 are not suitable for liquefaction, there are *less than significant impacts.*

iv. Landslides?

Less than Significant 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 a *less than significant impact.*

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

Less Than Significant Impact with Mitigation Incorporated: The potential for erosion is low since the project site is relatively flat. During construction, activities such as grubbing, clearing or grading may increase the probability for erosion and a loss of topsoil; however, any impacts will be temporary and minimized with Mitigation Measure GEO-2.1 and best management practices (BMPs) required by the SWPPP, which are developed to prevent significant impacts from construction-related activities. Therefore, the impact would be *less than significant with mitigation incorporated*.

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?

No Impact: The soil associated with the project site is considered stable and has a low capacity for landslides, lateral spreading, subsidence, liquefaction or collapse. Since the project area is stable, and

this project would not result in a substantial grade change to the topography to the point that it would increase the risk of landslides, lateral spreading, subsidence, liquefaction or collapse, there is *no impact.*

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: Figure 3-4 reveals the presence of two distinct soil types within the proposed project area, both classified as sandy loam. According to the 2018 HMP, sandy loam has a low-clay content and therefore is non-expansive. Because the soils associated with the project do not exhibit shrink swell behavior, implementation of the project will pose no 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact: The proposed project would not include the use of septic tanks or any other alternative wastewater disposal systems. The wastewater from residential homes will tie into the existing City sewer services. Therefore, there is *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 Mitigation Measure GEO-6.1 from the City of Fresno General Plan PEIR will ensure that any impacts resulting from project implementation remain *less than significant with mitigation incorporated*.

Mitigation Measures for Impacts to Soils and Geological Resources Incorporated from City of Fresno General Plan PEIR:

Mitigation Measure GEO-2.1: To prevent the project from resulting in substantial soil erosion or the loss of topsoil, the project shall implement a Stormwater Pollution Prevention Plan (SWPPP) incorporating best management practices (BMPs). This plan will be designed to effectively manage stormwater runoff and minimize soil disturbance during construction activities. Additionally, the plan will outline regular inspections, maintenance schedules, and employee training to ensure the proper implementation of erosion control measures throughout the construction phase. By addressing stormwater management through the SWPPP and integrating best management practices, the project aims to minimize soil erosion, protect topsoil integrity, and mitigate potential adverse impacts on the surrounding environment.

Mitigation Measure GEO-6.1: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed:

- If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

- If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

In conclusion, the Project will not result in any geologic impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	☐	☑	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☑	☐	☐

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 34ºC 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 gases 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 3-9. 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 (CH4)	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.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Carbon dioxide (CO2)	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 an 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.
Nitrous oxide (N2O)	Commonly known as laughing gas, is a chemical compound with the formula N2O. 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 3-9. Greenhouse Gasses; Source: EPA, Intergovernmental Panel on Climate Change

In regard to the quantity of these gases that 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 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.

Regulatory Setting

San Joaquin Valley Air Pollution Control District:
AB 32: 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 Scoping Plan was prepared by CARB and adopted in 2011. CARB released the 2017 Scoping Plan in November 2017. The 2017 Scoping Plan provides strategies for achieving the 2030 target established by EO B-30-15 and codified in SB 32. The Scoping Plan recommends local plan-level GHG emissions reduction goals.

SB 1078, SB 107 and Executive Order S-14-08: SB 1078, SB 107, and Executive Order S-14-08 require California to generate 20% of its electricity from renewable energy by 2017. SB 107 then changes the 2017 deadline to 2010. Executive Order S-14-08 required that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.

City of Fresno Greenhouse Gas Reduction Plan: The City of Fresno has prepared a *City of Fresno Greenhouse Gas Reduction Plan Update* (2020 GHG Reduction Plan) (March 2020) included as Appendix G of the 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: The City of Fresno's Strategy for Achieving Sustainability* (April 2007) 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 with Mitigation Incorporated: Greenhouse gas emissions for the construction and operation of the proposed project 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 232.5 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 SJVAPCD does not provide numeric thresholds to assess the significance of greenhouse gas emissions. Instead, the *SJVAPCD Guidance for Valley Land Use Agencies in Addressing GHG Emission Impacts for New Projects* (December 17, 2009) under CEQA states that projects which achieve a 29% GHG emission reduction compared to Business as Usual (BAU) would be determined to have a less than significant individual and cumulative impact for GHG during operation. BAU conditions are defined based on the year 2005 building energy efficiency, average vehicle emissions, and electricity energy conditions. The BAU conditions assume no improvements in energy efficiency, fuel efficiency, or renewable energy generation beyond that existing today. The 2005 BAU conditions were estimated using CalEEMod.

Implementation of the 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 GHG emissions were estimated using CalEEMod (see Appendix A).

	CO2e (MT/Year)
Operational Emissions	688.07
2005 BAU	1050.09
% Reduction From BAU	**34.48%**

Table 3-10. Project Emissions Compared to 2005 BAU, Source CalEEMod

The Project's operational GHGs are estimated to be 362.019 CO_2e metric tons (MT) lower than the 2005 BAU. This is a reduction of 34.48%, which is above the 29% threshold.

The General Plan and PEIR rely upon the Recirculated Greenhouse Gas Reduction Plan Update that provides a comprehensive assessment of the benefits of city policies and proposed code changes, existing plans, programs, and initiatives that reduce greenhouse gas emissions. The Recirculated Plan provides goals and supporting measures to reflect and ensure compliance with changes in the local and State policies while ensuring it encourages economic growth and keeps the city economically competitive while achieving GHG reductions, as discussed under VIII. GREENHOUSE GAS EMISSIONS (b) and Mitigation Measure GHG-1.1 below.

The Greenhouse Gas Reduction Plan Update includes the following policies in Table 3-11 that are applicable to the implementation of the proposed project:

Greenhouse Gas Reduction Plan Measures	Required Compliance	Project Consistency with Strategy
Local Street Connectivity. Design local roadways to connect neighborhoods and large private developments with adjacent major roadways and pathways of existing adjacent development. Create access for pedestrians and bicycles where a local street must dead end or be designed as a cul-de-sac to adjoining uses that provide services, shopping, and connecting pathways for access to the greater community area.	Review development plans during project review to determine if roads are consistent with this measure.	**Consistent.** The proposed project will include local roadways that connect the residential development with a major roadway (Church Ave).
Connection to Public Transit. Provide public transit opportunities to the maximum number and diversity of people practicable in balance with providing service that is high in quality, convenient, frequent, reliable, cost effective, and financially feasible.	Review development plans to ensure development are located in close proximity to public transit facilities.	**Consistent.** The proposed project is located ¼ mile from the nearest bus stop.
Sidewalk Development. Pursue funding and implement standards for development of sidewalks on public streets, with priority given to meeting the needs of persons with physical and vision limitations; providing safe routes to school; completing pedestrian improvements in established neighborhoods with lower vehicle ownership rates; or providing pedestrian access to public transportation routes.	Include sidewalk improvements as conditions of approval of the subdivision or commercial site plan.	**Consistent.** The proposed project includes sidewalks, curbs, and gutters on all internal streets. Additionally, the project will improve sidewalk conditions along Church Ave and S Thorne Ave.
Renewable Energy. Reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources.	Required compliance with energy efficiency policies in the General Plan	**Consistent.** The project is required to comply with energy efficiency policies RC-8-a through RC-8-k included in the Fresno General Plan

Table 3-11. Project Compliance with Greenhouse Gas Reduction Plan Update

In conclusion, the proposed project complies with the Recirculated Greenhouse Gas Reduction Plan Update and would not result in any greenhouse gas emission environmental impacts beyond those analyzed in the City of Fresno PEIR. Therefore, there would be a *less than*

significant impact with mitigation incorporated as the Project would adhere to standards identified in the Fresno City General Plan and PEIR (Mitigation Measure GHG-1.1).

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

Less than Significant Impact with Mitigation Incorporated: The City of Fresno adopted its Recirculated GHG Reduction Plan Update as part of the preparation and certification of the GP PEIR. The Project's consistency with applicable GHG policies from the Recirculated GHG Reduction Plan policies is assessed below.

The Project is also assessed for its consistency with CARB's adopted Scoping Plans. This would be achieved with an assessment of the Project's compliance with Scoping Plan measures contained in the 2017 Climate Change Scoping Plan.

City of Fresno Recirculated GHG Plan Update

The Recirculated GHG Plan Update includes procedures to use when assessing the impacts of Project's requiring a general plan amendment. The following requirements apply:

1. Review General Plan policies listed in the Recirculated GHG Reduction Plan Update to identify those that apply to the project and prepare a consistency analysis for compliance with the applicable policies.
2. Ensure the Project is consistent with the City's Development Code as it relates to complete streets and design standards for single-family projects.
3. Prepare a GHG technical study to quantify project emissions and emission reductions through compliance with regulations and project design features.

An analysis was conducted to identify and assess the project's alignment with General Plan policies listed in the Recirculated GHG Reduction Plan Update. Each policy was reviewed, and Table 3-11 above demonstrates the project's consistency with each applicable policy. Additionally, a GHG technical study was conducted to quantify project emissions and emission reductions, showcasing how the project design and compliance with regulations contribute to emission reductions. The findings of this study are available in the Greenhouse Gas section of the document.

In summary, the Project would be required to incorporate several policies that would minimize GHG emissions as required by the City's existing plans and policies. These features are consistent with project-level strategies identified by the CARB's Scoping Plan and the City of Fresno Recirculated GHG Reduction Plan Update (2021).

Consistency with California's Post-2020 Targets

The State's executive branch adopted several Executive Orders related to GHG emissions. Executive Orders S-3-05 and B-30-15 are two examples. Executive Order S-3-05 sets goals to reduce emissions to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. The goal of Executive Order S-3-05 to reduce GHG emissions to 1990 levels by 2020 was codified by AB 32. The Project, as analyzed above, is consistent with AB 32. Therefore, the Project does not conflict with this component of Executive

Order S-3-05. Executive Order B-30-15 establishes an interim goal to reduce GHG emissions to 40 percent below 1990 levels by 2030.

Consistency with SB 32

The 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. The Project is required to comply with the SB 32 strategy and is not expected to conflict with this component of Executive Order S-3-05. As discussed above, the proposed Project will not occur at a scale or scope with the potential to contribute substantially or cumulatively to the generation of GHG emissions, either directly or indirectly, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. There would be a less than significant impact with mitigation incorporation as the Project would adhere to standards as identified in the Fresno City General Plan and PEIR (GHG-1.1). In conclusion, the proposed Project will not result in any GHG impacts beyond those analyzed in City of Fresno PEIR. Therefore, impacts are considered *less than significant with mitigation incorporated.*

Mitigation Measures for Impacts to Greenhouse Gas Emissions Incorporated from City of Fresno General Plan PEIR:

Mitigation Measure GHG-1.1: Prior to the City's approval of subsequent discretionary projects, the Director of the City Planning and Development Department, or designee, shall confirm that development projects are consistent with the Recirculated GHG Reduction Plan Update (2021) and ensure all measures deemed applicable to the project through the GHG Reduction Plan Update-Project Consistency Checklist are implemented (Appendix B to the GHG Reduction Plan Update).

In conclusion, the Project will not result in any greenhouse gas impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

IX. HAZARDS AND HAZARDOUS MATERIALS

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

Environmental Setting

The proposed project site is located approximately 0.4 miles west of Computech Middle School, 0.5 miles west of West Fresno Center City College, 0.6 miles west of Edison High School, 1 mile south-east of Sunset Elementary School, 1.25 miles south of Columbia Elementary School, and approximately 1 mile south of the nearest public airport (Fresno Chandler Executive 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. The database indicates 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.

Fresno County Department of Public Health: A Certified Unified Program Agency (CUPA) is a local agency that has been certified by Cal/EPA to implement the local Unified Program. The CUPA can be a county, city, or joint powers authority. The Fresno County Department of Public Health is the certified CUPA for the City of Fresno and vicinity.

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:

> **Objective NS-4:** Minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.

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 action plans.

Policy NS-4-c Soil and Groundwater Contamination Reports. Require an investigation of potential soil or groundwater contamination whenever justified by past site uses. Require appropriate mitigation as a condition of project approval in the event soil or groundwater contamination is identified or could be encountered during site development.

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.

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 with Mitigation: 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 BMPs included in the SWPPP and Mitigation Measure HAZ-1.1 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. Hazardous materials associated with Project operations are those of typical residential uses such as cleaning supplies, HVAC equipment, etc. It is not expected that the Project would routinely transport use, or dispose, of hazardous materials other than those typical of residential uses that would not be a significant hazard to the public. The impact is *less than significant with mitigation.*

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?

Less than Significant Impact: There is no reasonably foreseeable condition or incident involving the project that could result in release of hazardous materials into the environment, other than any potential accidental releases of standard fuels, solvents, or chemicals encountered during typical construction of a residential subdivision. Should an accidental hazardous release occur, or should the project encounter hazardous soils, existing regulations for handling hazardous materials require coordination with the DTSC for an appropriate plan of action, which can include studies or testing to determine the nature and extent of contamination, as well as handling and proper disposal. Therefore, potential impacts are *less than significant*.

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?

Less than Significant Impact: The project is located approximately 0.4 miles from an existing middle school. The project does not involve the use or storage of hazardous substances other than small amounts of pesticides, fertilizers, and cleaning agents required for normal maintenance of structures and landscaping. The project would not emit hazardous emissions or involve the handling of acutely hazardous materials or waste. Therefore, the impacts would be *less than significant*.

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?

Less than Significant Impact With Mitigation Incorporated: The project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included in the Envirostor database compiled by the DTSC. The project site is located adjacent to a site that is included on a list compiled by DTSC (The Church and Fruit Junkyard) and is also located near the boundary of a known landfill (Hyde Park) north of the subject property. However, the DTSC conducted a site inspection on May 3, 2022, and found the site does not pose a threat to human health or the environment. A Phase II ESA was completed for the project site on April 24, 2023, which stated there were no detections of suspect contaminants at the locations sampled. Although this assessment was not intended to meet the requirements of a regulatory agency, the ESA also stated there is a low likelihood of an adverse chemical release at this site. That said, based on its location to surrounding and nearby hazardous sites, special provisions need to be taken to comply with guidelines pertaining thereto, including the incorporation of Mitigation Measure HAZ-1.1 and HAZ-1.2. Therefore, there would be *a less than significant impact with mitigation incorporated.*

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?

Less than Significant Impact: The proposed project is located approximately 1 mile south of the Fresno Chandler Executive Airport. It is located within Zone 6 (Traffic Pattern Zone) as identified in

the Fresno County Airport Land Use Compatibility Plan (ALUCP). Zone 6 encompasses the areas falling within the regular aircraft traffic patterns determined in accordance with the 14 CFR Part 77 Conical Surface. Notably, the TPZ is characterized by a low aircraft accident risk level, contributing to a safe aviation environment.

Within this zone, the Safety Criteria Matrix of the Fresno County Airport Land Use Compatibility Plan presents several significant observations. Zone 6 does not prescribe any limitations on the number of dwelling units per acre for projects located in this area. This absence of dwelling unit restrictions reflects the region's compatibility with residential development. Moreover, the Safety Criteria Matrix does not identify any Prohibited Uses relating to residential or commercial development. This suggests that implementation of the project does not have the potential to expose residents to excessive noise or safety hazards generated by use of Fresno Chandler Executive Airport. The impact is *less than significant*.

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

Less Than Significant 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. Fresno's Emergency Operations Plan is located within the City's General Plan Emergency Response Section. The proposed project complies with the following policies included in the Emergency Response section of the City of Fresno's General Plan:

- **Policy NS-6-b.** Disaster Response Coordination. Maintain coordination with other local, State, and Federal agencies to provide coordinated disaster response.
- **Policy NS-6-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.

Therefore, the proposed project would have *a less than significant 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 uses and is not considered to be wildlands. Additionally, the 2018 HMP 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.*

Mitigation Measures for Impacts to Hazards and Hazardous Materials Incorporated from City of Fresno General Plan PEIR:

Mitigation Measure HAZ-1.1: To prevent the project from resulting in substantial soil erosion or the loss of topsoil, the project shall implement a Stormwater Pollution Prevention Plan (SWPPP) incorporating best management practices (BMPs). This plan will be designed to effectively manage

stormwater runoff and minimize soil disturbance during construction activities. Additionally, the plan will outline regular inspections, maintenance schedules, and employee training to ensure the proper implementation of erosion control measures throughout the construction phase. By addressing stormwater management through the SWPPP and integrating best management practices, the project aims to minimize soil erosion, protect topsoil integrity, and mitigate potential adverse impacts on the surrounding environment.

Mitigation Measures for Impacts to Hazards and Hazardous Materials Incorporated as Project Specific Mitigation Measure:

Mitigation Measure HAZ-1.2: The proposed residential project is near the boundary of a known landfill (Hyde Park) and potential areas of landfill gases, special provisions should be taken to comply with guidelines pertaining thereto. Prior to any future development, the applicant should be required to comply with the provisions set forth within the Post Closure Land Use Elements of the California Code of Regulations Title 27, Section 21190 et. seq. Contact the Fresno County Department of Public Health, Environmental Health Division, Solid Waste Program at (559) 600-3271 for more information. A landfill mitigation plan shall be required prior to commencing any construction activities.

X. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With	Less than Significant Impact	No Impact

		Mitigation Incorporation		
a) Violate any water quality standards or waste discharge requirements or otherwise sustainably degrade surface or ground water quality?	☐	☑	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☑	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:				
(i) result in substantial erosion or siltation on- or off-site?	☐	☑	☐	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☑	☐	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☑	☐	☐
(iv) impede or redirect flood flows?	☐	☑	☐	☐
d) In flood hazard, tsunami, or seiche zones risk the release of pollutants due to project inundation?	☐	☐	☐	☑
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater movement plan?	☐	☑	☐	☐

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 9.3 miles north 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 subbasins. 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 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 RWQCB. The Central Valley RWQCB requires an NPDES Permit and SWPPP for projects disturbing more than one acre of total land area. Because the project is greater than one acre, an NPDES Permit and SWPPP will be required.

North Kings GSA's GSP: The proposed project is within the North Kings Ground Water Sustainability Act's Groundwater Sustainability Plan. The GSP is a requirement of the 2014 California law, the Sustainable Groundwater Management Act (SGMA). SGMA requires all high- and medium-priority subbasin Groundwater Sustainability Agencies (GSAs) develop and implement a GSP. This GSP includes a physical description of the groundwater management area including conditions, a water budget, groundwater management criteria, a monitoring program, and projects and measurable objectives to become sustainable by 2040.

2020 City of Fresno Urban Water Management Plan: The proposed project falls within the jurisdiction of Fresno's UWMP. This UWMP addresses the City's water service reliability, future challenges, and strategies for managing risks to water reliability through 2045.

City of Fresno Metropolitan Water Resources Management Plan: The proposed project is within this Water Resources Management Plan which provides a comprehensive and integrated water supply plan aimed at improving the management of the City's diverse water sources. It was designed to effectively address challenges such as declines in groundwater levels within the City's service area, concerns about groundwater quality, and the need to optimize the conjunctive use of various water supply sources.

2012 Kings Basin Integrated Regional Water Management Plan: The proposed project site is within the Kings Basin Integrated Regional Water Management Planning (IRWMP) area. The plan identifies the following goals and objectives to guide regional water management.

Regional Goals:

1. Halt, and ultimately reverse, the current overdraft and provide for sustainable management of surface and groundwater.
2. Increase the water supply reliability, enhance operational flexibility, and reduce system constraints.
3. Improve and protect water quality.
4. Provide additional flood protection.
5. Protect and enhance aquatic ecosystems and wildlife habitat.

Regional Objectives:

1. Increase amount of groundwater in storage with intent to eliminate the groundwater overdraft in 20 years.
2. Identify opportunities and Projects.
3. Identify DAC priority needs and promote/support solutions to DAC water issues.
4. Increase average annual supply and reduce demand.
5. Increase dry year supply.
6. Increase regional conveyance capacity.
7. Compile baseline water quality data for ground & surface water.
8. Encourage Best Management Practices, policies & education that protect water quality.
9. Identify sources of water quality problems & promote/support solutions to improve water quality.
10. Increase surface storage.
11. Sustain the Kings River Fisheries Management Program.
12. Pursue opportunities to incorporate habitat benefits into projects.
13. Increase public awareness of IRWM Efforts.
14. Involve local water districts and land use agencies in generating and confirming the current and future water needs to ensure compatibility and consistency with land use and water supply plans.
15. Comply with SBx7-7.

City of Fresno General Plan: The City of Fresno General Plan contains the following flood control and water use policies that are potentially applicable to the proposed project:

Objective NS-3: Minimize the risks to property, life, and the environment due to flooding and stormwater runoff hazards.

Policy NS-3-b. Curb and Gutter Installation. Coordinate with FMFCD to install curbing, gutters, and other drainage facilities with priority to existing neighborhoods with the greatest deficiencies and consistent with the Storm Drainage and Flood Control Master Plan.

Policy NS-3-c. Dual Use Facilities. Support multiple uses of flood control and drainage facilities as follows:

- Use, wherever practical, FMFCD facilities for groundwater management and recharge; and
- Promote recreational development of ponding basin facilities located within or near residential areas, compatible with the stormwater and groundwater recharge functions.

Policy NS-3-h. Runoff Controls. Implement grading regulations and related development policies that protect area residents from flooding caused by urban runoff produced from events that exceed the capacity of the Storm Drainage and Flood Control Master Plan system of facilities. Place all structures and/or flood-proofing in a manner that does not cause floodwaters to be diverted onto adjacent property, increase flood hazards to other property, or otherwise adversely affect other property.

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.

Objective PU-8: Manage and develop the City's water facilities on a strategic timeline basis that recognizes the long-life cycle of the assets and the duration of the resources, to ensure a safe, economical, and reliable water supply for existing customers and planned urban development and economic diversification.

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.

Objective RC-7: Promote water conservation through standards, incentives and capital investments.

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.

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 with Mitigation Incorporated: The project will result in less than significant impacts to water quality due to potentially polluted runoff generated during construction activities. Construction may include excavation, grading, and other earthwork across most of the 7.95-acre project site. During storm events, exposed construction areas across the project site may cause runoff to carry pollutants, such a chemicals, oils, sediment, and debris. Implementation of a 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 BMPs related to stormwater runoff.

During operation, the long-term operation and maintenance of post-construction stormwater controls will be documented in the Project's Development Maintenance Manual. The improvements to be constructed for stormwater control include concrete curbs and gutters per City of Fresno standards. The manual shall require that stormwater BMP devices be inspected, cleaned and maintained in accordance with the manufacturer's maintenance conditions. Other maintenance items include:

- Devices shall be cleaned prior to the onset of the rainy season (i.e., mid-October) and immediately after the end of the rainy season (i.e., mid- May);
- All devices be checked after major storm events;
- Runoff shall be directed away from trash and loading dock areas;
- Bins shall be lined or otherwise constructed to reduce leaking of liquid wastes;
- Trash areas shall be screened or walled to minimize offsite transport of trash; and
- Impervious berms, trench catch basin, drop inlets, or overflow containment structures nearby docks and trash areas shall be installed to minimize the potential for leaks, spills or wash down water to enter the drainage system.

With PEIR mitigation measures incorporated (HYD-3.1 through HYD-3.4), the Project will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality impacts beyond those analyzed in the City of Fresno PEIR. Therefore, Project impacts are *less than significant with mitigation incorporated.*

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

Less than Significant Impact with Mitigation Incorporated: Water services will be provided by the City of Fresno upon development. The city has 272 active wells, which pump an average of 146 million gallons of water per day (MGD). According to City's 2015 Urban Water Management Plan (UWMP), the projected water supply for Fresno in year 2025 is 329,030 AFY, which is comprised of both groundwater, surface water, and recycled water.

Using average per-person water use in the State of California (85 gallons; California Legislative Analyst's Office, 2017) and the average household size in the City of Fresno (3.20 persons; US Census Bureau), water demand for the proposed 58-unit residential development is estimated to be approximately 15,776 gallons of water daily, or 17.7 acre feet per year. The most water-intensive aspect of the Project (the single-family residences) is consistent with the City's General Plan land use designation of Medium Density Residential. As such, the Project would not affect groundwater supplies in the Kings River Sub-basin beyond what has already been analyzed in the most current General Plan PEIR.

The project would result in nearly full development of the site, which would convert approximately 7.95 acres from pervious surfaces to impervious surfaces. However, this would not significantly interfere with groundwater recharge because all stormwater would be collected and diverted to an existing basin located directly north of the project site for groundwater recharge.

The proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. The Project will not conflict with the implementation of a water

quality control plan or sustainable groundwater management. With implementation of applicable PEIR mitigation measures HYD-3.1 through HYD-3.4 and UTL 1.1.1 and UTL 1.2.1, the proposed Project would not obstruct implementation of a water quality control plan or sustainable groundwater management plan beyond those analyzed in the City of Fresno PEIR. The impact is *less than significant with mitigation incorporated.*

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 with Mitigation Incorporated: The Project will result in the increase of impervious surfaces, which could result in substantial erosion or siltation on- or off-site. However, during construction, substantial erosion or siltation on- or off-site will be minimized with BMPs identified in the SWPPP.

During operation, substantial erosion or siltation on- or off-site will be minimized by properly maintaining post-construction BMPs identified in the drainage plan and Development Maintenance Manual. The Project would comply with the City's grading plan check process, the Fresno Metropolitan Flood Control District (FMFCD) Storm Drainage and Flood Control Master Plan (SDFCMP). Therefore, the Project would have a less than significant impact on drainage patterns or cause substantial erosion or siltation on or off the site. With implementation of applicable PEIR mitigation measures HYD-3.1 through HYD-3.4, the Project will not substantially result in substantial erosion or siltation on or offsite beyond those analyzed in the City of Fresno PEIR. The impact would be *less than significant with mitigation incorporated.*

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

Less than Significant with Mitigation Incorporated: The Project will result in the increase of impervious surfaces, which will increase the amount of surface runoff that could result in flooding on- or off-site. However, during construction, the rate or amount of surface runoff will be minimized with temporary BMPs identified in the SWPPP to prevent flooding on- or offsite. During operation, the rate or amount of surface runoff will be minimized with permanent post-construction BMPs identified in the drainage plan and Development Maintenance Manual to minimize flooding on- or off-site. The Project would comply with the City's grading plan check process, the Fresno Metropolitan Flood Control District (FMFCD) Storm Drainage and Flood Control Master Plan (SDFCMP). Therefore, the Project would have a less than significant impact on drainage patterns or cause substantial erosion or siltation on or off the site. With implementation of applicable PEIR mitigation measures HYD-3.1 through HYD-3.4, the Project will not substantially result in substantial erosion or siltation on or offsite beyond those analyzed in the City of Fresno PEIR. The impact would be *less than significant with mitigation incorporated.*

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?

Less than Significant with Mitigation Incorporated: The proposed project would result in the addition of impervious surfaces and alter existing drainage patterns on the 7.95-acre project site which would have the potential to impact existing stormwater drainage systems or provide additional sources of polluted runoff. The disturbance of soils during construction could cause erosion, resulting in temporary construction impacts. However, this impact would be appropriately mitigated through implementation of a SWPPP which includes mandated erosion control measures, which are developed to prevent significant impacts related to erosion caused by runoff during construction. During project operations, the proposed impervious surfaces, including roads, building pads, and parking areas, would collect automobile derived pollutants such as oils, greases, rubber and heavy metals. This could contribute to point source and non-point source pollution if these pollutants were transported into waterways during storm events. The Project proponent will be required to prepare drainage plans and a Development Maintenance Manual to ensure that the project would not overwhelm existing or planned stormwater drainage systems or result in discharges of polluted runoff into local waterways. HYD-3.1 through HYD-3.4 in the City of Fresno PEIR requires projects to implement measures aimed toward reducing impacts on the capacity of existing or planned SDFCMP collection systems and to coordinate with FCMFCD. The impact is *less than significant with implementation of these mitigation measures.*

iv. Impede or redirect flood flows?

Less than Significant with Mitigation Incorporated: According to the County of Fresno's FEMA Flood Map, the Project area does not lie within a floodplain or flood hazard zone. The Project will result in the increase of impervious surfaces, which could contribute to flows being impeded or redirected, especially to the basin located next to the project site. However, during construction, runoff flows will be minimized with temporary BMPs identified in the SWPPP to prevent any impediment or redirection of flood flows. During operation, runoff flows will be minimized with permanent post-construction BMPs identified in the drainage plan and Development Maintenance Manual to prevent any impediment or redirection of flood flows. In addition, drainage plans will be submitted to the City Engineer prior to the issuance of grading permits.

With implementation of applicable PEIR mitigation measures HYD-3.1 through HYD-3.4, the proposed Project would not redirect flood flows beyond those analyzed in the City of Fresno PEIR. Therefore, Project impacts are *less than significant with mitigation incorporated.*

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 proposed project is 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 the 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?

Less than Significant with Mitigation Incorporated: The project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. The proposed project is consistent with the City of Fresno UWMP, City of Fresno Metropolitan Water Resources Management Plan, and the North Kings Groundwater Sustainability Plan. The City of Freno UWMP includes the following polices from the General Plan that align with the proposed project:

- **Policy NS-3-b:** Curb and Gutter Installation. Coordinate with Fresno Metropolitan Flood Control District (FMFCD) to install curbing, gutters, and other drainage facilities with priority to existing neighborhoods with the greatest deficiencies and consistent with the Storm Drainage and Flood Control Master Plan.
- **Policy NS-3-e:** Pollutants. Work with FMFCD to prevent and reduce the existence of urban stormwater pollutants pursuant to the requirements of the National Pollution Discharge Elimination Systems Act.
- **Policy NS-3-h.** Runoff Controls. Implement grading regulations and related development policies that protect area residents from flooding caused by urban runoff produced from events that exceed the capacity of the Storm Drainage and Flood Control Master Plan system of facilities. Place all structures and/or flood-proofing in a manner that does not cause floodwaters to be diverted onto adjacent property, increase flood hazards to other property, or otherwise adversely affect other property.
- **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 NS-3-k:** 100-Year Floodplain Policy. Require developers of residential subdivisions to preserve those portions of development sites as open space that may be subject to 100-year flood events, unless the flood hazard can be substantially mitigated by development project design.

The proposed project also falls within the North Kings Groundwater Sustainability Plan. Over the last several decades drought and other challenges have contributed to a decline in the overall groundwater supply in the North Kings region. The project shall comply with the aims and objectives of this Plan to ensure that the basin will maintain a reliable water supply for current and future uses. Furthermore, the project will implement PEIR Mitigation Measures HYD-3.1 through HYD-3.4 and UTL-1.1.1 and UTL-1.2.1. to minimize the impact on the City's water resources. The impact is *less than significant with mitigation incorporated.*

Mitigation Measures

Mitigation Measure HYD-3.1: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP collection systems:

- Coordinate with FMFCD to implement the existing Storm Drainage and Flood Control Master Plan (SDFCMP) for collection systems in drainage areas where the amount of imperviousness is unaffected by the change in land uses.
- Coordinate with FMFCD to update the SDFCMP in those drainage areas where the amount of imperviousness increased due to the change in land uses to determine the changes in the collection

systems that would need to occur to provide adequate capacity for the stormwater runoff from the increased imperviousness.
- As development is proposed, implement current SDFCMP to provide stormwater collection systems that have sufficient capacity to convey the peak runoff rates from the areas of increased imperviousness.
- Require developments that increase site imperviousness to install, operate, and maintain FMFCD approved on-site detention systems to reduce the peak runoff rates resulting from the increased imperviousness to the peak runoff rates that will not exceed the capacity of the existing stormwater collection systems.

Mitigation Measure HYD-3.2: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP retention basins: Prior to approval of development projects, coordinate with FMFCD to analyze the impacts to existing and planned retention basins to determine remedial measures required to reduce the impact on retention basin capacity to less than significant. Remedial measures would include:

- Increase the size of the retention basin through the purchase of more land or deepening the basin, or a combination for planned retention basins.
- Require developments that increase runoff volume to install, operate, and maintain Low Impact Development (LID) measures to reduce runoff volume to the runoff volume that will not exceed the capacity of the existing retention basins.

Mitigation Measure HYD-3.3: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP urban detention (stormwater quality) basins: Prior to approval of development projects, coordinate with FMFCD to determine the impacts to the urban detention basin weir overflow rates and determine remedial measures required to reduce the impact on the detention basin capacity to less than significant. Remedial measures would include:

- Modify overflow weir to maintain the suspended solids removal rates adopted by the FMFCD Board of Directors.
- Increase the size of the urban detention basin to increase residence time by purchasing more land. The existing detention basins are already at the adopted design depth.
- Require developments that increase runoff volume to install, operate, and maintain Low Impact Development (LID) measures to reduce peak runoff rates and runoff volume to the runoff rates and volumes that will not exceed the weir overflow rates of the existing urban detention basins.

Mitigation Measure HYD-3.4: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP pump disposal systems:

- Prior to approval of development projects, coordinate with FMFCD to determine the extent and degree to which the capacity of the existing pump system will be exceeded.
- Require new developments to install operate, and maintain on-site detention facilities, consistent with FMFCD design standards, to reduce peak stormwater runoff rates to existing planned peak runoff rates.
- Provide additional pump system capacity to the maximum allowed by existing permitting to increase the capacity to match or exceed the peak runoff rates determined by the SDFCMP.

Mitigation Measure UTL-1.1.1: The City shall evaluate the water conveyance system and, at the time that discretionary projects are submitted for approval by the City, the City shall not approve development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City by approximately 2025.

- Construct 65 new groundwater wells, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct a 2.0-million-gallon potable water reservoir (Reservoir T2) near the intersection of Clovis and California Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct a 4.0-million-gallon potable water reservoir (Reservoir T5) near the intersection of Ashlan and Chestnut Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct a 4.0-million-gallon potable water reservoir (Reservoir T6) near the intersection of Ashlan Avenue and Highway 99, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct 50.3 miles of regional water transmission mains ranging in size from 24-inch to 48-inch, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct 95.9 miles of 16-inch transmission grid mains in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.

Prior to initiating construction of any of the capacity improvement projects identified above, the City shall conduct appropriate environmental analyses for each project to determine whether environmental impacts would occur.

Mitigation Measure UTL-1.2.1: The City shall evaluate the water supply system at the time discretionary projects are submitted and shall not approve development that would demand additional water until additional capacity is provided. By approximately the year 2025, the following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City.

- Construct an approximately 30 mgd expansion of the existing northeast surface water treatment facility for a total capacity of 60 mgd, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct an approximately 20 mgd surface water treatment facility in the southwest portion of the City, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct a 25,000 AF/year recycled water facility as an expansion to the RWRF in accordance with the January 2014 City of Fresno Metropolitan Water Resources Management Plan. This improvement is required after the year 2025.

In conclusion, the Project will not result in any hazard impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XI. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☑
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑

Environmental Setting

The proposed project site is located within the City of Fresno, approximately 2.0 miles southwest of the Downtown Core. The project site is designated as RS-5 by the City of Fresno Zoning Code and as Medium Density Residential by the City of Fresno General Plan. No zone changes or general plan amendments are proposed for the site.

The project site is currently vacant. The site is topographically flat and is bounded by agricultural uses to the south, a public park to the north, a few single-family homes to the east, and vacant land to the west.

Regulatory Setting

City of Fresno General Plan. The proposed project site is designated as Medium Density Residential by the City of Fresno General Plan.

City of Fresno Zoning Ordinance: The proposed project site is designated as RS-5 by the City of Fresno Zoning Ordinance. This zoning designation applies to residential housing types in urban neighborhoods.

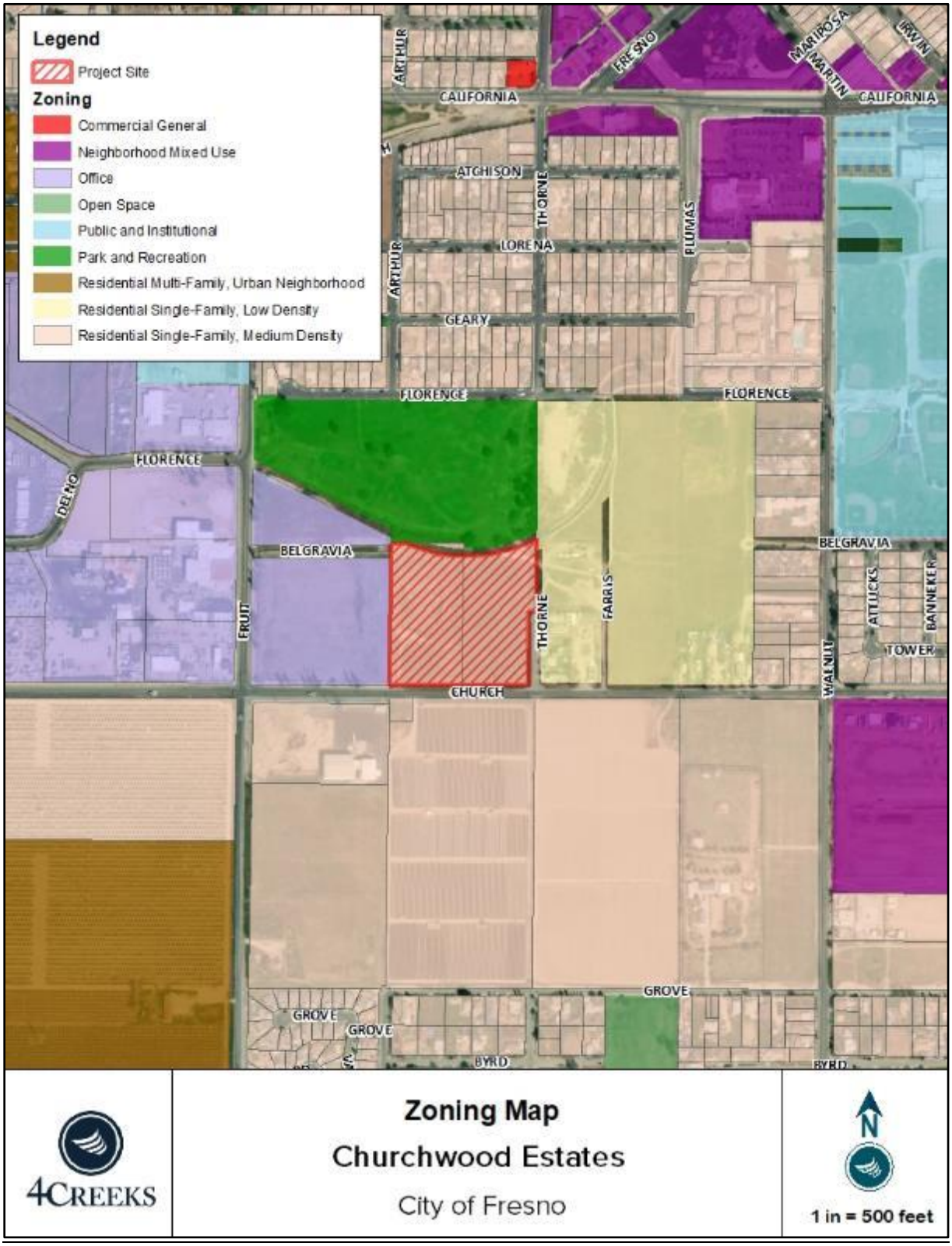


Figure 3-6 Zoning Map

Discussion

a) Would the project physically divide an established community?

No Impact: The proposed project will not physically divide an established community. The proposed project site is designated for single-family residential use under both the City's General Plan and Zoning Code and would continue to operate as single-family housing following project implementation. There is *no 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?

No Impact: The project site is located on land designated for single-family residential uses. The proposed project does not conflict with this land use, or any other policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. There is *no impact.*

In conclusion, the Project will not result in any land use impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XII. 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?	☐	☐	☐	☑
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?	☐	☐	☐	☑

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.).

Most of these mines are now closed – leaving only 15 active mining claims within the County of Fresno. According to the California Department of Conservation, CGS's Surface Mining and Reclamation Act (SMARA) Mineral Lands Classification (MLC) data portal, the nearest mineral resource areas to the city of Fresno are in the San Joaquin and Kings River areas which are classified as Mineral Resource Zone (MRZ)-2.

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 Surface Mining and Reclamation Ordinance: The Surface Mining and Reclamation Ordinance was created in accordance with the State's Surface Mining and Reclamation Act to ensure that mineral resources are recovered efficiently and safely, with minimal disruption to surrounding land uses and environmental values, and that sites are reclaimed to a usable condition which is readily adaptable for alternative land uses.

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?

No Impact: According to the CGS's Surface Mining and Reclamation Act (SMARA) Mineral Lands Classification (MLC) data portal, the project site is not located in an area designated for mineral resource preservation or recovery. The site has no known mineral resources that would be of value to the region and the residents of the state, therefore the proposed project would not result in the loss of or impede the mining of regionally or locally important mineral resources. There is *no 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?

No Impact: As stated above, the CGS's Surface Mining and Reclamation Act (SMARA) Mineral Lands Classification (MLC) data portal does not identify any known mineral resources of importance to the region and the project site is not designated under the City's or County's General Plan as an important mineral resource recovery site. For that reason, the proposed project would not result in the loss of availability of known regionally or locally important mineral resources. There is *no impact.*

In conclusion, the Project will not result in any impacts to mineral resources beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XIII. NOISE

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

Environmental Setting

Noise is often described as unwanted sound and consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. 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 is primarily due to vehicular traffic. Construction activities usually result in an increase in sound above ambient noise levels.

Regulatory Setting

City of Fresno General Plan: The City of Fresno General Plan Noise Element provides noise level criteria for land use compatibility for both transportation and non-transportation noise sources. The General Plan sets noise compatibility standards for transportation noise sources in terms of the Day-Night Average Level (Ldn). The Ldn represents the time-weighted energy average noise level for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). The Ldn represents cumulative exposure to noise over an extended period of time and is therefore calculated based upon *annual average* conditions. An Acoustical Analysis was prepared for the project site on February 14, 2023, by WJV Acoustics to quantify the site's noise exposure and determine noise mitigation

requirements. Table 3-12 provides the General Plan noise level standards for noise sources in sensitive land use areas.

Noise-Sensitive Land Use	Outdoor Activity Areas[1]	Interior Spaces	
	Ldn/CNEL, dB	Ldn/CNEL, dB	Leq dB[2]
Residential	65	45	---
Transient Lodging	65	45	---
Hospitals, Nursing Homes	65	45	---
Theaters, Auditoriums, Music Halls	---	---	35
Churches, Meeting Halls	65	---	45
Office Buildings	---	---	45
Schools, Libraries, Museums.	---	---	45

1. Where the location of the outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.
2. As determined for a typical worst-case hour during periods of use.

Table 3-12. CITY OF FRESNO GENERAL PLAN NOISE LEVEL STANDARDS TRANSPORTATION (NON-AIRCRAFT) NOISE SOURCES

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

Objective NS-1: Protect the citizens of the City from the harmful and annoying effects of exposure to excessive noise.

Policy NS-1-a: Desirable and Generally Acceptable Exterior Noise Environment. Establish 65 dBA L_{dn} 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 dBA L_{dn} or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise- sensitive uses. Maintain 65 dBA L_{dn} or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses and maintain 70 dBA L_{dn} 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 and the required interior noise level standards set in Table 9-2.

Policy NS-1-f: Performance Standards. Implement performance standards for noise reduction for new residential and noise sensitive uses exposed to exterior community noise levels from transportation sources above 65 dB L_{dn} or CNEL, as shown on Figure NS-3: Future Noise Contours, or as identified by a project-specific acoustical analysis based on the target acceptable noise levels set in Table 9-2 and Policies NS-1-a through

NS-1-c. For Table 9-1 and Policy NS-1-c, see Chapter 9: Noise and Safety in the General Plan.

Policy NS-1-g: Noise mitigation measures which help achieve the noise level targets of this plan include, but are not limited to, the following:

- Façades with substantial weight and insulation;
- Installation of sound-rated windows for primary sleeping and activity areas;
- Installation of sound-rated doors for all exterior entries at primary sleeping and activity areas;
- Greater building setbacks and exterior barriers;
- Acoustic baffling of vents for chimneys, attic and gable ends;
- Installation of mechanical ventilation systems that provide fresh air under closed window conditions.

The aforementioned measures are not exhaustive and alternative designs may be approved by the City, provided that a qualified Acoustical Consultant submits information demonstrating that the alternative design(s) will achieve and maintain the specific targets for outdoor activity areas and interior spaces.

Policy NS-1-h: Interior Noise Level Requirement. Comply with the State Code requirement that any new multifamily residential, hotel, or dorm buildings must be designed to incorporate noise reduction measures to meet the 45 dB Ldn interior noise criterion, and apply this standard as well to all new single-family residential and noise sensitive uses.

Policy NS-1-i: ***Mitigation by New Development****. Require an acoustical analysis where new development of industrial, commercial or other noise generating land uses (including transportation facilities such as roadways, railroads, and airports) may result in noise levels that exceed the noise level exposure criteria established by [Table I] and [Table II] to determine impacts, and require developers to mitigate these impacts in conformance with Tables 9-2 and 9-3 as a condition of permit approval through appropriate means.*

Noise mitigation measures may include:

- *The screening of noise sources such as parking and loading facilities, outdoor*
- *activities, and mechanical equipment;*
- *Providing increased setbacks for noise sources from adjacent dwellings;*
- *Installation of walls and landscaping that serve as noise buffers;*
- *Installation of soundproofing materials and double-glazed windows; and*
- *Regulating operations, such as hours of operation, including deliveries and trash pickup.*

Alternative acoustical designs that achieve the prescribed noise level reduction may be approved by the City, provided a qualified Acoustical Consultant submits information demonstrating that the alternative designs will achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose

to construct noise walls along roadways when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility, with no City funding.
Policy NS-1-j: *Significance Threshold.* *Establish, as a threshold of significance for the City's environmental review process, that a significant increase in ambient noise levels is assumed if the project would increase noise levels in the immediate vicinity by 3 dB Ldn or CNEL or more above the ambient noise limits established in this General Plan Update.*

Commentary: When an increase in noise would result in a "significant" impact (increase of three dBA or more) to residents or businesses, then noise mitigation would be required to reduce noise exposure. If the increase in noise is less than three dBA, then the noise impact is considered insignificant and no noise mitigation is needed. By setting a specific threshold of significance in the General Plan, this policy facilitates making a determination of environmental impact, as required by the California Environmental Quality Act. It helps the City determine whether (1) the potential impact of a development project on the noise environment warrants mitigation, or (2) a statement of overriding considerations will be required.

Municipal Code: Section 15-2506 of the City of Fresno Municipal code establishes hourly acoustical performance standards for non-transportation noise sources. During the daytime, the maximum noise level is 70 dBA. The standards are made more restrictive during the nighttime hours of 10:00 p.m. to 7:00 a.m., with the maximum noise level being 60 dBA. Additionally, the municipal code states that when ambient noise levels exceed or equal stated levels, mitigation shall only be required to limit noise to the existing ambient noise levels, plus five (5) dB. Section 15-2506 of the Municipal Code is consistent with Implementing Policy NS-1-I of the Noise Element of the City of Fresno General Plan (adopted 12/18/14).

Daytime (7 a.m.-10 p.m.)		Nighttime (10 p.m.-7 a.m.)	
Leq	Lmax	Leq	Lmax
50	70	45	60

Table 3-13. Non-Transportation Noise Level Standards, Dba City of Fresno Municipal Code, Section 15-2506

Additional guidance is provided in Section 10-102(b) of the City's Municipal Code. Section 10 provides existing ambient noise levels to be applied to various districts, further divided into various hours of the day. Table 3-12 describes the assumed minimum ambient noise levels by district and time. Section 10-102(b) states *"For the purpose of this ordinance, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen minutes, without inclusion of the offending noise, at the location and time of day at which a comparison with the offending noise is to be made. Where the ambient noise level is less than that designated in this section, however, the noise level specified herein shall be deemed to be the ambient noise level for that location."*

District	Time	Sound Level, dB Leq
Residential	10 PM to 7 AM	50
Residential	7 PM to 10 PM	55
Residential	7 AM to 7 PM	60

Table 3-14. Assumed Minimum Ambient Noise Level, dBA, City of Fresno Municipal Code, Section 10-102(B).

Section 10-106 (Prima Facie Violation) States *"Any noise or sound exceeding the ambient noise level at the properly line of any person offended thereby, or, if a condominium or apartment house, within any adjoining living unit, by more than five decibels shall be deemed to prima facie evidence of a violation of Section 8-305."*

For noise sources that are not transportation related, which usually includes commercial or industrial activities and other stationary noise sources (such as amplified music), it is common to assume that a 3-5 dB increase in noise levels represents a substantial increase in ambient noise levels. This is based on laboratory tests that indicate that a 3 dB increase is the minimum change perceptible to most people, and a 5 dB increase is perceived as a "definitely noticeable change."

For definitions of acoustical terminology, see the Noise Study in Appendix D. Unless otherwise stated, all sound levels reported in this analysis are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighted sound levels, as they correlate well with public reaction to noise. Appendix D provides typical A-weighted sound levels for common noise sources.

Discussion

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

Less than Significant Impact: The 2020 City of Fresno General Plan Update and associated PEIR provides noise level criteria for land use compatibility for both transportation and non-transportation noise sources. The General Plan sets noise compatibility standards for transportation noise sources in terms of the Day-Night Average Level (Ldn). The Ldn represents the time-weighted energy average noise level for a 24-hour day, with a 10-dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). The Ldn represents cumulative exposure to noise over an extended period of time and is therefore calculated based upon annual average conditions. Noise-sensitive receptors in close proximity to the Project include: Computech Middle School (0.4 miles), West Fresno Center City College (0.5 miles), and Edison High School (0.6 miles).

Implementing Policy NS-1-h of the Noise Element requires that interior noise levels attributable to exterior transportation noise sources not exceed 45 dB Ldn. The intent of the interior noise level standard is to provide an acceptable noise environment for indoor communication and sleep.

Construction

Project construction is anticipated to last approximately 1 year and will involve temporary noise sources from vehicles traveling to and from the site, and mechanical equipment. However, Section 10-109 of the Fresno Municipal Code states that noise regulations established by the Fresno Municipal Code shall not apply to construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday. Therefore, construction of the proposed project would be consistent with City of Fresno noise regulations as long as construction

activities only take place on Monday-Saturday between the hours of 7:00 a.m. and 10:00 p.m. Because the proposed project will not involve construction outside of these hours, impacts related to noise generated during project construction are considered *less than significant.*

Traffic Noise Exposure - Operation

Noise exposure from traffic on W. Church Avenue was calculated for existing and future (2046) conditions using the FHWA Traffic Noise Model and traffic data obtained from Fresno COG. A description of the noise model, applied data, methodology and findings is provided below.

WJVA utilized the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA Model is a standard analytical method used for roadway traffic noise calculations. The model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly Leq values for free-flowing traffic conditions and is generally considered to be accurate within ±1.5 dB. To predict Ldn values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Noise level measurements and concurrent traffic counts were conducted by WJVA staff within the project site on February 2, 2023. The purpose of the measurement was to evaluate the accuracy of the FHWA Model in describing traffic noise exposure within the project site. The traffic noise measurement site was located approximately 40 feet from the centerline of W. Church Avenue. The speed limit was assumed to be 40 mph (miles per hour). The project vicinity and noise monitoring site location are provided as Figure 2. A photograph showing the W. Church Avenue noise measurement site is provided as Figure 3.

Noise monitoring equipment consisted of Larson-Davis Laboratories Model LDL-820 sound level analyzer equipped with a B&K Type 4176 1/2" microphone. The equipment complies with the specifications of the American National Standards Institute (ANSI) for Type I (Precision) sound level meters. The meter was calibrated in the field prior to use with a B&K Type 4230 acoustic calibrator to ensure the accuracy of the measurements. The microphone was located on a tripod 5 feet above the ground. The project site presently consists of undeveloped land and a portion is currently used for industrial purposes.

Noise measurements were conducted in terms of the equivalent energy sound level (Leq). Measured Leq values were compared to Leq values calculated (predicted) by the FHWA Model using as inputs the traffic volumes, truck mix and vehicle speed observed during the noise measurements. The results of the comparison are shown in Table 3-15.

From Table 3-15 it may be determined that the traffic noise levels predicted by the FHWA Model were 1.5 dB lower than those measured for the conditions observed at the time of the noise measurements for W. Church Avenue. This is considered to be reasonable agreement with the model and therefore no adjustments to the model are necessary.

	W. Church Ave.

Measurement Start Time	12:45 p.m.
Observed # Autos/Hr.	168
Observed # Medium Trucks/Hr.	12
Observed # Heavy Trucks/Hr.	0
Observed Speed (MPH)	40
Distance, ft. (from center of roadway)	40
Leq, dBA (Measured)	61.9
Leq, dBA (Predicted)	60.4
Difference between Predicted and Measured Leq, dBA	1.5
Note: FHWA "soft" site assumed for calculations. Source: WJV Acoustics, Inc.	

Table 3-15. Comparison Of Measured And Predicted (FHWA Model) Noise Levels Churchwood Estates, Fresno

Annual Average Daily Traffic (AADT) data for W. Church Avenue in the project vicinity was obtained from Fresno COG. Truck percentages and the day/night distribution of traffic were estimated by WJVA, based upon previous studies conducted in the project vicinity since project-specific data were not available from government sources. A speed limit of 55 mph was assumed for the roadway. Table 3-16 summarizes annual average traffic data used to model noise exposure within the project site.

	W. Gettysburg Avenue (e/o Fruit Ave)	
	Existing	2046
Annual Avenue Daily Traffic (AADT)	2,111	3,266
Day/Night Split (%)	90/10	
Assumed Vehicle Speed (mph)	40	
% Medium Trucks (% AADT)	2	
% Heavy Trucks (% AADT)	2	

Table 3-16. Traffic Noise Modeling Assumptions Churchwood Estates, Fresno

Using data from Table 3-16, the FHWA Model, annual average traffic noise exposure was calculated for the closest proposed backyards to W. Church Avenue. Table 3-17 provides the noise exposure levels for W. Church Avenue, at the closest proposed residential lots to the roadway.

Roadway	Existing Conditions	2046 Conditions
W. Church Avenue (north of Alicante Avenue)	56.8	58.7

Table 3-17. Modeled Traffic Noise Levels At Closest Roadway Setbacks, Db, Ldn Ajit Gill Apartments, Fresno

Reference to Table 3-17 indicates that the traffic noise exposure at the closest proposed lots to W. Church Avenue would be approximately 57 dB Ldn for existing conditions and approximately 59 dB Ldn for future (2046) traffic conditions on W. Church Avenue. Such noise exposure levels do not exceed the City's 65 dB Ldn exterior noise level standard and mitigation measures are therefore not required for compliance with the City's exterior noise level standard.

Interior Noise Exposure

The City of Fresno interior noise level standard is 45 dB Ldn. The worst-case noise exposure within the proposed residential development would be approximately 59 dB Ldn (2046 conditions). This means

that the proposed residential construction must be capable of providing a minimum outdoor-to-indoor noise level reduction (NLR) of approximately 14 dB (59-45=14). A specific analysis of interior noise levels was not performed. However, it may be assumed that residential construction methods complying with current building code requirements will reduce exterior noise levels by approximately 25 dB if windows and doors are closed. This will be sufficient for compliance with the City's 45 dB Ldn interior standard at all proposed lots. Requiring that it be possible for windows and doors to remain closed for sound insulation means that air conditioning or mechanical ventilation will be required.

Conclusion

The proposed 58-lot single-family residential development will comply with all City of Fresno exterior and interior noise level standards, without the need for the inclusion of mitigation measures, provided that air conditioning or mechanical ventilation is incorporated into final project design, so that doors and windows can remain closed for noise insulation purposes. Therefore, the impact is *less than significant.*

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

Less than Significant Impact: Although project operations would not include uses or activities that typically generate excessive ground borne vibration or ground borne noise levels, project construction could introduce temporary ground borne vibration to the project site and the surrounding area. Sources that may produce perceptible vibrations are provided in Table 3-18.

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level (LV) at 25 feet
Pile driver (impact)	1.518 (upper range) 0.644 (typical)	112 104
Pile driver (sonic)	0.734 upper range 0.170 typical	105 93
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall)	0.008 in soil 0.017 in rock	66 75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Table 3-18. Vibration Levels Generated by Construction Equipment. Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

The primary source of vibration during project construction would likely be from a bulldozer (tractor), which would generate 0.089 inch per second PPV at 25 feet with an approximate vibration level of 87 VdB. Vibration from the bulldozer would be intermittent and not a source of continual vibration. The City of Fresno PEIR states that vibration sources of less than 0.1 inch/second would not have the

potential to damage fragile structures. The primary source of vibration generated by project construction would be 0.089 inch/second, which would not exceed the 0.1 inch/second threshold stated in the City of Fresno PEIR. Therefore, there would not be excessive ground-borne vibration or ground-borne noise levels, making the impact *less than significant.*

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

Less than Significant Impact: The proposed project is located approximately 1 mile south of the Fresno Chandler Executive Airport. It is located within Zone 6 (Traffic Pattern Zone) as identified in the Fresno County Airport Land Use Compatibility Plan (ALUCP). Zone 6 encompasses the areas falling within the regular aircraft traffic patterns determined in accordance with the 14 CFR Part 77 Conical Surface. Notably, the TPZ is characterized by a low aircraft accident risk level, contributing to a safe aviation environment.

Within this zone, the Safety Criteria Matrix of the Fresno County Airport Land Use Compatibility Plan presents several significant observations. Zone 6 does not prescribe any limitations on the number of dwelling units per acre for projects located in this area. This absence of dwelling unit restrictions reflects the region's compatibility with residential development. The Safety Criteria Matrix also does not identify any Prohibited Uses relating to residential development. Additionally, it's important to note that, as per the Handbook and the California Code of Regulations, residential uses are not considered suitable in areas with noise levels exceeding 65 dB. Given these considerations, it is reasonable to assume that the proposed project will not expose residents to excessive noise levels. The impact is *less than significant*.

In conclusion, the Project will not result in any noise impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XIV. POPULATION AND HOUSING

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

Environmental Setting

The United States Census Bureau estimated the population in the City of Fresno to be 544,510 as of July 2021. This is an increase from the 2010 census, which counted the population in the City of Fresno to be 494,665. Factors that influence population growth include job availability, housing availability, and the capacity of existing infrastructure.

Regulatory Setting

City of Fresno General Plan: Chapter 11: Housing Element in the City of Fresno General Plan discusses the city's housing needs and the goals, policies and programs that have been developed to meet those needs and how they are consistent with the General Plan.

> **Objective LU-2:** Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residents.

City of Fresno Municipal Code: Chapter 15: Citywide Development Code provides the purpose and development standards for the city's various land uses.

CEQA Guidelines Section 15126.2(d): CEQA Guidelines requiring that a CEQA document discuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

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)?

No Impact: The project proposes to construct 58 new single-family residential units. The City of Fresno General Plan states that the City's average household size is 3.07 persons. Based on this average household size, the anticipated population increase as a result of the proposed project is

179 people. The anticipated population increase as a result of the proposed project is 179 people; however, this population increase has been planned for and is consistent with the underlying zoning RS-5 by the City of Fresno Zoning code and Medium Density Residential by the City of Fresno General Plan. The construction of housing at this location would not be unplanned, as the City's General Plan designated the proposed project site for medium density residential. Overall, the project will not constitute an increase in growth and population. There is *no impact.*

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

No Impact: The project site is currently vacant with no existing residential structures. The project would not require the removal of any existing residential structures. The project would not displace any existing housing and there would be *no impact.*

In conclusion, the Project will not result in any population and housing impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XV. PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	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?	☐	☑	☐	☐
b. Police protection?	☐	☑	☐	☐
c. Schools?	☐	☐	☑	☐
d. Parks?	☐	☐	☑	☐
e. Other public facilities?	☐	☑	☐	☐

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 Fresno Fire Protection Department will continue to provide fire protection services to the proposed project site following project implementation. The nearest fire station is City of Fresno Fire Station #3, located approximately 1.4 miles northeast of the proposed project site on Fresno St.

Police: Law enforcement services are provided to the project site via the City of Fresno Police Department. The Fresno Police Department Southwest Policing District will continue to provide police protection services to the proposed project site following project implementation. Fresno Police Department Southwest Policing District is located approximately 1.3 miles northeast of the proposed project site.

Schools: The proposed project site is located within the Fresno Unified School District. The nearest schools within that district are Computech Middle School and Edison High School, which are located approximately 0.4 miles east 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 with Mitigation Incorporated: The City of Fresno Fire Department will provide fire protection services to the proposed development. The closest fire station is City of Fresno Fire Station #3, located 1.4 miles northeast of the project site at 1406 Fresno St. The addition of 58 residential homes will increase the demand for fire protection services. However, the proposed land use has been planned for by the General Plan to ensure existing public services, including fire protection, can accommodate the growth and will not be adversely affected.

The timing of when new fire service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts to a potential future facility would be speculative. As new or expanded fire service facilities become necessary, construction or expansion projects would be subject to their own separate CEQA review in order to identify and mitigate any potential environmental impacts. Mitigation Measure PSR-1.1 shall be incorporated. Therefore, the impact is *less than significant with mitigation incorporated.*

b. Police protection?

Less than Significant Impact with Mitigation Incorporated: The Fresno Police Department Southwest Policing District will provide services to the proposed development. The Fresno Police Department Southwest Policing District is located approximately 1.3 miles northeast of the proposed project site. The development would increase the demand for police service with the addition of 58 residential units. However, the proposed land use has been planned for by the General Plan to ensure existing public services, including police protection, can accommodate the growth and will not be adversely affected.

The timing of when new police service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts to a potential future facility would be speculative. As new or expanded police service facilities become necessary, construction or expansion projects would be subject to their own separate CEQA review in order to identify and mitigate any potential environmental impacts. Mitigation Measure PSR-1.2 shall be incorporated. Therefore, the impact is *less than significant with mitigation incorporated*.

c. Schools?

Less than Significant Impact: The proposed project is within Fresno Unified School District. Since the proposed project includes the addition of 58 single-family residential units, the number of students in the school district will increase. The proposed project site is located within the city limits and therefore, growth associated with the Project has been planned and expected. Computech Middle School and Edison High School, just east of the project site, were developed in anticipation of growth in this part of the city, including of the population increase stemming from the proposed project. In addition to the goals and policies of the City's General Plan, future development is required by state law to pay development impact fees to the school districts at the time of building permit issuance. These impact fees are used by the school districts to maintain existing facilities and develop new facilities, as needed. Therefore, the impact is *less than significant.*

d. Parks?

Less than Significant Impact: The addition of 58 new residential units would result in more use of existing parks. Parks within a half-mile to one-mile radius that would service the proposed development include Hyde Park and Hinton Park. The project would not lower the existing level of services for parks, and the proposed project would contribute its fair share to parks facilities through implementation of a pocket park and in-lieu fees. Therefore, the impact is *less than significant.*

e. Other public facilities?

Less than Significant Impact with Mitigation Incorporated: The proposed project would be required to pay development impact fees to offset increased demand for public such as libraries, courts, and hospitals. While the payment of development fees could result in the construction of new or altered public service facilities, no specific projects have been identified at this time. As new or expanded public service facilities become necessary, construction or expansion projects would be subject to their own separate CEQA review in order to identify and mitigate any potential environmental impacts. Mitigation Measure PSR-1.3 shall be incorporated Therefore, the impact is *less than significant with mitigation incorporated*.

Mitigation Measures

Mitigation Measure PSR-1.1: As future fire facilities are planned, environmental review of proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from fire facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.

Mitigation Measure PSR-1.2: As future police facilities are planned, environmental review of proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from police facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.

Mitigation Measure PSR-1.3: As future public facilities are planned by the City of Fresno (e.g., court, library, and hospital facilities), environmental review of the proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from public facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.

In conclusion, the Project will not result in any impacts to public services beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XVI. RECREATION

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

Environmental Setting

There are 79 existing parks that are owned and operated by the City of Fresno. 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; those goals 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:

- Chapter 12 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.
- Chapter 12 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.
- Chapter 15 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.
- Chapter 15 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.
- Chapter 15 Article 41: Provides subdivision design standards, including standards for park location and design.
- Chapter 15 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.
- Chapter 15 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: Implementation of the proposed project would result in increased use of existing parks and other recreational facilities, however the project would contribute its fair share to parks facilities through a combination of pocket park development, as well as in-lieu fees, which will be used to support the maintenance of existing parks and other recreational facilities.

Furthermore, the proposed project has dedicated 5,056 sq. ft as a pocket park/open space area. The impact is *less than significant.*

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact: The proposed project includes 5,056 sq. ft of open space dedicated in fee to the City of Fresno, which does not require construction or expansion that would have an adverse physical effect on the environment. There will be no construction taking place in the proposed open space. Therefore, there is *no impact.*

In conclusion, the Project will not result in any parks and recreation impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XVII. TRANSPORTATION

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?	☐	☐	☑	☐
b) Conflict or be inconsistent with the CEQA guidelines Section 15064.3, Subdivision (b)?	☐	☐	☑	☐
d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☐	☑

Environmental Setting

Vehicular Access: Site access will be via one main street connecting to West Church Avenue and another street connecting to South Thorne Avenue.

Parking: Parking on site will consist of driveways for individual single-family lots as well as street parking. There are no designated parking lots or structures within the project area.

Regulatory Setting

CEQA Guidelines Section 15064.3, Subdivision (b): Criteria for Analyzing Transportation Impacts

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute

terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

City of Fresno Standard Specifications: The City of Fresno Standard Specifications are developed and enforced by the City of Fresno Public Works Department to guide the development and maintenance of streets within the city. The cross-section drawings contained in the City's Standard Specifications dictate the development of roads within the City.

City of Fresno General Plan: The Transportation and Mobility Element of the City of Fresno General Plan provides tiered impact criteria based on a project's location within the City's Spere of Influence. The proposed project site is located within Traffic Impact Zone III (TIZ-III). TIZ-III generally represents areas near or outside the City Limits but within the SOI as of December 31, 2012. Maintain a peak hour LOS standard of D or better for all intersections and roadway segments. The general plan states that a TIS will be required for all development projected to generate 100 or more peak hour new vehicle trips.

City of Fresno Active Transportation Plan: The City of Fresno Active Transportation Plan (ATP) adopted March 2017, updates and supersedes the City of Fresno 2010 Bicycle, Pedestrian, and Trails Master Plan (BMP). The ATP outlines the vision to provide human-powered travel including walking, bicycling, and wheelchair use. The plan aims to improve the accessibility and connectivity of bicycle and pedestrian network to increase the number of people to travel active transportation. The goals identified in the ATP are:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno
- Increase walking and bicycling trips in Fresno by creating user-friendly facilities
- Improve the geographic equity of access to walking and bicycling facilities in Fresno
- Fill key gaps in Fresno's walking and bicycling networks

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: Senate Bill (SB) 743 requires that relevant CEQA analysis of transportation impacts be conducted using a metric known as Vehicle Miles Traveled (VMT) instead of Level of Service (LOS). A TIS will be required for all development projected to generate 100 or more peak hour new vehicle trips in this zone. Peters Engineering Group has conducted a VMT analysis for the Project. The result of this analysis identified that, "the proposed Project is located within a green area when plotted on Figure 6, City of Fresno - Existing VMT per Capita (attached in Appendix E), indicating that the Project is proposed within an area that is known to generate low VMT per capita. Therefore, no additional analyses are required and the lead agency may presume that the Project will create a less-than-significant transportation impact." Given this analysis, the expected traffic generation will not adversely impact the existing and projected circulation system. The proposed project does not conflict with any program, plan, ordinance or policy related to the circulation system. There is *a less than significant impact.*

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

Less than Significant Impact: Senate Bill (SB) 743 requires that relevant CEQA analysis of transportation impacts be conducted using a metric known as Vehicle Miles Traveled (VMT) instead of Level of Service (LOS). VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto our roads, the project may cause a significant transportation impact.

The State CEQA Guidelines were amended to implement SB 743, by adding Section 15064.3. Among its provisions, Section 15064.3 confirms that, except with respect to transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, LOS measures of impacts on traffic facilities are no longer a relevant CEQA criteria for transportation impacts.

CEQA Guidelines Section 15064.3(b)(4) states that "[a] lead agency has discretion to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate used to estimate vehicle miles traveled and any revision to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section."

On June 25, 2020, the City of Fresno adopted CEQA Guidelines for Vehicle Miles Traveled Thresholds, pursuant to Senate Bill 743 to be effective of July 1, 2020. The thresholds described therein are referred to herein as the City of Fresno VMT Thresholds. The City of Fresno VMT Thresholds document was prepared and adopted consistent with the requirements of CEQA Guidelines Sections 15064.3 and 15064.7. The December 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) published by the Governor's Office of Planning and Research (OPR), was utilized as a reference and guidance document in the preparation of the Fresno VMT Thresholds.

The City of Fresno VMT Thresholds adopted a screening standard and criteria that can be used to screen out qualified projects that meet the adopted criteria from needing to prepare a detailed VMT analysis.

The City of Fresno VMT Thresholds Section 3.0 regarding Project Screening discusses a variety of projects that may be screened out of a VMT analysis including specific development and transportation projects. For development projects, conditions may exist that would presume that a development project has a less than significant impact. These may be size, location, proximity to transit, or trip-making potential.

One of the eligible screening criteria to whether a project is located within an area with low VMT, as designated in the screening map for residential uses (Figure 6) in the City of Fresno's CEQA Guidelines for Vehicle Miles Traveled Thresholds Technical Advisory. These low VMT areas were calculated using Fresno County as the region. The Fresno County average VMT per capita is 16.10. A project would screen out if the project average VMT per capita is less than 13 percent of the County average (16.10)

which results in a maximum of 14.01. The subject properties equate to an average VMT per capita of 8.41 per the Fresno COG screening map tool.

The proposed project is eligible to screen out because it is located in a low VMT zone, as designated by the Fresno COG screening map and Figure 6 of the City of Fresno CEQA Guidelines for VMT Thresholds. Therefore, the Project is consistent with CEQA Guidelines section 15064.3(b) and the VMT impact is *less than significant*.

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 project does not propose any incompatible uses or include any design features that could increase traffic hazards. The project does include two new vehicle access points via West Church Avenue and South Thorne Avenue. This improvement will be subject to review by the City's engineer to ensure the new access point does not pose any safety risks due to project design. The proposed project would not substantially increase hazards in or around the project area, there is *no impact.*

d) Would the project result in inadequate emergency access?

No Impact This project would not result in inadequate emergency access. Emergency access to the site would be via W. Church Avenue. A network of drive aisles within the proposed project property provides full access to all buildings within the development. The Project would have *no impact* on emergency access.

In conclusion, the Project will not result in any transportation impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	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	☐	☑	☐	☐
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.	☐	☑	☐	☐

Environmental Setting

Ethnographically, the Fresno area was occupied by the Yokuts. 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. 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, although most were concentrated around Tulare Lake, Kaweah River and its tributaries.

Cultural Resources Record Search: A Cultural Resources Records Search was conducted by the Southern San Joaquin Valley Information Center on March 6, 2023. The records search stated there have been two previous cultural resource studies in the project area. There have been five additional cultural resource studies within a one-half mile radius. All these reports are greater than five years of age and should be considered out of date for current studies. According to the records search, there are no recorded resources within the project area. There are two recorded resources within the one-half mile radius. These resources consist of a historic era single family residence and a historic era church. The full findings of the cultural records search can be found in Appendix B.

Native American Consultation: The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for

the purpose of protecting Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)).

Additional information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

Pursuant to AB 52, the Table Mountain Rancheria Tribe and the Dumna Wo Wah were invited to consult under AB 52. The City of Fresno mailed notices of the proposed project to each of these tribes on April 6, 2023, which included the required 30-day time period for tribes to request consultation. Invitations to consult under AB 52, responses from the included tribes are currently pending.

The site is currently vacant and has been routinely disturbed as part of the agricultural operations. If any artifacts are inadvertently discovered during ground-disturbing activities, existing federal, State, and local laws and regulations as well as the mitigation measures of the Fresno General Plan PEIR will require construction activities to cease until such artifacts are properly examined and determined not to be of significance by a qualified cultural resource professional.

Regulatory Setting

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.

Native American Reserve (NAR): This designation recognizes tribal trust and reservation lands managed by a Native American Tribe under the United States Department of the Interior's Bureau of Indian Affairs over which the County has no land use jurisdiction. The County encourages adoption of tribal management plans for these areas that consider compatibility and impacts upon adjacent area facilities and plans.

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 General Plan recognizes that connections to culture and history are essential character tics 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 polices are related to tribal resources that may apply to the proposed project:

Objective HCR-2: Identify and preserve Fresno's historic and cultural resources that reflect important cultural, social, economic, and architectural features so that residents will have a foundation upon which to measure and direct physical change.

- HCR-2-a. Policy. 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.
- HCR-2-c. Policy. Project Development. Prior to project approval, continue to require a project site and its Area of Potential Effects (APE), without benefit of a prior historic survey, to be evaluated and reviewed for the potential for historic and/or cultural resources by a professional who meets the Secretary of Interior's Qualifications. Survey costs shall be the responsibility of the project developer. Council may, but is not required, to adopt an ordinance to implement this policy.

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 with Mitigation: The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is 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. Although no cultural resources were identified, the presence of remains or unanticipated cultural resources under the ground surface is possible. Implementation of Mitigation Measures CUL-1.1, CUL-1.2, CUL-2 and CUL-3 will ensure that impacts to this checklist item will be *less than significant with mitigation* incorporated.

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 with Mitigation: Assembly Bill (AB) 52, which became law January 1, 2015, requires that, as part of the CEQA review process, public agencies provide early notice of a project to California Native American Tribes to allow for consultation between the tribe and the public agency. The purpose of AB 52 is to provide the opportunity for public agencies and tribes to consult and consider potential impacts to Tribal Cultural Resources (TCR's), as defined by the Public Resources Code (PRC) Section 2107(a). Under AB 52, public agencies shall reach out to California Native American Tribes who have requested to be notified of projects in areas within or which may have been affiliated with their tribal geographic range.

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. However, if resources were found to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American Tribe. Implementation of Mitigation Measures CUL-1.1, CUL-1.2, CUL-2 and CUL-3 will ensure that any impacts resulting from project implementation remain *less than significant with mitigation* incorporated.

Mitigation Measures for Impacts to Cultural Resources:

Mitigation Measure CUL-1.1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical

resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Mitigation Measure CUL-1.2: Prior to approval of any discretionary project that could result in an adverse change to a potential historic and/or cultural resource, the City shall require a site-specific evaluation of historic and/or cultural resources by a professional who meets the Secretary of Interior's Qualifications. The evaluation shall provide recommendations to mitigate potential impacts to historic and/or cultural resources and shall be approved by the Director of Planning and Development.

Mitigation Measure CUL-2: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for prehistoric archaeological resources shall be conducted. The following procedures shall be followed.

- If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines Section 15064.5. If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any prehistoric archaeological artifacts recovered as a result of mitigation shall be provided to a City approved institution or person who is capable of providing long term preservation to allow future scientific study.

- If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated for

significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist. If additional prehistoric archaeological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

Mitigation Measure CUL-3: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains.

Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

In conclusion, the Project will not result in any impacts to tribal cultural resources beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XIX. UTILITIES AND SERVICE SYSTEMS

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

Environmental Setting

Wastewater: Sewer services are provided to the site by the City of Fresno. The City of Fresno owns and operates two wastewater treatment facilities that serve the Fresno metropolitan area. They are the Fresno/Clovis Regional Wastewater Reclamation Facility (Regional Facility) and the North Fresno Wastewater Reclamation Facility (NFWRF). No new wastewater treatment services will be required as a result of project implementation.

Solid Waste: The Solid Waste Division of the City of Fresno provides the following services: collection of residential and commercial solid waste, recyclables and green waste throughout the community at least once a week; disposes of solid waste at the County of Fresno landfill; provides and maintains containers; responds to customer complaints/concerns and provides roll-off and compactor services to residential, multi-family and commercial customers.

Water: The City of Fresno Department of Public Utilities (DPU) provides potable water to the majority of the City, including the proposed project site. Fresno's primary source of potable water is groundwater stored in an aquifer. However, in 2004 the City's first surface water treatment facility (Northeast Surface

Water Treatment Facility [NESWTF]) came online and began delivering approximately 4,060 acre-feet in 2004 to residents in northeast Fresno. By 2010, the NESWTF delivered approximately 18,474 acre-feet of treated surface water.

Stormwater: The Fresno Metropolitan Flood Control District (FMFCD) manages stormwater runoff in Fresno. The major elements of the FMFCD's flood control system include dams, reservoirs, and detention basins. The FMFCD is responsible for reviewing development proposals to assess drainage and flood control impacts and needs, in addition to determining applicable requirements and modifications needed in order to implement the Storm Drainage and Flood Control Master Plan.

Natural Gas and Electricity: PG&E, the natural gas and electric service provider for the area, incrementally expands and updates its service system as needed to serve its users.

Telecommunications: Accordingly, telecommunications providers in the area incrementally expand and update their service systems in response to usage and demand.

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 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 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 Waters of the U.S. There are 350 permitted facilities within the Central Valley Region.

City of Fresno General Plan:

Objective PU-4: Ensure provision of adequate trunk sewer and collector main capacities to serve existing and planned urban development, consistent with the Wastewater Master Plan.

> **Policy PU-4-a Plan for Regional Needs**. Coordinate and consult with Plan for Regional Needs. h the City of Clovis, pursuant to the Fresno-Clovis Sewerage System Joint Powers Agreement, so that planning and construction of sewer collection facilities will continue to meet the regional needs of the Metropolitan Area.

Objective PU-9: Provide adequate solid waste facilities and services for the collection, transfer, recycling, and disposal of refuse.

Policy PU-9-d Facility Siting. Locate private or public waste fac Facility Siting. Utilities and recycling facilities in conformance with City zoning and State and federal regulations, so that the transportation, processing, and disposal of these materials are not detrimental to the public health, safety, welfare, and aesthetic well-being of the surrounding community.

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: The proposed project will require the extension of existing utility services into the project area and be subject to payment of any applicable connection charges or fees. This is not anticipated to cause a significant environmental effect because extension/relocation would occur within the right-of-way prior to street construction to minimize environmental impacts. In regard to stormwater drainage, section 4.10 of the PEIR applies to guide and inform the development, ensuring that appropriate measures are taken to address environmental concerns related to stormwater management and drainage throughout the project's construction and operation phases.

While the Project will increase water demand, the proposed land use and associated water demand are consistent with and planned for by the City of Fresno General Plan, which identifies the project site as Medium Density Residential. It is not anticipated that the proposed project would result in the relocation or construction of new or expanded wastewater treatment facilities, power plants, natural gas extraction facilities or telecommunication facilities. In the event that any of these facilities become required, they would be required to serve more than just the proposed project and would be subject to separate environmental review and approval. The impact is *less than significant.*

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

Less Than Significant Impact with Mitigation Incorporated: Water services will be provided by the City of Fresno upon development. The city has 272 active wells, which pump an average of 146 million gallons of water per day (MGD). According to City's UWMP (2015), the projected water supply for Fresno in year 2025 is 329,030 AFY, which is comprised of groundwater, surface water, and recycled water. Water demand for the proposed 58 residential developments is estimated to be approximately 15,036 gallons of water daily, or 16.9-acre feet per year. This demand was estimated by multiplying the project's population (179 persons) by the average daily per capita residential water use in Fresno (84 gallons). This data was provided by the Fresno Metropolitan Flood Control District. While the Project will increase water demand, the proposed land use and associated water demand are consistent with and planned for by the City of Fresno General Plan, which identifies the project site as Medium Density Residential. The most water-intensive aspect of the Project (the medium density residences) is consistent with the City's General Plan land use designation. As such, the Project would not affect groundwater supplies in the Kings River Sub-basin beyond what has already been analyzed in the most current General Plan PEIR.

The proposed Project is consistent with the City's General Plan land use designation. As such, the Project would not affect water supplies beyond what has already been analyzed in the most current

General Plan PEIR. Additionally, the applicant will be required to comply with all requirements of the City of Fresno Department of Public Utilities to reduce the Project's water impacts to less than significant. With implementation of applicable City of Fresno PEIR mitigation measures HYD-3.1 through HYD-3.4 and UTL 1.1.1 and UTL 1.2.1, the proposed Project would not obstruct implementation of a water quality control plan or sustainable groundwater management plan beyond those analyzed in the City of Fresno PEIR. Therefore, the Project has a *less than significant impact with mitigation incorporated.*

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 with Mitigation Incorporated: While the Project will increase water demand, the proposed land use and associated water demand are consistent with and planned for by the City of Fresno General Plan, which identifies the project site as Medium Density Residential. The City of Fresno PEIR concludes that impacts associated with wastewater treatment facilities and capacity resulting from the buildout of the General Plan, including the proposed Project site, would be less than significant with implementation of PEIR mitigation measures HYD-3.1 through HYD-3.4, UTL-1.3.1 UTL-1.3.2, and UTL-1.4.1. Therefore, the impact is *less than significant with mitigation incorporated*.

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: Solid waste collection service will be provided by the City of Fresno and waste disposal will be provided by the County. Solid waste is anticipated because of project implementation; however, the project does not include any components that would generate excessive waste and the existing landfill (American Avenue Disposal Site) has sufficient permitted capacity to accommodate the project's solid waste disposal needs. According to CalRecycle's Solid Waste Information System (SWIS), American Avenue Disposal Site has a daily capacity of 2,200 tons of solid waste (803,000 tons per year). Section 8.2, Waste by Land Use, of the CalEEMod Report (Appendix A) conducted for the project found that operation of the 58 single-family homes will produce 59.76 tons of solid waste per year. Therefore, the proposed project will take up 0.00007% of the landfill's yearly capacity. While solid waste will result from project implementation, the impact is *less than significant.*

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

No Impact: The proposed project will comply with all applicable federal, state, and local regulations pertaining to the disposal of solid waste, including recycling. Therefore, the proposed project would have no impact on solid waste regulations. Furthermore, project construction and operational activities that generate solid waste would be handled, transported, and disposed of in accordance with AB 939 and CALGreen regulations related to solid waste.

In compliance with CALGreen Section 4.408, the project will undertake construction waste management practices, which include recycling and salvaging a minimum of 65 percent of

nonhazardous construction and demolition waste. Exceptions are made for excavated soil and land-clearing debris. The enforcing agency may identify alternate waste reduction requirements in cases where diversion facilities necessary for compliance are not reasonably available near the job site. To adhere to these requirements, the project will submit a construction waste management plan signed by the owner, which will identify the materials to be diverted from disposal through recycling, reuse, or salvage, and specify whether materials will be source-separated or bulk mixed. Documentation will be maintained to demonstrate compliance with these regulations. Therefore, the proposed project would have *no impact* on solid waste regulations.

The proposed project aligns with the City of Fresno General Plan and Greenhouse Gas Reduction Plan Update includes the following policies related to solid waste management:

Policy PU-9-a: New Techniques. Continue to collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal, such as recycling, composting, waste to energy technology, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities.

Policy PU-9-b: Compliance with State Law. Continue to pursue programs to maintain conformance with the Solid Waste Management Act of 1989 or as otherwise required by law and mandated diversion goals.

Policy RC-11-a: Waste Reduction Strategies. Maintain current targets for recycling and re-use of all types of waste material in the city and enhance waste and wastewater management practices to reduce natural resource consumption, including the following measures:

- Continue to require recyclable material collection and storage areas in all residential development.
- Establish recycling collection and storage area standards for commercial and industrial facilities to size the recycling areas according to the anticipated types and amounts of recyclable material generated.
- Provide educational materials to residents on how and what to recycle and how to dispose of hazardous waste.
- Provide recycling canisters and collection in public areas where trash cans are also provided.
- Institute a program to evaluate major waste generators and identify recycling opportunities for their facilities and operations.
- Continue to partner with the California Integrated Waste Management Board on waste diversion and recycling programs and the CalMax (California Materials Exchange) program.
- Evaluate the feasibility of a residential, restaurant and institutional food waste segregation and recycling program, to reduce the amount of organic material sent to landfill and minimize the emissions generated by decomposing organic material.
- Evaluate the feasibility of “carbon foot printing” for the City’s wastewater treatment facilities, biomass and composting operations, solid waste collection and recycling programs.
- Expand yard waste collection to divert compostable waste from landfills.

- Study the feasibility and cost-benefit analysis of a municipal composting program to collect and compost food and yard waste, including institutional food and yard waste, using the resulting compost matter for City park and median maintenance.

Policy RC-11-b: Zero Waste Strategy. Create a strategic and operations plan for fulfilling the City Council resolution committing the City to a Zero Waste goal.

Policy RC-4-i: Methane Capture. Continue to pursue opportunities to reduce air pollution by using methane gas from the old City landfill and the City's wastewater treatment process.

Mitigation Measures

Mitigation Measure HYD-3.1: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP collection systems:

- Coordinate with FMFCD to implement the existing Storm Drainage and Flood Control Master Plan (SDFCMP) for collection systems in drainage areas where the amount of imperviousness is unaffected by the change in land uses.
- Coordinate with FMFCD to update the SDFCMP in those drainage areas where the amount of imperviousness increased due to the change in land uses to determine the changes in the collection systems that would need to occur to provide adequate capacity for the stormwater runoff from the increased imperviousness.
- As development is proposed, implement current SDFCMP to provide stormwater collection systems that have sufficient capacity to convey the peak runoff rates from the areas of increased imperviousness.
- Require developments that increase site imperviousness to install, operate, and maintain FMFCD approved on-site detention systems to reduce the peak runoff rates resulting from the increased imperviousness to the peak runoff rates that will not exceed the capacity of the existing stormwater collection systems.

Mitigation Measure HYD-3.2: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP retention basins: Prior to approval of development projects, coordinate with FMFCD to analyze the impacts to existing and planned retention basins to determine remedial measures required to reduce the impact on retention basin capacity to less than significant. Remedial measures would include:

- Increase the size of the retention basin through the purchase of more land or deepening the basin, or a combination for planned retention basins.
- Require developments that increase runoff volume to install, operate, and maintain Low Impact Development (LID) measures to reduce runoff volume to the runoff volume that will not exceed the capacity of the existing retention basins.

Mitigation Measure HYD-3.3: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP urban detention (stormwater quality) basins: Prior to approval of development projects, coordinate with FMFCD to determine the impacts to the urban detention basin weir overflow rates and determine remedial measures required to reduce the impact on the detention basin capacity to less than significant. Remedial measures would include:

- Modify overflow weir to maintain the suspended solids removal rates adopted by the FMFCD Board of Directors.
- Increase the size of the urban detention basin to increase residence time by purchasing more land. The existing detention basins are already at the adopted design depth.
- Require developments that increase runoff volume to install, operate, and maintain Low Impact Development (LID) measures to reduce peak runoff rates and runoff volume to the runoff rates and volumes that will not exceed the weir overflow rates of the existing urban detention basins.

Mitigation Measure HYD-3.4: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP pump disposal systems:

- Prior to approval of development projects, coordinate with FMFCD to determine the extent and degree to which the capacity of the existing pump system will be exceeded.
- Require new developments to install operate, and maintain on-site detention facilities, consistent with FMFCD design standards, to reduce peak stormwater runoff rates to existing planned peak runoff rates.
- Provide additional pump system capacity to the maximum allowed by existing permitting to increase the capacity to match or exceed the peak runoff rates determined by the SDFCMP.

Mitigation Measure UTL-1.1.1: The City shall evaluate the water conveyance system and, at the time that discretionary projects are submitted for approval by the City, the City shall not approve development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City by approximately 2025.

- Construct 65 new groundwater wells, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct a 2.0-million-gallon potable water reservoir (Reservoir T2) near the intersection of Clovis and California Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct a 4.0-million-gallon potable water reservoir (Reservoir T5) near the intersection of Ashlan and Chestnut Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct a 4.0-million-gallon potable water reservoir (Reservoir T6) near the intersection of Ashlan Avenue and Highway 99, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct 50.3 miles of regional water transmission mains ranging in size from 24-inch to 48-inch, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct 95.9 miles of 16-inch transmission grid mains in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.

Prior to initiating construction of any of the capacity improvement projects identified above, the City shall conduct appropriate environmental analyses for each project to determine whether environmental impacts would occur.

Mitigation Measure UTL-1.2.1: The City shall evaluate the water supply system at the time discretionary projects are submitted and shall not approve development that would demand additional water until

additional capacity is provided. By approximately the year 2025, the following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City.

- Construct an approximately 30 mgd expansion of the existing northeast surface water treatment facility for a total capacity of 60 mgd, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update.
- Construct an approximately 20 mgd surface water treatment facility in the southwest portion of the City, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct a 25,000 AF/year recycled water facility as an expansion to the RWRF in accordance with the January 2014 City of Fresno Metropolitan Water Resources Management Plan. This improvement is required after the year 2025.

Mitigation Measure UTL-1.3.1: The City shall evaluate the wastewater system at the time discretionary projects are submitted and shall not approve development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. By approximately the year 2025, the City shall evaluate the potential environmental impacts and construct the following improvements.

- Construct an approximately 70 mgd expansion of the Regional Wastewater Treatment Facility prior to flows reaching 80 percent of rated capacity and obtain revised waste discharge permits as the generation of wastewater is increased.
- Construct an approximately 0.49 mgd expansion of the North Facility and obtain revised waste discharge permits as the generation of wastewater is increased.

Mitigation Measure UTL-1.3.2: The City shall evaluate the wastewater system at the time discretionary projects are submitted and shall not approve development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. After approximately the year 2025, the City shall evaluate the potential environmental impacts of and construct the following improvements.

- Construct an approximately 24 mgd Wastewater Treatment Facility within the Southeast Development Area and obtain revised waste discharge permits as the generation of wastewater is increased.
- Construct an approximately 9.6 mgd expansion of the Regional Wastewater Treatment Facility and obtain revised waste discharge permits as the generation of wastewater is increased.

Mitigation Measure UTL-1.4.1: Consistent with the Sewer System Management Plan, the City shall evaluate the wastewater collection system at the time discretionary projects are submitted and shall not approve development that would generate additional wastewater and exceed the capacity of a facility until additional capacity is provided.

In conclusion, the Project will not result in any impacts to utilities and service systems beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XX. WILDFIRE

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

Environmental Setting

Fresno is categorized as having little or no threat or moderate fire hazard, which can be attributed to its impervious surface areas. The Project site comprises a relatively flat property within the city limits in an area planned for and developed with urban uses.

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.

There are no State Responsibility Areas (SRAs) within the vicinity of the project site, and the project site is not categorized as a "Very High" Fire Hazard Severity Zone (FHSZ) by CalFire. This CEQA topic only applies to areas within an SRA or a Very High FHSZ.

Discussion

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

Less than Significant Impact: The project would not substantially impair access to the existing roadway network. There would be convenient and safe vehicular and pedestrian circulation provided

within the project site and connecting offsite. The Project has adopted the Emergency Operations Plan located within the City's General Plan, this will be reviewed by the City of Fresno Fire Chief to ensure the project does not impair emergency response or emergency evacuation. The project will comply with all applicable codes and regulations as put forth by the City of Fresno Police Department and Fire Department. Additionally, the proposed project site is not located within an SRA or a Very High FHSZ. The impact is *less than significant.*

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?

Less than Significant Impact: According to the City's General Plan, Fresno's urbanized and working agricultural landscape, along with its low wildfire threat designation, reduces the likelihood of exacerbating fire hazards. While certain localized areas in the city may pose higher wildfire risks due to steep terrain and vegetation, the majority of the Planning Area is characterized by little to no threat or moderate fire hazard, largely attributed to the presence of paved areas. Because the proposed project is located on flat land surrounded by urbanized and agricultural land uses it is considered to be at little risk of fire. There is *a less than significant 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 construction of the project involves adding new local residential streets, and new and relocated utilities. Utilities such as emergency water sources and power lines would be included as part of the proposed development, however all improvements would be subject to City standards and fire chief approval. The proposed project would not exacerbate fire risk and the impact would be *less than significant.*

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?

No Impact: The project site is not located in an area designated as a Fire Hazard Severity Zone and lands associated with the Project site are relatively flat. Therefore, the project would not be susceptible to downslope or downstream flooding or landslides as a result of post-fire instability or drainage changes. There is *no impact.*

In conclusion, the Project will not result in any wildfire impacts beyond those analyzed in PEIR SCH No. 2019050005 prepared for the Fresno General Plan.

XXI. 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?	☐	☑	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☑	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☑	☐

Discussion

a) 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 aesthetic, biological, historical, geological, hydrological, air quality, public service, utility, 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 incorporated.*

Mitigation Measures to be Incorporated: AES 4.1, AES 4.2, AES 4.5, CUL 1.1-1.2, CUL 2.1, CUL 3.1, GEO 2.1, GEO 6.1, GHG 1.1, HAZ 1.1-1.2, HYD 3.1-3.4, PSR 1.1-1.3, UTL 1.1.1-1.4.1.

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) requires a comprehensive evaluation of the cumulative impact of a project, considering its effects in conjunction with past projects, other ongoing projects, and probable future projects. Considering the specific context of this project and its alignment with established environmental policies, it is essential to address the potential cumulative impacts. The project may indeed contribute to certain localized effects, such as increased home values in the immediate area and a potential acceleration of development on the city's outskirts. Furthermore, changes in energy consumption, water use, and water quality may have enduring consequences extending beyond the construction phase. However, upon careful analysis presented in this Initial Study and Mitigated Negative Declaration (ISMND), it is evident that all these impacts, including the cumulative effects when considered with other residential developments in the area, are projected to be less than significant with mitigation incorporation. This ISMND reflects that the project complies with environmental regulations and mitigation measures, demonstrating that the incremental contributions to these impacts will not result in considerable adverse effects. The comprehensive assessment ensures that the cumulative impacts of this project are *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 on human beings.

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 Ajit Gill Apartments in the City of Fresno.

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 City 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 Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
Mitigation Measure AES-4.1: Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences.	Project Applicant	Prior to the issuance of building permits	City of Fresno	
Mitigation Measure AES-4.2: Lighting systems for public facilities such as active play areas shall provide adequate illumination for the activity; however, low intensity light fixtures and shields shall be used to minimize spillover light onto adjacent properties.	Project Applicant	Prior to the issuance of building permits	City of Fresno	
Mitigation Measure AES-4.5: Materials used on building facades shall be non-reflective.	Project Applicant	Prior to the issuance of building permits	City of Fresno	
Mitigation Measure BIO-1.1: Construction of a proposed project shall avoid, where possible, vegetation communities that provide suitable habitat for a special-status species known to occur within the Planning Area. If construction within potentially suitable habitat must occur, the presence/absence of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If a special-status species are determined to occupy any portion of a project site, avoidance and minimization measures shall be incorporated into the construction phase of a project to avoid direct or incidental take of a listed species to the greatest extent feasible.	Project Applicant	Prior to commencement of and during construction activities	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
Mitigation Measure BIO-1.2: Direct or incidental take of any state or federally listed species shall be avoided to the greatest extent feasible. If construction of a proposed project will result in the direct or incidental take of a listed species, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the CDFW 2081 and USFWS Section 7 or Section 10 permitting processes shall take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation.	Project Applicant	Prior to commencement of and during construction activities	City of Fresno	
Mitigation Measure BIO-1.3: Development within the Planning Area shall avoid, where possible, special-status natural communities and vegetation communities that provide suitable habitat for special-status species. If a proposed project will result in the loss of a special-status natural community or suitable habitat for special-status species, compensatory habitat-based mitigation is required under CEQA and CESA. Mitigation shall consist of preserving on-site habitat, restoring similar habitat or purchasing off-site credits from an approved mitigation bank. Compensatory mitigation shall be determined through consultation with the City and/or resource agencies. An appropriate mitigation strategy and ratio shall be agreed upon by the developer and lead agency to reduce project impacts to special-status natural communities to a less than significant level. Agreed-upon mitigation ratios shall depend on the quality of the habitat and presence/absence of a special-status species. The specific mitigation for project level impacts shall be determined on a case-by-case basis.	Project Applicant	Prior to commencement of and during construction activities	City of Fresno	
Mitigation Measure BIO-1.4: Proposed projects within the Planning Area should avoid, if possible, construction within the general nesting season of February through August for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey shall be conducted by a qualified biologist to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor shall be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer shall be	Project Applicant	Prior to commencement of and during construction activities	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor. Prior to commencement of grading activities and issuance of any building permits, the Director of the City of Fresno Planning and Development Department, or designee, shall verify that all proposed project grading and construction plans include specific documentation regarding the requirements of the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503, that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field.				
Mitigation Measure CUL-1.1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.	Project Applicant	Prior to commencement of and during construction activities	City of Fresno	
Mitigation Measure CUL-1.2: Prior to approval of any discretionary project that could result in an adverse change to a potential historic and/or cultural resource, the City shall require a site-specific evaluation of historic and/or cultural resources by a professional who meets the Secretary of Interior's	Project Applicant	Prior to commencement of, and during, construction activities.	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
Qualifications. The evaluation shall provide recommendations to mitigate potential impacts to historic and/or cultural resources and shall be approved by the Director of Planning and Development.				
Mitigation Measure CUL-2.1: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for prehistoric archaeological resources shall be conducted. The following procedures shall be followed. • If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines Section 15064.5. If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any prehistoric archaeological artifacts recovered as a result of mitigation shall be provided to a City approved institution or person who is capable of providing long-term preservation to allow future scientific study. • If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be	Project Applicant	Prior to commencement of, and during, construction activities.	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
evaluated for significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist. If additional prehistoric archaeological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.				
Mitigation Measure CUL-3.1: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.	Project Applicant	Prior to commencement of and during construction activities	City of Fresno	
Mitigation Measure GEO-2.1: To prevent the project from resulting in substantial soil erosion or the loss of topsoil, the project shall implement a Stormwater Pollution Prevention Plan (SWPPP) incorporating best management practices. This plan will be	Project Applicant	Prior to commencement of and during construction activities	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
designed to effectively manage stormwater runoff and minimize soil disturbance during construction activities. Additionally, the plan will outline regular inspections, maintenance schedules, and employee training to ensure the proper implementation of erosion control measures throughout the construction phase. By addressing stormwater management through the SWPPP and integrating best management practices, the project aims to minimize soil erosion, protect topsoil integrity, and mitigate potential adverse impacts on the surrounding environment.				
Mitigation Measure GEO-6.1: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed: • If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future	Project Applicant	Prior to development approvals	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
scientific study. • If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.				
Mitigation Measure GHG-1.1: Prior to the City's approval of subsequent discretionary projects, the Director of the City Planning and Development Department, or designee, shall confirm that development projects are consistent with the Recirculated GHG Reduction Plan Update (2021) and shall implement all measures deemed applicable to the project through the GHG Reduction Plan Update-Project Consistency Checklist (Appendix B to the GHG Reduction Plan Update).	Project Applicant	Prior to discretionary approval	City of Fresno	
Mitigation Measure HAZ-1.1: To prevent the project from resulting in substantial soil erosion or the loss of topsoil, the project shall implement a Stormwater Pollution Prevention Plan (SWPPP) incorporating best management practices (BMPs). This plan will be designed to effectively manage stormwater runoff and minimize soil disturbance during construction activities. Additionally, the plan will outline regular inspections, maintenance schedules, and employee training to ensure the proper implementation of erosion control measures throughout the construction phase. By addressing stormwater management through the SWPPP and integrating best management practices, the project aims to minimize soil erosion, protect topsoil integrity, and mitigate potential adverse impacts on the surrounding environment.	Project Applicant	Prior to commencement of and during construction activities	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
Mitigation Measure HAZ-1.2: The proposed residential project is near the boundary of a known landfill (Hyde Park) and potential areas of landfill gases, special provisions should be taken to comply with guidelines pertaining thereto. Prior to any future development, the applicant should be required to comply with the provisions set forth within the Post Closure Land Use Elements of the California Code of Regulations Title 27, Section 21190 et. seq. Contact the Fresno County Department of Public Health, Environmental Health Division, Solid Waste Program at (559) 600-3271 for more information. A landfill mitigation plan shall be required prior to commencing any construction activities.	Project Applicant	Prior to commencement of any construction activities	County of Fresno, Environmental Health Division & City of Fresno	
HYD-3.1: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP collection systems: • Coordinate with FMFCD to implement the existing Storm Drainage and Flood Control Master Plan (SDFCMP) for collection systems in drainage areas where the amount of imperviousness is unaffected by the change in land uses. • Coordinate with FMFCD to update the SDFCMP in those drainage areas where the amount of imperviousness increased due to the change in land uses to determine the changes in the collection systems that would need to occur to provide adequate capacity for the stormwater runoff from the increased imperviousness. • As development is proposed, implement current SDFCMP to provide stormwater collection systems that have sufficient capacity to convey the peak runoff rates from the areas of increased imperviousness. • Require developments that increase site imperviousness to install, operate, and maintain FMFCD approved on-site detention systems to reduce the peak runoff rates resulting from the increased imperviousness to the peak runoff rates that will not exceed the capacity of the existing stormwater collection systems.	City of Fresno	Ongoing.	City of Fresno	
HYD-3.2: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP retention basins: Prior to approval of development projects, coordinate with FMFCD to analyze the impacts to existing and planned retention basins to determine remedial measures required to reduce the impact on retention basin capacity to less than significant.	City of Fresno	Prior to issuance of building permits.	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
Remedial measures would include: • Increase the size of the retention basin through the purchase of more land or deepening the basin, or a combination for planned retention basins. • Require developments that increase runoff volume to install, operate, and maintain Low Impact Development (LID) measures to reduce runoff volume to the runoff volume that will not exceed the capacity of the existing retention basins.				
HYD-3.3: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP urban detention (stormwater quality) basins: Prior to approval of development projects, coordinate with FMFCD to determine the impacts to the urban detention basin weir overflow rates and determine remedial measures required to reduce the impact on the detention basin capacity to less than significant. Remedial measures would include: • Modify overflow weir to maintain the suspended solids removal rates adopted by the FMFCD Board of Directors. • Increase the size of the urban detention basin to increase residence time by purchasing more land. The existing detention basins are already at the adopted design depth. • Require developments that increase runoff volume to install, operate, and maintain Low Impact Development (LID) measures to reduce peak runoff rates and runoff volume to the runoff rates and volumes that will not exceed the weir overflow rates of the existing urban detention basins.	City of Fresno	Prior to development approvals	City of Fresno	
HYD-3.4: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned SDFCMP pump disposal systems: • Prior to approval of development projects, coordinate with FMFCD to determine the extent and degree to which the capacity of the existing pump system will be exceeded. • Require new developments to install, operate, and maintain on-site detention facilities, consistent with FMFCD design standards, to reduce peak stormwater runoff rates to existing planned peak runoff rates. • Provide additional pump system capacity to the maximum allowed by existing permitting to increase the capacity to match or exceed the peak runoff rates determined by the SDFCMP.	City of Fresno	Prior to development approvals	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
Mitigation Measure PSR-1.1: As future fire facilities are planned, environmental review of proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from fire facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.	City of Fresno	Prior to development approvals	City of Fresno	
Mitigation Measure PSR-1.2: As future police facilities are planned, environmental review of proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from police facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting	City of Fresno	Prior to development approvals	City of Fresno	
Mitigation Measure PSR-1.3: As future public facilities are planned by the City of Fresno (e.g., court, library, and hospital facilities), environmental review of the proposed facilities shall be completed to meet the requirements of CEQA. Typical impacts from public facilities include air quality/greenhouse gas emissions, noise, traffic, and lighting.	City of Fresno	Prior to development approvals	City of Fresno	
Mitigation Measure UTL-1.1.1: The City shall evaluate the water conveyance system and, at the time that discretionary projects are submitted for approval by the City, the City shall not approve development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City by approximately 2025. • Construct 65 new groundwater wells, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 2.0-million-gallon potable water reservoir (Reservoir T2) near the intersection of Clovis and California Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 4.0-million-gallon potable water reservoir (Reservoir T5) near the intersection of Ashlan and Chestnut Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 4.0-million-gallon potable water reservoir (Reservoir T6) near the intersection of Ashlan Avenue and Highway 99, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct 50.3 miles of regional water transmission mains ranging in size from 24-inch	City of Fresno	Prior to development approvals	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
to 48-inch, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct 95.9 miles of 16-inch transmission grid mains in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Prior to initiating construction of any of the capacity improvement projects identified above, the City shall conduct appropriate environmental analyses for each project to determine whether environmental impacts would occur.				
Mitigation Measure UTL-1.2.1: The City shall evaluate the water supply system at the time discretionary projects are submitted and shall not approve development that would demand additional water until additional capacity is provided. By approximately the year 2025, the following capacity improvements shall be evaluated for potential environmental impacts and constructed by the City. • Construct an approximately 30 mgd expansion of the existing northeast surface water treatment facility for a total capacity of 60 mgd, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct an approximately 20 mgd surface water treatment facility in the southwest portion of the City, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. Construct a 25,000 AF/year recycled water facility as an expansion to the RWRF in accordance with the January 2014 City of Fresno Metropolitan Water Resources Management Plan. This improvement is required after the year 2025.	City of Fresno	Prior to development approvals	City of Fresno	
Mitigation Measure UTL-1.3.1: The City shall evaluate the wastewater system at the time discretionary projects are submitted and shall not approve development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. By approximately the year 2025, the City shall evaluate the potential environmental impacts and construct the following improvements. • Construct an approximately 70 mgd expansion of the Regional Wastewater Treatment Facility prior to flows reaching 80 percent of rated capacity, and obtain revised waste discharge permits as the generation of wastewater is increased.	City of Fresno	Prior to approval	City of Fresno	

Mitigation Measures Incorporated from the City of Fresno General Plan PEIR				
Mitigation Measure	**Responsible Party for Implementation**	**Implementation Timing**	**Responsible Party for Monitoring**	**Verification**
• Construct an approximately 0.49 mgd expansion of the North Facility and obtain revised waste discharge permits as the generation of wastewater is increased.				
Mitigation Measure UTL-1.3.2: The City shall evaluate the wastewater system at the time discretionary projects are submitted and shall not approve development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. After approximately the year 2025, the City shall evaluate the potential environmental impacts of and construct the following improvements. • Construct an approximately 24 mgd Wastewater Treatment Facility within the Southeast Development Area and obtain revised waste discharge permits as the generation of wastewater is increased. • Construct an approximately 9.6 mgd expansion of the Regional Wastewater Treatment Facility and obtain revised waste discharge permits as the generation of wastewater is increased.	City of Fresno	Prior to approval	City of Fresno	
Mitigation Measure UTL-1.4.1: Consistent with the Sewer System Management Plan, the City shall evaluate the wastewater collection system at the time discretionary projects are submitted and shall not approve development that would generate additional wastewater and exceed the capacity of a facility until additional capacity is provided.	City of Fresno	Prior to approval	City of Fresno	

3.7 Supporting Information and Sources

1. AB 3098 List
2. EMFAC2014
3. City of Fresno General Plan
4. City of Fresno General Plan PEIR
5. Fresno Greenhouse Gas Reduction Plan
6. City of Fresno Zoning Ordinance
7. Engineering Standards, City of Fresno
8. SJVAPCD Regulations and Guidelines
9. Flood Insurance Rate Maps
10. California Air Resources Board's (CARB's) Air Quality and Land Use Handbook
11. 2019 California Environmental Quality Act CEQA Guidelines
12. California Building Code
13. California Stormwater Pollution Prevention Program (SWPPP)

14. "Construction Noise Handbook." U.S. Department of Transportation/Federal Highway Administration.
15. Government Code Section 65962.5
16. California Environmental Protection Agency (CEPA) San Joaquin Valley Air Pollution Control District Mitigation Measures (http://www.valleyair.org/transportation/Mitigation-Measures.pdf)
17. PG&E 2017 Power Content Label
18. Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Churchwood Estates

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0
Single Family Housing	58.00	Dwelling Unit	8.00	104,400.00	166

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on acerage of project site

Woodstoves - Per Section 5.4.2.1, Rule 4901

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	31.90	58.00
tblFireplaces	NumberNoFireplace	26.10	58.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LotAcreage	18.83	8.00
tblWoodstoves	NumberCatalytic	8.00	9.00
tblWoodstoves	NumberNoncatalytic	8.00	9.00

2.0 Emissions Summary

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2024	0.1189	1.0931	1.1493	2.2200e-003	0.1886	0.0484	0.2369	0.0900	0.0451	0.1351	0.0000	194.0161	194.0161	0.0462	1.8500e-003	195.7237
2025	1.1116	1.0670	1.4291	2.6400e-003	0.0313	0.0441	0.0754	8.4600e-003	0.0415	0.0499	0.0000	230.3368	230.3368	0.0475	3.1700e-003	232.4707
Maximum	**1.1116**	**1.0931**	**1.4291**	**2.6400e-003**	**0.1886**	**0.0484**	**0.2369**	**0.0900**	**0.0451**	**0.1351**	**0.0000**	**230.3368**	**230.3368**	**0.0475**	**3.1700e-003**	**232.4707**

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					
2024	0.1189	1.0931	1.1493	2.2200e-003	0.1886	0.0484	0.2369	0.0900	0.0451	0.1351	0.0000	194.0159	194.0159	0.0462	1.8500e-003	195.7235
2025	1.1116	1.0670	1.4291	2.6400e-003	0.0313	0.0441	0.0754	8.4600e-003	0.0415	0.0499	0.0000	230.3366	230.3366	0.0475	3.1700e-003	232.4705
Maximum	**1.1116**	**1.0931**	**1.4291**	**2.6400e-003**	**0.1886**	**0.0484**	**0.2369**	**0.0900**	**0.0451**	**0.1351**	**0.0000**	**230.3366**	**230.3366**	**0.0475**	**3.1700e-003**	**232.4705**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2024**	**9-30-2024**	0.6870	0.6870
2	**10-1-2024**	**12-31-2024**	0.5160	0.5160
3	**1-1-2025**	**3-31-2025**	0.4695	0.4695
4	**4-1-2025**	**6-30-2025**	0.4736	0.4736
5	**7-1-2025**	**9-30-2025**	1.2296	1.2296
		Highest	1.2296	1.2296

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	0.7104	0.0716	2.1127	5.7100e-003		0.2773	0.2773		0.2773	0.2773	36.3845	46.3872	82.7717	0.1716	8.4000e-004	87.3123
Energy	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	117.1899	117.1899	8.3500e-003	2.2000e-003	118.0552
Mobile	0.2409	0.4069	2.2827	5.6400e-003	0.5941	4.6000e-003	0.5987	0.1589	4.3200e-003	0.1632	0.0000	522.2602	522.2602	0.0265	0.0285	531.4082
Waste						0.0000	0.0000		0.0000	0.0000	12.1307	0.0000	12.1307	0.7169	0.0000	30.0534
Water						0.0000	0.0000		0.0000	0.0000	1.1989	2.6634	3.8623	0.1236	2.9600e-003	7.8335
Total	**0.9588**	**0.5427**	**4.4228**	**0.0118**	**0.5941**	**0.2871**	**0.8812**	**0.1589**	**0.2868**	**0.4457**	**49.7141**	**688.5007**	**738.2149**	**1.0469**	**0.0345**	**774.6625**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.5224	4.9600e-003	0.4303	2.0000e-005		2.3900e-003	2.3900e-003		2.3900e-003	2.3900e-003	0.0000	0.7035	0.7035	6.7000e-004	0.0000	0.7203
Energy	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	117.1899	117.1899	8.3500e-003	2.2000e-003	118.0552
Mobile	0.2409	0.4069	2.2827	5.6400e-003	0.5941	4.6000e-003	0.5987	0.1589	4.3200e-003	0.1632	0.0000	522.2602	522.2602	0.0265	0.0285	531.4082
Waste						0.0000	0.0000		0.0000	0.0000	12.1307	0.0000	12.1307	0.7169	0.0000	30.0534
Water						0.0000	0.0000		0.0000	0.0000	1.1989	2.6634	3.8623	0.1236	2.9600e-003	7.8335
Total	**0.7708**	**0.4761**	**2.7403**	**6.0700e-003**	**0.5941**	**0.0122**	**0.6063**	**0.1589**	**0.0119**	**0.1708**	**13.3296**	**642.8170**	**656.1467**	**0.8760**	**0.0336**	**688.0705**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**19.61**	**12.28**	**38.04**	**48.38**	**0.00**	**95.76**	**31.20**	**0.00**	**95.85**	**61.68**	**73.19**	**6.64**	**11.12**	**16.33**	**2.44**	**11.18**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2024	7/26/2024	5	20	
2	Site Preparation	Site Preparation	7/27/2024	8/9/2024	5	10	
3	Grading	Grading	8/10/2024	9/6/2024	5	20	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	9/7/2024	7/25/2025	5	230	
5	Paving	Paving	7/26/2025	8/22/2025	5	20	
6	Architectural Coating	Architectural Coating	8/23/2025	9/19/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 1

Residential Indoor: 211,410; Residential Outdoor: 70,470; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,614 (Architectural Coating – sqft)

OffRoad Equipment

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	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	39.00	13.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2024

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	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**		**9.6000e-003**	**9.6000e-003**		**8.9200e-003**	**8.9200e-003**	**0.0000**	**33.9961**	**33.9961**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	4.3000e-004	2.7000e-004	3.2600e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9120	0.9120	3.0000e-005	3.0000e-005	0.9202
Total	**4.3000e-004**	**2.7000e-004**	**3.2600e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9120**	**0.9120**	**3.0000e-005**	**3.0000e-005**	**0.9202**

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	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**		**9.6000e-003**	**9.6000e-003**		**8.9200e-003**	**8.9200e-003**	**0.0000**	**33.9960**	**33.9960**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	4.3000e-004	2.7000e-004	3.2600e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9120	0.9120	3.0000e-005	3.0000e-005	0.9202
Total	**4.3000e-004**	**2.7000e-004**	**3.2600e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9120**	**0.9120**	**3.0000e-005**	**3.0000e-005**	**0.9202**

3.3 Site Preparation - 2024

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6600e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

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	1.6000e-004	1.9600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5472	0.5472	2.0000e-005	2.0000e-005	0.5521
Total	**2.6000e-004**	**1.6000e-004**	**1.9600e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5472**	**0.5472**	**2.0000e-005**	**2.0000e-005**	**0.5521**

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6500e-003	5.6500e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6500e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

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	1.6000e-004	1.9600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5472	0.5472	2.0000e-005	2.0000e-005	0.5521
Total	**2.6000e-004**	**1.6000e-004**	**1.9600e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5472**	**0.5472**	**2.0000e-005**	**2.0000e-005**	**0.5521**

3.4 Grading - 2024

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					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2747
Total	**0.0166**	**0.1703**	**0.1476**	**3.0000e-004**	**0.0708**	**7.2400e-003**	**0.0781**	**0.0343**	**6.6600e-003**	**0.0409**	**0.0000**	**26.0639**	**26.0639**	**8.4300e-003**	**0.0000**	**26.2747**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

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	4.3000e-004	2.7000e-004	3.2600e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9120	0.9120	3.0000e-005	3.0000e-005	0.9202
Total	**4.3000e-004**	**2.7000e-004**	**3.2600e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9120**	**0.9120**	**3.0000e-005**	**3.0000e-005**	**0.9202**

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					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2746
Total	**0.0166**	**0.1703**	**0.1476**	**3.0000e-004**	**0.0708**	**7.2400e-003**	**0.0781**	**0.0343**	**6.6600e-003**	**0.0409**	**0.0000**	**26.0639**	**26.0639**	**8.4300e-003**	**0.0000**	**26.2746**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

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	4.3000e-004	2.7000e-004	3.2600e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9120	0.9120	3.0000e-005	3.0000e-005	0.9202
Total	**4.3000e-004**	**2.7000e-004**	**3.2600e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9120**	**0.9120**	**3.0000e-005**	**3.0000e-005**	**0.9202**

3.5 Building Construction - 2024

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	0.0603	0.5512	0.6628	1.1100e-003		0.0252	0.0252		0.0237	0.0237	0.0000	95.0581	95.0581	0.0225	0.0000	95.6201
Total	**0.0603**	**0.5512**	**0.6628**	**1.1100e-003**		**0.0252**	**0.0252**		**0.0237**	**0.0237**	**0.0000**	**95.0581**	**95.0581**	**0.0225**	**0.0000**	**95.6201**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	5.6000e-004	0.0234	6.8500e-003	1.1000e-004	3.5300e-003	1.5000e-004	3.6900e-003	1.0200e-003	1.4000e-004	1.1700e-003	0.0000	10.0760	10.0760	5.0000e-005	1.5200e-003	10.5293
Worker	4.5800e-003	2.8300e-003	0.0348	1.1000e-004	0.0128	6.0000e-005	0.0128	3.4000e-003	5.0000e-005	3.4500e-003	0.0000	9.7222	9.7222	2.8000e-004	2.7000e-004	9.8094
Total	**5.1400e-003**	**0.0263**	**0.0416**	**2.2000e-004**	**0.0163**	**2.1000e-004**	**0.0165**	**4.4200e-003**	**1.9000e-004**	**4.6200e-003**	**0.0000**	**19.7982**	**19.7982**	**3.3000e-004**	**1.7900e-003**	**20.3387**

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	0.0603	0.5512	0.6628	1.1000e-003		0.0252	0.0252		0.0237	0.0237	0.0000	95.0580	95.0580	0.0225	0.0000	95.6200
Total	**0.0603**	**0.5512**	**0.6628**	**1.1000e-003**		**0.0252**	**0.0252**		**0.0237**	**0.0237**	**0.0000**	**95.0580**	**95.0580**	**0.0225**	**0.0000**	**95.6200**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	5.6000e-004	0.0234	6.8500e-003	1.1000e-004	3.5300e-003	1.5000e-004	3.6900e-003	1.0200e-003	1.4000e-004	1.1700e-003	0.0000	10.0760	10.0760	5.0000e-005	1.5200e-003	10.5293
Worker	4.5800e-003	2.8300e-003	0.0348	1.1000e-004	0.0128	6.0000e-005	0.0128	3.4000e-003	5.0000e-005	3.4500e-003	0.0000	9.7222	9.7222	2.8000e-004	2.7000e-004	9.8094
Total	**5.1400e-003**	**0.0263**	**0.0416**	**2.2000e-004**	**0.0163**	**2.1000e-004**	**0.0165**	**4.4200e-003**	**1.9000e-004**	**4.6200e-003**	**0.0000**	**19.7982**	**19.7982**	**3.3000e-004**	**1.7900e-003**	**20.3387**

3.5 Building Construction - 2025

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	0.1012	0.9228	1.1903	2.0000e-003		0.0390	0.0390		0.0367	0.0367	0.0000	171.6204	171.6204	0.0403	0.0000	172.6290
Total	**0.1012**	**0.9228**	**1.1903**	**2.0000e-003**		**0.0390**	**0.0390**		**0.0367**	**0.0367**	**0.0000**	**171.6204**	**171.6204**	**0.0403**	**0.0000**	**172.6290**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	9.8000e-004	0.0421	0.0121	1.9000e-004	6.3800e-003	2.7000e-004	6.6500e-003	1.8400e-003	2.6000e-004	2.1000e-003	0.0000	17.8364	17.8364	9.0000e-005	2.6800e-003	18.6386
Worker	7.6800e-003	4.5400e-003	0.0582	1.8000e-004	0.0231	1.0000e-004	0.0232	6.1300e-003	9.0000e-005	6.2200e-003	0.0000	16.9562	16.9562	4.5000e-004	4.5000e-004	17.1023
Total	**8.6600e-003**	**0.0466**	**0.0704**	**3.7000e-004**	**0.0295**	**3.7000e-004**	**0.0298**	**7.9700e-003**	**3.5000e-004**	**8.3200e-003**	**0.0000**	**34.7926**	**34.7926**	**5.4000e-004**	**3.1300e-003**	**35.7409**

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	0.1012	0.9228	1.1903	2.0000e-003		0.0390	0.0390		0.0367	0.0367	0.0000	171.6202	171.6202	0.0403	0.0000	172.6288
Total	**0.1012**	**0.9228**	**1.1903**	**2.0000e-003**		**0.0390**	**0.0390**		**0.0367**	**0.0367**	**0.0000**	**171.6202**	**171.6202**	**0.0403**	**0.0000**	**172.6288**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	9.8000e-004	0.0421	0.0121	1.9000e-004	6.3800e-003	2.7000e-004	6.6500e-003	1.8400e-003	2.6000e-004	2.1000e-003	0.0000	17.8364	17.8364	9.0000e-005	2.6800e-003	18.6386
Worker	7.6800e-003	4.5400e-003	0.0582	1.8000e-004	0.0231	1.0000e-004	0.0232	6.1300e-003	9.0000e-005	6.2200e-003	0.0000	16.9562	16.9562	4.5000e-004	4.5000e-004	17.1023
Total	**8.6600e-003**	**0.0466**	**0.0704**	**3.7000e-004**	**0.0295**	**3.7000e-004**	**0.0298**	**7.9700e-003**	**3.5000e-004**	**8.3200e-003**	**0.0000**	**34.7926**	**34.7926**	**5.4000e-004**	**3.1300e-003**	**35.7409**

3.6 Paving - 2025

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0105**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

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	4.0000e-004	2.4000e-004	3.0300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8813	0.8813	2.0000e-005	2.0000e-005	0.8889
Total	**4.0000e-004**	**2.4000e-004**	**3.0300e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**0.8813**	**0.8813**	**2.0000e-005**	**2.0000e-005**	**0.8889**

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0105**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

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	4.0000e-004	2.4000e-004	3.0300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	0.0000	3.2000e-004	0.0000	0.8813	0.8813	2.0000e-005	2.0000e-005	0.8889
Total	**4.0000e-004**	**2.4000e-004**	**3.0300e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**0.8813**	**0.8813**	**2.0000e-005**	**2.0000e-005**	**0.8889**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9890					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**0.9907**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2025

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	2.1000e-004	1.3000e-004	1.6100e-003	1.0000e-005	6.4000e-004	0.0000	6.4000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.4700	0.4700	1.0000e-005	1.0000e-005	0.4741
Total	**2.1000e-004**	**1.3000e-004**	**1.6100e-003**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**6.4000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.4700**	**0.4700**	**1.0000e-005**	**1.0000e-005**	**0.4741**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9890					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**0.9907**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

3.7 Architectural Coating - 2025

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	2.1000e-004	1.3000e-004	1.6100e-003	1.0000e-005	6.4000e-004	0.0000	6.4000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.4700	0.4700	1.0000e-005	1.0000e-005	0.4741
Total	**2.1000e-004**	**1.3000e-004**	**1.6100e-003**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**6.4000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.4700**	**0.4700**	**1.0000e-005**	**1.0000e-005**	**0.4741**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2409	0.4069	2.2827	5.6400e-003	0.5941	4.6000e-003	0.5987	0.1589	4.3200e-003	0.1632	0.0000	522.2602	522.2602	0.0265	0.0285	531.4082
Unmitigated	0.2409	0.4069	2.2827	5.6400e-003	0.5941	4.6000e-003	0.5987	0.1589	4.3200e-003	0.1632	0.0000	522.2602	522.2602	0.0265	0.0285	531.4082

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	547.52	553.32	495.90	1,584,876	1,584,876
Total	547.52	553.32	495.90	1,584,876	1,584,876

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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
Other Asphalt Surfaces	0.526576	0.053500	0.175633	0.147803	0.024189	0.006487	0.014618	0.022827	0.000697	0.000286	0.023187	0.001433	0.002764
Single Family Housing	0.526576	0.053500	0.175633	0.147803	0.024189	0.006487	0.014618	0.022827	0.000697	0.000286	0.023187	0.001433	0.002764

5.0 Energy Detail

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42.7913	42.7913	6.9200e-003	8.4000e-004	43.2144
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42.7913	42.7913	6.9200e-003	8.4000e-004	43.2144
NaturalGas Mitigated	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3986	74.3986	1.4300e-003	1.3600e-003	74.8408
NaturalGas Unmitigated	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3986	74.3986	1.4300e-003	1.3600e-003	74.8408

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.39418e+006	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3986	74.3986	1.4300e-003	1.3600e-003	74.8408
Total		**7.5200e-003**	**0.0642**	**0.0273**	**4.1000e-004**		**5.1900e-003**	**5.1900e-003**		**5.1900e-003**	**5.1900e-003**	**0.0000**	**74.3986**	**74.3986**	**1.4300e-003**	**1.3600e-003**	**74.8408**

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.39418e+006	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3986	74.3986	1.4300e-003	1.3600e-003	74.8408
Total		**7.5200e-003**	**0.0642**	**0.0273**	**4.1000e-004**		**5.1900e-003**	**5.1900e-003**		**5.1900e-003**	**5.1900e-003**	**0.0000**	**74.3986**	**74.3986**	**1.4300e-003**	**1.3600e-003**	**74.8408**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	462490	42.7913	6.9200e-003	8.4000e-004	43.2144
Total		**42.7913**	**6.9200e-003**	**8.4000e-004**	**43.2144**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	462490	42.7913	6.9200e-003	8.4000e-004	43.2144
Total		**42.7913**	**6.9200e-003**	**8.4000e-004**	**43.2144**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5224	4.9600e-003	0.4303	2.0000e-005		2.3900e-003	2.3900e-003		2.3900e-003	2.3900e-003	0.0000	0.7035	0.7035	6.7000e-004	0.0000	0.7203
Unmitigated	0.7104	0.0716	2.1127	5.7100e-003		0.2773	0.2773		0.2773	0.2773	36.3845	46.3872	82.7717	0.1716	8.4000e-004	87.3123

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4106					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1880	0.0666	1.6825	5.6900e-003		0.2749	0.2749		0.2749	0.2749	36.3845	45.6837	82.0682	0.1710	8.4000e-004	86.5919
Landscaping	0.0129	4.9600e-003	0.4303	2.0000e-005		2.3900e-003	2.3900e-003		2.3900e-003	2.3900e-003	0.0000	0.7035	0.7035	6.7000e-004	0.0000	0.7203
Total	**0.7104**	**0.0716**	**2.1127**	**5.7100e-003**		**0.2773**	**0.2773**		**0.2773**	**0.2773**	**36.3845**	**46.3872**	**82.7717**	**0.1716**	**8.4000e-004**	**87.3123**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4106					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0129	4.9600e-003	0.4303	2.0000e-005		2.3900e-003	2.3900e-003		2.3900e-003	2.3900e-003	0.0000	0.7035	0.7035	6.7000e-004	0.0000	0.7203
Total	**0.5224**	**4.9600e-003**	**0.4303**	**2.0000e-005**		**2.3900e-003**	**2.3900e-003**		**2.3900e-003**	**2.3900e-003**	**0.0000**	**0.7035**	**0.7035**	**6.7000e-004**	**0.0000**	**0.7203**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.8623	0.1236	2.9600e-003	7.8335
Unmitigated	3.8623	0.1236	2.9600e-003	7.8335

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.77893 / 2.38237	3.8623	0.1236	2.9600e-003	7.8335
Total		**3.8623**	**0.1236**	**2.9600e-003**	**7.8335**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.77893 / 2.38237	3.8623	0.1236	2.9600e-003	7.8335
Total		**3.8623**	**0.1236**	**2.9600e-003**	**7.8335**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.1307	0.7169	0.0000	30.0534
Unmitigated	12.1307	0.7169	0.0000	30.0534

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	59.76	12.1307	0.7169	0.0000	30.0534
Total		**12.1307**	**0.7169**	**0.0000**	**30.0534**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	59.76	12.1307	0.7169	0.0000	30.0534
Total		**12.1307**	**0.7169**	**0.0000**	**30.0534**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Churchwood Estates

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.00	Acre	1.00	43,560.00	0
Single Family Housing	58.00	Dwelling Unit	8.00	104,400.00	166

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2005
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on acerage of project site

Woodstoves - Per Section 5.4.2.1, Rule 4901

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblFireplaces	NumberGas	31.90	58.00
tblFireplaces	NumberNoFireplace	26.10	58.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblLandUse	LotAcreage	18.83	8.00
tblWoodstoves	NumberCatalytic	8.00	9.00
tblWoodstoves	NumberNoncatalytic	8.00	9.00

2.0 Emissions Summary

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2003	0.6615	3.9684	2.1077	0.0241	0.1886	0.2688	0.4574	0.0900	0.2685	0.3585	0.0000	230.2660	230.2660	0.0531	4.9100e-003	233.0571
2004	2.4667	4.4869	2.6984	0.0280	0.0313	0.3261	0.3574	8.4600e-003	0.3256	0.3340	0.0000	273.7739	273.7739	0.0657	8.1600e-003	277.8485
Maximum	**2.4667**	**4.4869**	**2.6984**	**0.0280**	**0.1886**	**0.3261**	**0.4574**	**0.0900**	**0.3256**	**0.3585**	**0.0000**	**273.7739**	**273.7739**	**0.0657**	**8.1600e-003**	**277.8485**

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					
2003	0.6615	3.9684	2.1077	0.0241	0.1886	0.2688	0.4574	0.0900	0.2685	0.3585	0.0000	230.2658	230.2658	0.0531	4.9100e-003	233.0568
2004	2.4667	4.4869	2.6984	0.0280	0.0313	0.3261	0.3574	8.4600e-003	0.3256	0.3340	0.0000	273.7737	273.7737	0.0657	8.1600e-003	277.8482
Maximum	**2.4667**	**4.4869**	**2.6984**	**0.0280**	**0.1886**	**0.3261**	**0.4574**	**0.0900**	**0.3256**	**0.3585**	**0.0000**	**273.7737**	**273.7737**	**0.0657**	**8.1600e-003**	**277.8482**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2003**	**9-30-2003**	2.5265	2.5265
2	**10-1-2003**	**12-31-2003**	2.0914	2.0914
3	**1-1-2004**	**3-31-2004**	2.0687	2.0687
4	**4-1-2004**	**6-30-2004**	2.0555	2.0555
5	**7-1-2004**	**9-30-2004**	2.8476	2.8476
		Highest	2.8476	2.8476

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	0.7844	0.0734	2.1820	5.7100e-003		0.2770	0.2770		0.2770	0.2770	36.3845	46.3872	82.7717	0.1721	8.4000e-004	87.3236
Energy	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	117.1899	117.1899	8.3500e-003	2.2000e-003	118.0552
Mobile	1.0087	2.6260	11.7124	0.0175	0.5952	0.0530	0.6482	0.1595	0.0503	0.2098	0.0000	777.7494	777.7494	0.1075	0.0886	806.8288
Waste						0.0000	0.0000		0.0000	0.0000	12.1307	0.0000	12.1307	0.7169	0.0000	30.0534
Water						0.0000	0.0000		0.0000	0.0000	1.1989	2.6634	3.8623	0.1236	2.9600e-003	7.8335
Total	**1.8007**	**2.7637**	**13.9217**	**0.0236**	**0.5952**	**0.3352**	**0.9304**	**0.1595**	**0.3326**	**0.4920**	**49.7141**	**943.9899**	**993.7040**	**1.1285**	**0.0946**	**1,050.0945**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.5964	6.7900e-003	0.4995	2.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	0.7035	0.7035	1.1300e-003	0.0000	0.7317
Energy	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	117.1899	117.1899	8.3500e-003	2.2000e-003	118.0552
Mobile	1.0087	2.6260	11.7124	0.0175	0.5952	0.0530	0.6482	0.1595	0.0503	0.2098	0.0000	777.7494	777.7494	0.1075	0.0886	806.8288
Waste						0.0000	0.0000		0.0000	0.0000	12.1307	0.0000	12.1307	0.7169	0.0000	30.0534
Water						0.0000	0.0000		0.0000	0.0000	1.1989	2.6634	3.8623	0.1236	2.9600e-003	7.8335
Total	**1.6126**	**2.6971**	**12.2392**	**0.0179**	**0.5952**	**0.0603**	**0.6555**	**0.1595**	**0.0576**	**0.2171**	**13.3296**	**898.3062**	**911.6358**	**0.9575**	**0.0937**	**963.5025**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**10.44**	**2.41**	**12.09**	**24.14**	**0.00**	**82.02**	**29.55**	**0.00**	**82.67**	**55.88**	**73.19**	**4.84**	**8.26**	**15.15**	**0.89**	**8.25**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2003	7/28/2003	5	20	
2	Site Preparation	Site Preparation	7/29/2003	8/11/2003	5	10	
3	Grading	Grading	8/12/2003	9/8/2003	5	20	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	9/9/2003	7/26/2004	5	230	
5	Paving	Paving	7/27/2004	8/23/2004	5	20	
6	Architectural Coating	Architectural Coating	8/24/2004	9/20/2004	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 1

Residential Indoor: 211,410; Residential Outdoor: 70,470; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,614 (Architectural Coating – sqft)

OffRoad Equipment

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	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	39.00	13.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2003

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	0.1020	0.7704	0.2922	4.4200e-003		0.0438	0.0438		0.0438	0.0438	0.0000	39.7218	39.7218	8.3100e-003	0.0000	39.9295
Total	**0.1020**	**0.7704**	**0.2922**	**4.4200e-003**		**0.0438**	**0.0438**		**0.0438**	**0.0438**	**0.0000**	**39.7218**	**39.7218**	**8.3100e-003**	**0.0000**	**39.9295**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2003

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	3.4500e-003	4.7000e-003	0.0326	2.0000e-005	1.2000e-003	5.0000e-005	1.2500e-003	3.2000e-004	5.0000e-005	3.6000e-004	0.0000	1.3818	1.3818	2.6000e-004	2.2000e-004	1.4548
Total	**3.4500e-003**	**4.7000e-003**	**0.0326**	**2.0000e-005**	**1.2000e-003**	**5.0000e-005**	**1.2500e-003**	**3.2000e-004**	**5.0000e-005**	**3.6000e-004**	**0.0000**	**1.3818**	**1.3818**	**2.6000e-004**	**2.2000e-004**	**1.4548**

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	0.1020	0.7704	0.2922	4.4200e-003		0.0438	0.0438		0.0438	0.0438	0.0000	39.7218	39.7218	8.3100e-003	0.0000	39.9295
Total	**0.1020**	**0.7704**	**0.2922**	**4.4200e-003**		**0.0438**	**0.0438**		**0.0438**	**0.0438**	**0.0000**	**39.7218**	**39.7218**	**8.3100e-003**	**0.0000**	**39.9295**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2003

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	3.4500e-003	4.7000e-003	0.0326	2.0000e-005	1.2000e-003	5.0000e-005	1.2500e-003	3.2000e-004	5.0000e-005	3.6000e-004	0.0000	1.3818	1.3818	2.6000e-004	2.2000e-004	1.4548
Total	**3.4500e-003**	**4.7000e-003**	**0.0326**	**2.0000e-005**	**1.2000e-003**	**5.0000e-005**	**1.2500e-003**	**3.2000e-004**	**5.0000e-005**	**3.6000e-004**	**0.0000**	**1.3818**	**1.3818**	**2.6000e-004**	**2.2000e-004**	**1.4548**

3.3 Site Preparation - 2003

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0561	0.4016	0.1539	2.2500e-003		0.0252	0.0252		0.0252	0.0252	0.0000	20.0023	20.0023	4.5700e-003	0.0000	20.1165
Total	**0.0561**	**0.4016**	**0.1539**	**2.2500e-003**	**0.0983**	**0.0252**	**0.1235**	**0.0505**	**0.0252**	**0.0758**	**0.0000**	**20.0023**	**20.0023**	**4.5700e-003**	**0.0000**	**20.1165**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2003

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	2.0700e-003	2.8200e-003	0.0196	1.0000e-005	7.2000e-004	3.0000e-005	7.5000e-004	1.9000e-004	3.0000e-005	2.2000e-004	0.0000	0.8291	0.8291	1.6000e-004	1.3000e-004	0.8729
Total	**2.0700e-003**	**2.8200e-003**	**0.0196**	**1.0000e-005**	**7.2000e-004**	**3.0000e-005**	**7.5000e-004**	**1.9000e-004**	**3.0000e-005**	**2.2000e-004**	**0.0000**	**0.8291**	**0.8291**	**1.6000e-004**	**1.3000e-004**	**0.8729**

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0561	0.4016	0.1539	2.2500e-003		0.0252	0.0252		0.0252	0.0252	0.0000	20.0023	20.0023	4.5700e-003	0.0000	20.1164
Total	**0.0561**	**0.4016**	**0.1539**	**2.2500e-003**	**0.0983**	**0.0252**	**0.1235**	**0.0505**	**0.0252**	**0.0758**	**0.0000**	**20.0023**	**20.0023**	**4.5700e-003**	**0.0000**	**20.1164**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2003

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	2.0700e-003	2.8200e-003	0.0196	1.0000e-005	7.2000e-004	3.0000e-005	7.5000e-004	1.9000e-004	3.0000e-005	2.2000e-004	0.0000	0.8291	0.8291	1.6000e-004	1.3000e-004	0.8729
Total	**2.0700e-003**	**2.8200e-003**	**0.0196**	**1.0000e-005**	**7.2000e-004**	**3.0000e-005**	**7.5000e-004**	**1.9000e-004**	**3.0000e-005**	**2.2000e-004**	**0.0000**	**0.8291**	**0.8291**	**1.6000e-004**	**1.3000e-004**	**0.8729**

3.4 Grading - 2003

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					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0831	0.5952	0.2295	3.5100e-003		0.0374	0.0374		0.0374	0.0374	0.0000	31.2046	31.2046	6.7700e-003	0.0000	31.3738
Total	**0.0831**	**0.5952**	**0.2295**	**3.5100e-003**	**0.0708**	**0.0374**	**0.1082**	**0.0343**	**0.0374**	**0.0716**	**0.0000**	**31.2046**	**31.2046**	**6.7700e-003**	**0.0000**	**31.3738**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2003

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	3.4500e-003	4.7000e-003	0.0326	2.0000e-005	1.2000e-003	5.0000e-005	1.2500e-003	3.2000e-004	5.0000e-005	3.6000e-004	0.0000	1.3818	1.3818	2.6000e-004	2.2000e-004	1.4548
Total	**3.4500e-003**	**4.7000e-003**	**0.0326**	**2.0000e-005**	**1.2000e-003**	**5.0000e-005**	**1.2500e-003**	**3.2000e-004**	**5.0000e-005**	**3.6000e-004**	**0.0000**	**1.3818**	**1.3818**	**2.6000e-004**	**2.2000e-004**	**1.4548**

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					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0831	0.5952	0.2295	3.5100e-003		0.0374	0.0374		0.0374	0.0374	0.0000	31.2046	31.2046	6.7700e-003	0.0000	31.3738
Total	**0.0831**	**0.5952**	**0.2295**	**3.5100e-003**	**0.0708**	**0.0374**	**0.1082**	**0.0343**	**0.0374**	**0.0716**	**0.0000**	**31.2046**	**31.2046**	**6.7700e-003**	**0.0000**	**31.3738**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2003

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	3.4500e-003	4.7000e-003	0.0326	2.0000e-005	1.2000e-003	5.0000e-005	1.2500e-003	3.2000e-004	5.0000e-005	3.6000e-004	0.0000	1.3818	1.3818	2.6000e-004	2.2000e-004	1.4548
Total	**3.4500e-003**	**4.7000e-003**	**0.0326**	**2.0000e-005**	**1.2000e-003**	**5.0000e-005**	**1.2500e-003**	**3.2000e-004**	**5.0000e-005**	**3.6000e-004**	**0.0000**	**1.3818**	**1.3818**	**2.6000e-004**	**2.2000e-004**	**1.4548**

3.5 Building Construction - 2003

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	0.3577	1.9787	0.9167	0.0125		0.1556	0.1556		0.1556	0.1556	0.0000	107.7730	107.7730	0.0291	0.0000	108.5013
Total	**0.3577**	**1.9787**	**0.9167**	**0.0125**		**0.1556**	**0.1556**		**0.1556**	**0.1556**	**0.0000**	**107.7730**	**107.7730**	**0.0291**	**0.0000**	**108.5013**

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2003

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	0.0167	0.1602	0.0835	1.1500e-003	3.5300e-003	6.1700e-003	9.7000e-003	1.0200e-003	5.9000e-003	6.9200e-003	0.0000	13.2413	13.2413	8.2000e-004	1.9600e-003	13.8457
Worker	0.0368	0.0501	0.3473	2.3000e-004	0.0128	5.2000e-004	0.0133	3.4000e-003	4.8000e-004	3.8800e-003	0.0000	14.7302	14.7302	2.8200e-003	2.3700e-003	15.5078
Total	**0.0536**	**0.2103**	**0.4307**	**1.3800e-003**	**0.0163**	**6.6900e-003**	**0.0230**	**4.4200e-003**	**6.3800e-003**	**0.0108**	**0.0000**	**27.9715**	**27.9715**	**3.6400e-003**	**4.3300e-003**	**29.3535**

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	0.3577	1.9787	0.9167	0.0125		0.1556	0.1556		0.1556	0.1556	0.0000	107.7729	107.7729	0.0291	0.0000	108.5012
Total	**0.3577**	**1.9787**	**0.9167**	**0.0125**		**0.1556**	**0.1556**		**0.1556**	**0.1556**	**0.0000**	**107.7729**	**107.7729**	**0.0291**	**0.0000**	**108.5012**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2003

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	0.0167	0.1602	0.0835	1.1500e-003	3.5300e-003	6.1700e-003	9.7000e-003	1.0200e-003	5.9000e-003	6.9200e-003	0.0000	13.2413	13.2413	8.2000e-004	1.9600e-003	13.8457
Worker	0.0368	0.0501	0.3473	2.3000e-004	0.0128	5.2000e-004	0.0133	3.4000e-003	4.8000e-004	3.8800e-003	0.0000	14.7302	14.7302	2.8200e-003	2.3700e-003	15.5078
Total	**0.0536**	**0.2103**	**0.4307**	**1.3800e-003**	**0.0163**	**6.6900e-003**	**0.0230**	**4.4200e-003**	**6.3800e-003**	**0.0108**	**0.0000**	**27.9715**	**27.9715**	**3.6400e-003**	**4.3300e-003**	**29.3535**

3.5 Building Construction - 2004

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	0.6456	3.5714	1.6546	0.0225		0.2808	0.2808		0.2808	0.2808	0.0000	194.5172	194.5172	0.0526	0.0000	195.8317
Total	**0.6456**	**3.5714**	**1.6546**	**0.0225**		**0.2808**	**0.2808**		**0.2808**	**0.2808**	**0.0000**	**194.5172**	**194.5172**	**0.0526**	**0.0000**	**195.8317**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2004

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	0.0302	0.2891	0.1506	2.0700e-003	6.3800e-003	0.0111	0.0175	1.8400e-003	0.0107	0.0125	0.0000	23.8990	23.8990	1.4800e-003	3.5400e-003	24.9898
Worker	0.0665	0.0905	0.6268	4.2000e-004	0.0231	9.4000e-004	0.0240	6.1300e-003	8.7000e-004	7.0100e-003	0.0000	26.5863	26.5863	5.1000e-003	4.2800e-003	27.9898
Total	**0.0967**	**0.3795**	**0.7774**	**2.4900e-003**	**0.0295**	**0.0121**	**0.0415**	**7.9700e-003**	**0.0115**	**0.0195**	**0.0000**	**50.4852**	**50.4852**	**6.5800e-003**	**7.8200e-003**	**52.9795**

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	0.6456	3.5714	1.6546	0.0225		0.2808	0.2808		0.2808	0.2808	0.0000	194.5169	194.5169	0.0526	0.0000	195.8315
Total	**0.6456**	**3.5714**	**1.6546**	**0.0225**		**0.2808**	**0.2808**		**0.2808**	**0.2808**	**0.0000**	**194.5169**	**194.5169**	**0.0526**	**0.0000**	**195.8315**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2004

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	0.0302	0.2891	0.1506	2.0700e-003	6.3800e-003	0.0111	0.0175	1.8400e-003	0.0107	0.0125	0.0000	23.8990	23.8990	1.4800e-003	3.5400e-003	24.9898
Worker	0.0665	0.0905	0.6268	4.2000e-004	0.0231	9.4000e-004	0.0240	6.1300e-003	8.7000e-004	7.0100e-003	0.0000	26.5863	26.5863	5.1000e-003	4.2800e-003	27.9898
Total	**0.0967**	**0.3795**	**0.7774**	**2.4900e-003**	**0.0295**	**0.0121**	**0.0415**	**7.9700e-003**	**0.0115**	**0.0195**	**0.0000**	**50.4852**	**50.4852**	**6.5800e-003**	**7.8200e-003**	**52.9795**

3.6 Paving - 2004

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	0.0668	0.4778	0.1940	2.7000e-003		0.0291	0.0291		0.0291	0.0291	0.0000	24.0995	24.0995	5.4400e-003	0.0000	24.2355
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0681**	**0.4778**	**0.1940**	**2.7000e-003**		**0.0291**	**0.0291**		**0.0291**	**0.0291**	**0.0000**	**24.0995**	**24.0995**	**5.4400e-003**	**0.0000**	**24.2355**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2004

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	3.4500e-003	4.7000e-003	0.0326	2.0000e-005	1.2000e-003	5.0000e-005	1.2500e-003	3.2000e-004	5.0000e-005	3.6000e-004	0.0000	1.3818	1.3818	2.6000e-004	2.2000e-004	1.4548
Total	**3.4500e-003**	**4.7000e-003**	**0.0326**	**2.0000e-005**	**1.2000e-003**	**5.0000e-005**	**1.2500e-003**	**3.2000e-004**	**5.0000e-005**	**3.6000e-004**	**0.0000**	**1.3818**	**1.3818**	**2.6000e-004**	**2.2000e-004**	**1.4548**

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	0.0668	0.4778	0.1940	2.7000e-003		0.0291	0.0291		0.0291	0.0291	0.0000	24.0995	24.0995	5.4400e-003	0.0000	24.2355
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0681**	**0.4778**	**0.1940**	**2.7000e-003**		**0.0291**	**0.0291**		**0.0291**	**0.0291**	**0.0000**	**24.0995**	**24.0995**	**5.4400e-003**	**0.0000**	**24.2355**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2004

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	3.4500e-003	4.7000e-003	0.0326	2.0000e-005	1.2000e-003	5.0000e-005	1.2500e-003	3.2000e-004	5.0000e-005	3.6000e-004	0.0000	1.3818	1.3818	2.6000e-004	2.2000e-004	1.4548
Total	**3.4500e-003**	**4.7000e-003**	**0.0326**	**2.0000e-005**	**1.2000e-003**	**5.0000e-005**	**1.2500e-003**	**3.2000e-004**	**5.0000e-005**	**3.6000e-004**	**0.0000**	**1.3818**	**1.3818**	**2.6000e-004**	**2.2000e-004**	**1.4548**

3.7 Architectural Coating - 2004

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	1.6422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7700e-003	0.0509	0.0225	3.0000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	2.5533	2.5533	7.1000e-004	0.0000	2.5711
Total	**1.6510**	**0.0509**	**0.0225**	**3.0000e-004**		**4.1400e-003**	**4.1400e-003**		**4.1400e-003**	**4.1400e-003**	**0.0000**	**2.5533**	**2.5533**	**7.1000e-004**	**0.0000**	**2.5711**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2004

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	1.8400e-003	2.5100e-003	0.0174	1.0000e-005	6.4000e-004	3.0000e-005	6.7000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	0.7370	0.7370	1.4000e-004	1.2000e-004	0.7759
Total	**1.8400e-003**	**2.5100e-003**	**0.0174**	**1.0000e-005**	**6.4000e-004**	**3.0000e-005**	**6.7000e-004**	**1.7000e-004**	**2.0000e-005**	**1.9000e-004**	**0.0000**	**0.7370**	**0.7370**	**1.4000e-004**	**1.2000e-004**	**0.7759**

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	1.6422					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7700e-003	0.0509	0.0225	3.0000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	2.5533	2.5533	7.1000e-004	0.0000	2.5711
Total	**1.6510**	**0.0509**	**0.0225**	**3.0000e-004**		**4.1400e-003**	**4.1400e-003**		**4.1400e-003**	**4.1400e-003**	**0.0000**	**2.5533**	**2.5533**	**7.1000e-004**	**0.0000**	**2.5711**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2004

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	1.8400e-003	2.5100e-003	0.0174	1.0000e-005	6.4000e-004	3.0000e-005	6.7000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	0.7370	0.7370	1.4000e-004	1.2000e-004	0.7759
Total	**1.8400e-003**	**2.5100e-003**	**0.0174**	**1.0000e-005**	**6.4000e-004**	**3.0000e-005**	**6.7000e-004**	**1.7000e-004**	**2.0000e-005**	**1.9000e-004**	**0.0000**	**0.7370**	**0.7370**	**1.4000e-004**	**1.2000e-004**	**0.7759**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.0087	2.6260	11.7124	0.0175	0.5952	0.0530	0.6482	0.1595	0.0503	0.2098	0.0000	777.7494	777.7494	0.1075	0.0886	806.8288
Unmitigated	1.0087	2.6260	11.7124	0.0175	0.5952	0.0530	0.6482	0.1595	0.0503	0.2098	0.0000	777.7494	777.7494	0.1075	0.0886	806.8288

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	547.52	553.32	495.90	1,584,876	1,584,876
Total	547.52	553.32	495.90	1,584,876	1,584,876

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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
Other Asphalt Surfaces	0.477591	0.081668	0.164575	0.168109	0.036290	0.006715	0.016687	0.017024	0.000893	0.000307	0.021194	0.000966	0.007982
Single Family Housing	0.477591	0.081668	0.164575	0.168109	0.036290	0.006715	0.016687	0.017024	0.000893	0.000307	0.021194	0.000966	0.007982

5.0 Energy Detail

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42.7913	42.7913	6.9200e-003	8.4000e-004	43.2144
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	42.7913	42.7913	6.9200e-003	8.4000e-004	43.2144
NaturalGas Mitigated	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3986	74.3986	1.4300e-003	1.3600e-003	74.8408
NaturalGas Unmitigated	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3986	74.3986	1.4300e-003	1.3600e-003	74.8408

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.39418e+006	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3986	74.3986	1.4300e-003	1.3600e-003	74.8408
Total		**7.5200e-003**	**0.0642**	**0.0273**	**4.1000e-004**		**5.1900e-003**	**5.1900e-003**		**5.1900e-003**	**5.1900e-003**	**0.0000**	**74.3986**	**74.3986**	**1.4300e-003**	**1.3600e-003**	**74.8408**

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.39418e+006	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3986	74.3986	1.4300e-003	1.3600e-003	74.8408
Total		**7.5200e-003**	**0.0642**	**0.0273**	**4.1000e-004**		**5.1900e-003**	**5.1900e-003**		**5.1900e-003**	**5.1900e-003**	**0.0000**	**74.3986**	**74.3986**	**1.4300e-003**	**1.3600e-003**	**74.8408**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	462490	42.7913	6.9200e-003	8.4000e-004	43.2144
Total		**42.7913**	**6.9200e-003**	**8.4000e-004**	**43.2144**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	462490	42.7913	6.9200e-003	8.4000e-004	43.2144
Total		**42.7913**	**6.9200e-003**	**8.4000e-004**	**43.2144**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5964	6.7900e-003	0.4995	2.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	0.7035	0.7035	1.1300e-003	0.0000	0.7317
Unmitigated	0.7844	0.0734	2.1820	5.7100e-003		0.2770	0.2770		0.2770	0.2770	36.3845	46.3872	82.7717	0.1721	8.4000e-004	87.3236

Churchwood Estates - Fresno County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1642					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4106					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1880	0.0666	1.6825	5.6900e-003		0.2749	0.2749		0.2749	0.2749	36.3845	45.6837	82.0682	0.1710	8.4000e-004	86.5919
Landscaping	0.0216	6.7900e-003	0.4995	2.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	0.7035	0.7035	1.1300e-003	0.0000	0.7317
Total	**0.7844**	**0.0734**	**2.1820**	**5.7100e-003**		**0.2770**	**0.2770**		**0.2770**	**0.2770**	**36.3845**	**46.3872**	**82.7717**	**0.1721**	**8.4000e-004**	**87.3236**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1642					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4106					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0216	6.7900e-003	0.4995	2.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	0.7035	0.7035	1.1300e-003	0.0000	0.7317
Total	**0.5964**	**6.7900e-003**	**0.4995**	**2.0000e-005**		**2.1100e-003**	**2.1100e-003**		**2.1100e-003**	**2.1100e-003**	**0.0000**	**0.7035**	**0.7035**	**1.1300e-003**	**0.0000**	**0.7317**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.8623	0.1236	2.9600e-003	7.8335
Unmitigated	3.8623	0.1236	2.9600e-003	7.8335

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.77893 / 2.38237	3.8623	0.1236	2.9600e-003	7.8335
Total		**3.8623**	**0.1236**	**2.9600e-003**	**7.8335**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.77893 / 2.38237	3.8623	0.1236	2.9600e-003	7.8335
Total		**3.8623**	**0.1236**	**2.9600e-003**	**7.8335**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.1307	0.7169	0.0000	30.0534
Unmitigated	12.1307	0.7169	0.0000	30.0534

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	59.76	12.1307	0.7169	0.0000	30.0534
Total		**12.1307**	**0.7169**	**0.0000**	**30.0534**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	59.76	12.1307	0.7169	0.0000	30.0534
Total		**12.1307**	**0.7169**	**0.0000**	**30.0534**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

To: Ellie Krantz
4 Creeks, Inc.
324 S. Santa Fe Street, Suite A
Visalia, CA 93292

Record Search 23-080

Date: March 6, 2023

Re: Churchwood Estates

County: Fresno

Map(s): Fresno South 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, the OHP Built Environment Resources 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 OHP 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 two previous cultural resource studies completed within the project area, FR-02140 and FR-02175. There have been five additional cultural resource studies conducted within the one-half mile radius: FR-02076, FR-02105, FR-02213, FR-02719, and FR-02987.

Record Search 23-080

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there are no recorded resources within the project area. There are two recorded resources within the one-half mile radius: P-10-005228 and P-10-006527. These resources consist of an historic era single family residence and an historic era church, respectively.

There are no recorded cultural resources within the project area or radius 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, for the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of development of 58 new single-family residences and a community park on approximately 9 acres of land. No information was given as to the current state of the property, though current aerial maps show the property as undeveloped. The two previous studies that were completed on this property were nearly 20 years ago. Because a previous study is only considered valid of up to five years, the Information Center routinely recommends a new study be conducted if previous studies exceed that timeframe. Therefore, if the project area is still undeveloped, we recommend a qualified professional consultant conducted a new field survey to determine if any 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 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**: March 6, 2023

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Construction Equipment Energy Use

Phase Name	Off Road Equipment Type	Off Road Equipment Unit Amount[1]	Usage Hours Per Day[1]	Horse Power (lbs/sec)[1]	Load Factor[1]	Total Operational Hours	BSFC[2]	Fuel Used (gallons)[3]	MBTU[4]
Architectural Coating	Air Compressors	1	6.00	78	0.48	450	0.408	966.94	134.4048
Paving	Cement and Mortar Mixers	4	6.00	9	0.56	1800	0.408	520.66	72.37182
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73	560	0.408	1900.41	264.1571
Building Construction	Cranes	1	4.00	231	0.29	4440	0.367	15355.02	2134.348
Building Construction	Forklifts	2	6.00	89	0.20	13320	0.408	13607.42	1891.432
Grading	Graders	1	6.00	187	0.41	660	0.367	2612.32	363.113
Site Preparation	Graders	1	8.00	187	0.41	320	0.367	1266.58	176.0548
Paving	Pavers	1	7.00	130	0.42	525	0.367	1479.82	205.6953
Paving	Rollers	1	7.00	80	0.38	525	0.408	915.98	127.3208
Demolition	Rubber Tired Dozers	1	1.00	247	0.40	70	0.367	357.04	49.62806
Grading	Rubber Tired Dozers	1	6.00	247	0.40	660	0.367	3366.34	467.9217
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37	17760	0.408	36582.05	5084.905
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37	840	0.408	1730.23	240.5023
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37	770	0.408	1586.05	220.4604
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37	525	0.408	1081.40	150.3139
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37	320	0.408	659.14	91.61992
Total								83987.40	11674.25

Construction Phases

PhaseNumber	Phase Name	Phase Type	Phase Start Date	Phase End Date	Num Days Week	Total Number of Days
1	**Demolition**	**Demolition**	8/1/2025	11/6/2025	5	70
2	Site Preparation	Site Preparation	11/7/2025	1/1/2026	5	40
3	Grading	Grading	1/2/2026	6/4/2026	5	110
4	Building Construction	Building Construction	6/5/2026	9/5/2030	5	1110
5	Paving	Paving	9/6/2030	12/19/2030	5	75
6	Architectural Coating	Architectural Coating	12/20/2030	4/3/2031	5	75
						1480

Notes

1. CalEEMod Default Values Used
2. BSFC - Brake Specific Fuel Consumption (pounds per horsepower-hour) – If less than 100 Horsepower = 0.408, if greater than 100 Horsepower = 0.367
3. Fuel Used = Load Factor x Horsepower x Total Operational Hours x BSFC / Unit Conversion
4. MBTU calculated for comparison purposes. Assumed 1 gallon of diesel = 0.139 MBTU

Mobile Energy Use (Construction)

Worker Trips

	Daily Worker Trips[1]	Worker Trip Length[1]	VMT/Day	MPG Factor (EMFAC2017)	Gallons of Gas/Day	# of Days	Total Gallons of Gas	MBTU
Demolition	15	10.8	162	29.23	5.5	20	110.8	12.868
Site Preparation	18	10.8	194.4	29.23	6.7	10	66.5	7.720799
Grading	15	10.8	162	29.23	5.5	20	110.8	12.868
Building Construction	39	10.8	421.2	29.23	14.4	230	3314.3	384.7532
Paving	15	10.8	162	29.23	5.5	20	110.8	12.868
Architectural Coating	8	10.8	86.4	29.23	3.0	20	59.1	6.862933
Total	**110**	**64.8**	**1188**	**175.38**	**40.6**	**320**	**3772.4**	**437.9409**

Vendor Trips

	Daily Vendor Trips	Vendor Trip Length	VMT/Day	MPG Factor	Gallons of Diesel/Day	# of Days	Total Gallons of Diesel	MBTU
Building Construction	13	7.3	94.9	8.43	11.3	230	2589.205219	359.8995

Hauling Trips

	Daily Hauling Trips	Hauling Trip Length	VMT/Day	MPG Factor	Gallons of Gas/Day	# of Days	Total Gallons of Diesel	MBTU
Demolition	0	20	0	8.43	0.0	20	0	0

Fleet Characteristics

	Vehicle Class	Fleet Mix	2024 MPG Factor (EMFAC2017)	Average MPG Factor
Assumed Vehicle Fleet for Workers	LDA	33%	33.24	
	LDT1	33%	28.07	
	LDT2	33%	26.38	29.23
Assumed Vehicle Fleet for Vendor Trips	MHD	50%	9.74	
	HHD	50%	7.12	8.43

Notes

1. CalEEMod Default values used
2. MBTU calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.11609 MBTU

Mobile Energy Use (Operations)

Total Annual VMT from Project (CalEEMod)	**1,584,876**

Fleet Mix & Fuel Calculations

Vehicle Class	Proportion of Fleet Mix[1]	Annual VMT by Vehicle Class	Proportion of vehicle class using gas or diesel (EMFAC2021)[2]		Annual VMT by Vehicle Class and Fuel Type		Fuel Efficiency (MPG) by Vehicle Class and Fuel Type (EMFAC2021)		Annual Fuel Use from Project (gallons)		MBTU/Year[3]
			Gas	Diesel	Gas	Diesel	Gas	Diesel	Gas	Diesel	
LDA	50.44%	799356.0	100%	0%	797890.09	1465.89	28.92	42.70	27586.0	34.3	3207.2
LDT1	5.14%	81500.7	100%	0%	81470.53	30.14	23.79	24.66	3425.3	1.2	397.8
LDT2	16.85%	267121.3	100%	0%	266259.50	861.84	23.27	32.65	11444.5	26.4	1332.3
MDV	16.40%	259908.6	98%	2%	255797.08	4111.49	18.87	23.72	13557.5	173.3	1598.0
LHD1	2.99%	47308.5	50%	50%	23605.95	23702.60	9.67	15.77	2440.3	1502.9	492.2
LHD2	0.67%	10690.0	27%	73%	2893.71	7796.28	8.58	13.15	337.2	593.1	121.6
MHD	0.83%	13105.3	18%	82%	2339.47	10765.87	4.80	8.78	487.4	1226.1	227.0
HHD	3.67%	58090.5	0%	100%	12.77	58077.69	3.37	6.22	3.8	9342.3	1299.0
OBUS	0.06%	982.6	63%	37%	622.38	360.24	4.79	6.96	129.9	51.8	22.3
UBUS	0.02%	299.5	64%	36%	193.09	106.45	8.41	12.12	23.0	8.8	3.9
MCY	2.47%	39106.8	100%	0%	39106.82	0.00	40.47	NA	966.4	0.0	112.2
SBUS	0.12%	1825.8	38%	62%	693.08	1132.69	9.83	8.13	70.5	139.4	27.6
MH	0.35%	5578.8	65%	35%	3643.27	1935.49	4.41	9.39	825.4	206.1	124.5
Total	**100.00%**	**1584874.4**			**1474527.74**	**110346.68**	**14.55**		**61297**	**13306**	**8965.5**

Fleet Characteristics 21.2

Source: EMFAC 2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Tulare County
Calendar Year: 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

GASOLINE

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (Annual)	Trips (Annual)	Fuel Consumption (1000 gal/year)	Annual Fuel Consumption (gallons)	MPG
Tulare County	2025	HHDT	Aggregated	Aggregated	GAS	2	164	36	0.0486	49	3.37
Tulare County	2025	LDA	Aggregated	Aggregated	GAS	62800	2580000	292000	89.2	89200	28.92
Tulare County	2025	LDT1	Aggregated	Aggregated	GAS	5590	186000	24100	7.82	7820	23.79
Tulare County	2025	LDT2	Aggregated	Aggregated	GAS	29000	1140000	135000	49	49000	23.27
Tulare County	2025	LHDT1	Aggregated	Aggregated	GAS	2670	97700	39800	10.1	10100	9.67
Tulare County	2025	LHDT2	Aggregated	Aggregated	GAS	336	12100	5010	1.41	1410	8.58
Tulare County	2025	MCY	Aggregated	Aggregated	GAS	3370	19100	6750	0.472	472	40.47
Tulare County	2025	MDV	Aggregated	Aggregated	GAS	27500	983000	125000	52.1	52100	18.87
Tulare County	2025	MH	Aggregated	Aggregated	GAS	356	3200	36	0.725	725	4.41
Tulare County	2025	MHDT	Aggregated	Aggregated	GAS	176	10800	3520	2.25	2250	4.80
Tulare County	2025	OBUS	Aggregated	Aggregated	GAS	73	3870	1460	0.808	808	4.79
Tulare County	2025	SBUS	Aggregated	Aggregated	GAS	28	1750	110	0.178	178	9.83
Tulare County	2025	UBUS	Aggregated	Aggregated	GAS	12	497	47	0.0591	59	8.41

DIESEL

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption (1000 gal/year)	Annual Fuel Consumption (gallons)	MPG
Tulare County	2025	HHDT	Aggregated	Aggregated	DSL	4890	746000	88700	120	120000	6.22
Tulare County	2025	LDA	Aggregated	Aggregated	DSL	159	4740	658	0.111	111	42.70
Tulare County	2025	LDT1	Aggregated	Aggregated	DSL	4	69	12	0.00279	3	24.66
Tulare County	2025	LDT2	Aggregated	Aggregated	DSL	88	3690	422	0.113	113	32.65
Tulare County	2025	LHDT1	Aggregated	Aggregated	DSL	2760	98100	34700	6.22	6220	15.77
Tulare County	2025	LHDT2	Aggregated	Aggregated	DSL	871	32600	11000	2.48	2480	13.15
Tulare County	2025	MDV	Aggregated	Aggregated	DSL	424	15800	1950	0.666	666	23.72
Tulare County	2025	MH	Aggregated	Aggregated	DSL	196	1700	20	0.181	181	9.39
Tulare County	2025	MHDT	Aggregated	Aggregated	DSL	1060	49700	12400	5.66	5660	8.78
Tulare County	2025	OBUS	Aggregated	Aggregated	DSL	32	2240	390	0.322	322	6.96
Tulare County	2025	SBUS	Aggregated	Aggregated	DSL	135	2860	1950	0.352	352	8.13
Tulare County	2025	UBUS	Aggregated	Aggregated	DSL	3	274	14	0.0226	23	12.12

Notes

1. Fleet Mix Provided by CalEEMod
2. Proportion of diesel vs. gasoline vehicles calculated based on total annual VMT for each vehicle class
3. MBTU Calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.116090 MBTU and 1 gallong of diesel = 0.139 MBTU

ACOUSTICAL ANALYSIS

CHURCHWOOD ESTATES
FRESNO, CALIFORNIA

WJVA Project No. 23-04

PREPARED FOR

4CREEKS
324 S. SANTA FE STREET, SUITE A
VISALIA, CALIFORNIA 93292

PREPARED BY

WJV ACOUSTICS, INC.
VISALIA, CALIFORNIA

wjv acoustics

FEBRUARY 14, 2023

INTRODUCTION

The project is a proposed 60-lot single-family residential development to be located in Fresno, California. The project site is located north of (and adjacent to) Church Avenue, approximately 700 feet east of Fruit Avenue. The City of Fresno has requested an acoustical analysis to quantify project site noise exposure and determine noise mitigation requirements. This analysis, prepared by WJV Acoustics, Inc. (WJVA), is based upon a project site plan prepared by Central Valley Engineering and Surveying (dated 11-29-22), traffic data provided by the Fresno Council of Governments (Fresno COG) and the findings of on-site noise level measurements. Revisions to the site plan may affect the findings and recommendations of this report. The site plan is provided as Figure 1.

Appendix A provides a description of the acoustical terminology used in this report. Unless otherwise stated, all sound levels reported are in A-weighted decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects. Appendix B provides typical A-weighted sound levels for common noise sources.

NOISE EXPOSURE CRITERIA

General Plan

The City of Fresno General Plan Noise Element provides noise level criteria for land use compatibility for both transportation and non-transportation noise sources. The General Plan sets noise compatibility standards for transportation noise sources in terms of the Day-Night Average Level (L_{dn}). The L_{dn} represents the time-weighted energy average noise level for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). The L_{dn} represents cumulative exposure to noise over an extended period of time and are therefore calculated based upon *annual average* conditions. Table I provides the General Plan noise level standards for transportation noise sources.

TABLE I

CITY OF FRESNO GENERAL PLAN NOISE LEVEL STANDARDS
TRANSPORTATION (NON-AIRCRAFT) NOISE SOURCES

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

1 Where the location of the outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.

2 As determined for a typical worst-case hour during periods of use.

Source: City of Fresno General Plan

Implementation Policy NS-1-a of the General Plan provides guidance in regards to the development of new noise sensitive land uses (including residential developments).

> ***Desirable and Generally Acceptable Exterior Noise Environment.*** *Establish 65 dBA L_{dn} 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 dBA L_{dn} or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise- sensitive uses. Maintain 65 dBA L_{dn} or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses, and maintain 70 dBA L_{dn} 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.*

The General Plan also provides noise level standards for non-transportation (stationary) noise sources. The General Plan noise level standards for non-transportation noise sources are identical to those provided in the City's Municipal code, provided below in Table II.

Implementation Policy NS-1-i of the General Plan Noise Element provides guidance in regards to mitigation for new developments and projects that have potential to result in a noise-related impact at existing noise-sensitive land uses.

> ***Mitigation by New Development.*** *Require an acoustical analysis where new development of industrial, commercial or other noise generating land uses (including transportation facilities such as roadways, railroads, and airports) may result in noise levels that exceed the noise level exposure criteria established by [Table I] and [Table II] to determine impacts, and require developers to mitigate these impacts in conformance with Tables 9-2 and 9-3 as a condition of permit approval through appropriate means.*
>
> *Noise mitigation measures may include:*
>
> - *The screening of noise sources such as parking and loading facilities, outdoor activities, and mechanical equipment;*
> - *Providing increased setbacks for noise sources from adjacent dwellings;*
> - *Installation of walls and landscaping that serve as noise buffers;*
> - *Installation of soundproofing materials and double-glazed windows; and*
> - *Regulating operations, such as hours of operation, including deliveries and trash pickup.*
>
> *Alternative acoustical designs that achieve the prescribed noise level reduction may be approved by the City, provided a qualified Acoustical Consultant submits information demonstrating that the alternative designs will achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose to construct noise walls along roadways when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility, with no City funding.*

Implementation Policy NS-1-j of the General Plan Noise Element provides guidance in regards to the establishment of a significance threshold when determining an increase in noise levels over existing ambient noise levels.

> ***Significance Threshold.*** *Establish, as a threshold of significance for the City's environmental review process, that a significant increase in ambient noise levels is*

assumed if the project would increase noise levels in the immediate vicinity by 3 dB L_{dn} or CNEL or more above the ambient noise limits established in this General Plan Update.

Commentary: When an increase in noise would result in a "significant" impact (increase of three dBA or more) to residents or businesses, then noise mitigation would be required to reduce noise exposure. If the increase in noise is less than three dBA, then the noise impact is considered insignificant and no noise mitigation is needed. By setting a specific threshold of significance in the General Plan, this policy facilitates making a determination of environmental impact, as required by the California Environmental Quality Act. It helps the City determine whether (1) the potential impact of a development project on the noise environment warrants mitigation, or (2) a statement of overriding considerations will be required.

Municipal Code

Section 15-2506 of the City of Fresno Municipal code establishes hourly acoustical performance standards for non-transportation noise sources. The standards, provided in Table II, are made more restrictive during the nighttime hours of 10:00 p.m. to 7:00 a.m. Additionally, the municipal code states that when ambient noise levels exceed or equal the levels described in Table II, mitigation shall only be required to limit noise to the existing ambient noise levels, plus five (5) dB. Section 15-2506 of the Municipal Code is consistent with Implementing Policy NS-1-I of the Noise Element of the City of Fresno General Plan (adopted 12/18/14).

TABLE II

NON-TRANSPORTATION NOISE LEVEL STANDARDS, dBA
CITY OF FRESNO MUNICIPAL CODE, SECTION 15-2506

Daytime (7 a.m.-10 p.m.)		Nighttime (10 p.m.-7 a.m.)	
L_{eq}	L_{max}	L_{eq}	L_{max}
50	70	45	60

Source: City of Fresno Municipal Code

Additional guidance is provided in Section 10-102(b) of the City's Municipal Code. Section 10 provides existing ambient noise levels to be applied to various districts, further divided into various hours of the day. Table III describes the assumed minimum ambient noise levels by district and time. Section 10-102(b) states *"For the purpose of this ordinance, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen minutes, without inclusion of the offending noise, at the location and time of day at which a comparison with the offending noise is to be made. Where the ambient noise level is less than that designated in this section, however, the noise level specified herein shall be deemed to be the ambient noise level for that location".*

TABLE III

ASSUMED MINIMUM AMBIENT NOISE LEVEL, dBA
CITY OF FRESNO MUNICIPAL CODE, SECTION 10-102(B)

DISTRICT	TIME	SOUND LEVEL, dB L_{eq}
RESIDENTIAL	10 PM TO 7 AM	50
RESIDENTIAL	7 PM TO 10 PM	55
RESIDENTIAL	7 AM TO 7 PM	60
COMMERCIAL	10 PM TO 7 AM	60
COMMERCIAL	7 AM TO 10 PM	65
INDUSTRIAL	ANYTIME	70

Source: City of Fresno Municipal Code

Section 10-106 (Prima Facie Violation) States *"Any noise or sound exceeding the ambient noise level at the properly line of any person offended thereby, or, if a condominium or apartment house, within any adjoining living unit, by more than five decibels shall be deemed to prima facie evidence of a violation of Section 8-305."*

For noise sources that are not transportation related, which usually includes commercial or industrial activities and other stationary noise sources (such as amplified music), it is common to assume that a 3-5 dB increase in noise levels represents a substantial increase in ambient noise levels. This is based on laboratory tests that indicate that a 3 dB increase is the minimum change perceptible to most people, and a 5 dB increase is perceived as a "definitely noticeable change."

Appendix A provides definitions of the acoustical terminology used in this report. Unless otherwise stated, all sound levels reported in this analysis are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighted sound levels, as they correlate well with public reaction to noise. Appendix B provides typical A-weighted sound levels for common noise sources.

PROJECT SITE NOISE EXPOSURE

The project site is located north of (and adjacent to) W. Church Avenue, west of S. Fruit Avenue, in Fresno, California. The project site is exposed traffic noise associated with vehicles on W. Church Avenue. The distance from center of the backyards of the closest proposed lots to the centerline of W. Church Avenue is approximately 700 feet.

Traffic Noise Exposure

Noise exposure from traffic on W. Church Avenue was calculated for existing and future (2046) conditions using the FHWA Traffic Noise Model and traffic data obtained from Fresno COG. A description of the noise model, applied data, methodology and findings is provided below.

WJVA utilized the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA Model is a standard analytical method used for roadway traffic noise calculations. The model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within ±1.5 dB. To predict L_{dn} values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Noise level measurements and concurrent traffic counts were conducted by WJVA staff within the project site on February 2, 2023. The purpose of the measurement was to evaluate the accuracy of the FHWA Model in describing traffic noise exposure within the project site. The traffic noise measurement site was located at a distance of approximately 40 feet from the centerline of W. Church Avenue. The speed limit was assumed to be 40 mph (miles per hour). The project vicinity and noise monitoring site location are provided as Figure 2. A photograph showing the W. Church Avenue noise measurement site is provided as Figure 3.

Noise monitoring equipment consisted of Larson-Davis Laboratories Model LDL-820 sound level analyzer equipped with a B&K Type 4176 1/2" microphone. The equipment complies with the specifications of the American National Standards Institute (ANSI) for Type I (Precision) sound level meters. The meter was calibrated in the field prior to use with a B&K Type 4230 acoustic calibrator to ensure the accuracy of the measurements. The microphone was located on a tripod at 5 feet above the ground. The project site presently consists of undeveloped land and a portion is currently used for industrial purposes.

Noise measurements were conducted in terms of the equivalent energy sound level (L_{eq}). Measured L_{eq} values were compared to L_{eq} values calculated (predicted) by the FHWA Model using as inputs the traffic volumes, truck mix and vehicle speed observed during the noise measurements. The results of the comparison are shown in Table IV.

From Table IV it may be determined that the traffic noise levels predicted by the FHWA Model were 1.5 dB lower than those measured for the conditions observed at the time of the noise

measurements for W. Church Avenue. This is considered to be reasonable agreement with the model and therefore no adjustments to the model are necessary.

TABLE IV

COMPARISON OF MEASURED AND PREDICTED (FHWA MODEL) NOISE LEVELS CHURCHWOOD ESTATES, FRESNO

	W. Church Ave.
Measurement Start Time	12:45 p.m.
Observed # Autos/Hr.	168
Observed # Medium Trucks/Hr.	12
Observed # Heavy Trucks/Hr.	0
Observed Speed (MPH)	40
Distance, ft. (from center of roadway)	40
L_{eq}, dBA (Measured)	61.9
L_{eq}, dBA (Predicted)	60.4
Difference between Predicted and Measured L_{eq}, dBA	**1.5**

Note: FHWA "soft" site assumed for calculations.
Source: WJV Acoustics, Inc.

Annual Average Daily Traffic (AADT) data for W. Church Avenue in the project vicinity was obtained from Fresno COG. Truck percentages and the day/night distribution of traffic were estimated by WJVA, based upon previous studies conducted in the project vicinity since project-specific data were not available from government sources. A speed limit of 55 mph was assumed for the roadway. Table V summarizes annual average traffic data used to model noise exposure within the project site.

TABLE V

TRAFFIC NOISE MODELING ASSUMPTIONS CHURCHWOOD ESTATES, FRESNO

	W. Church Ave (e/o Fruit Ave)	
	Existing	2046
Annual Avenue Daily Traffic (AADT)	2,111	3,266
Day/Night Split (%)	90/10	
Assumed Vehicle Speed (mph)	40	
% Medium Trucks (% AADT)	2	
% Heavy Trucks (% AADT)	2	

Sources: Fresno COG
WJV Acoustics, Inc.

Using data from Table V, the FHWA Model, annual average traffic noise exposure was calculated for the closest proposed backyards from W. Church Avenue. Table VI provides the noise exposure levels for W. Church Avenue, at the closest proposed residential lots to the roadway.

TABLE VI

MODELED TRAFFIC NOISE LEVELS, W. CHURCH AVENUE, dB, L_{dn}
CHURCHWOOD ESTATES, FRESNO

Roadway	Existing Conditions	2046 Conditions
W. Church Avenue (north of Alicante Avenue)	56.8	58.7

Source: WJV Acoustics
Fresno COG

Reference to Table VI indicates that the traffic noise exposure at the closest proposed lots to W. Church Avenue would be approximately 57 dB L_{dn} for existing conditions and approximately 59 dB L_{dn} for future (2046) traffic conditions on W. Church Avenue. Such noise exposure levels do not exceed the City's 65 dB L_{dn} exterior noise level standard and mitigation measures are therefore not required for compliance with the City's exterior noise level standard.

Interior Noise Exposure:

The City of Fresno interior noise level standard is 45 dB L_{dn}. The worst-case noise exposure within the proposed residential development would be approximately 59 dB L_{dn} (2046 conditions). This means that the proposed residential construction must be capable of providing a minimum outdoor-to-indoor noise level reduction (NLR) of approximately 14 dB (59-45=14).

A specific analysis of interior noise levels was not performed. However, it may be assumed that residential construction methods complying with current building code requirements will reduce exterior noise levels by approximately 25 dB if windows and doors are closed. This will be sufficient for compliance with the City's 45 dB L_{dn} interior standard at all proposed lots. Requiring that it be possible for windows and doors to remain closed for sound insulation means that air conditioning or mechanical ventilation will be required.

CONCLUSIONS AND RECOMMENDATIONS

The proposed 60-lot single-family residential development will comply with all City of Fresno exterior and interior noise level standards, provided the following mitigation measures are incorporated into final project design.

- Mechanical ventilation or air conditioning must be provided for all homes so that windows and doors can remain closed for sound insulation purposes.

The conclusions and recommendations of this acoustical analysis are based upon the best information known to WJV Acoustics Inc. (WJVA) at the time the analysis was prepared concerning the proposed lot layout plan, project site elevation, traffic volumes and roadway configurations. Any significant changes in these factors will require a reevaluation of the findings of this report. Additionally, any significant future changes in motor vehicle technology, noise regulations or other factors beyond WJVA's control may result in long-term noise results different from those described by this analysis.

Respectfully submitted,

Walter J. Van Groningen
President

WJV:wjv

FIGURE 1: SITE PLAN

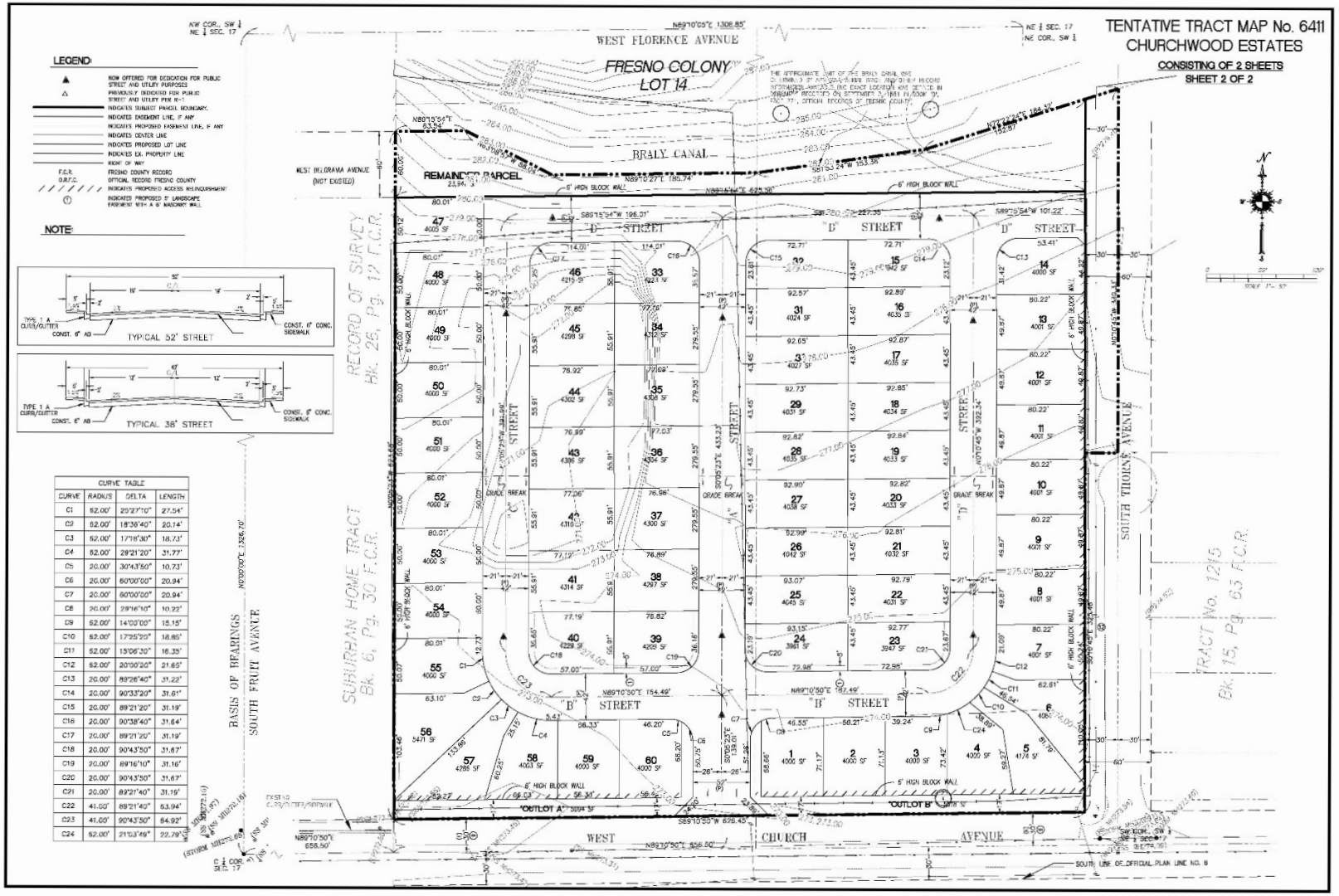


FIGURE 2: PROJECT SITE VICINITY AND NOISE MEASUREMENT LOCATION

FIGURE 3: W. CHURCH AVENUE NOISE MEASUREMENT SITE

APPENDIX A

ACOUSTICAL TERMINOLOGY

AMBIENT NOISE LEVEL: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

CNEL: Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

DECIBEL, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

DNL/L_{dn}: Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

L_{eq}: Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.

NOTE: The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour.

L_{max}: The maximum noise level recorded during a noise event.

L_n: The sound level exceeded "n" percent of the time during a sample interval (L_{90}, L_{50}, L_{10}, etc.). For example, L_{10} equals the level exceeded 10 percent of the time.

A-2

ACOUSTICAL TERMINOLOGY

NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

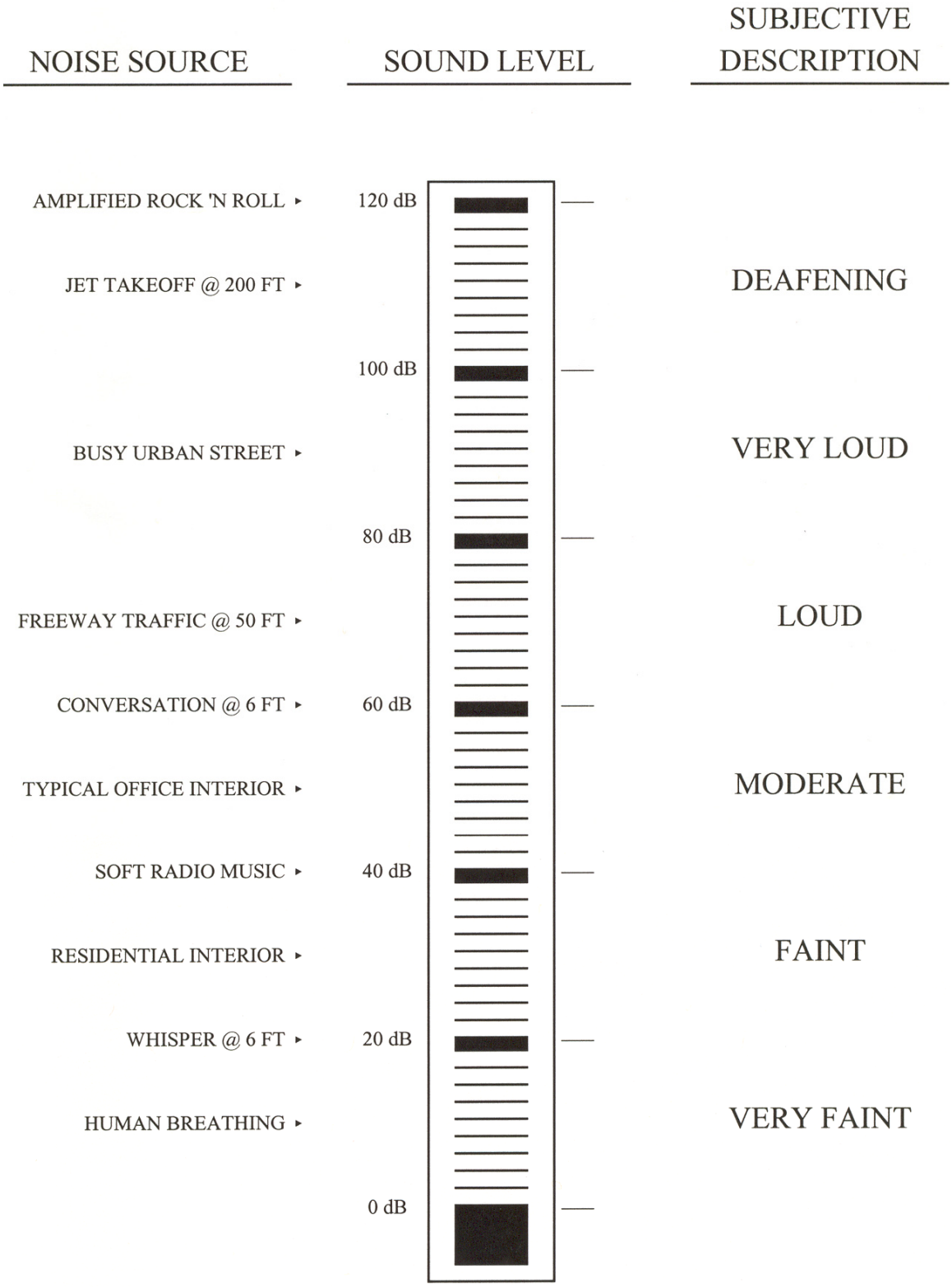
NOISE LEVEL REDUCTION (NLR): The noise reduction between indoor and outdoor environments or between two rooms that is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of "noise level reduction" combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

SOUND LEVEL: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

SOUND TRANSMISSION CLASS (STC): The single-number rating of sound transmission loss for a construction element (window, door, etc.) over a frequency range where speech intelligibility largely occurs.

APPENDIX B
EXAMPLES OF SOUND LEVELS



PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

Ms. Ellie Krantz
4Creeks
324 South Santa Fe Street, Suite A
Visalia, California 93292

March 16, 2023

Subject: Vehicle Miles Traveled Analysis
Proposed Tract 6411 - Churchwood Estates
Northeast of the Intersection of Fruit and Church Avenues
Fresno, California

Dear Ms. Krantz:

Introduction

This report presents the results of vehicle miles traveled (VMT) analyses for the subject project.

Project Description

The proposed project site covers approximately 8.867 gross acres located on the north side of Church Avenue between Fruit and Thorne Avenues in Fresno, California (APN 477-060-05 and 477-060-06). The proposed Project consists of 60 single-family residential lots. Site access will be via one local street connecting to Thorne Avenue and one local street connecting to Church Avenue. A site plan is attached.

Trip Generation

Data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* were used to estimate the number of trips anticipated to be generated by the project. Table 1 presents trip generation characteristics of the proposed project.

Table 1
Project Trip Generation

Land Use	Units	Weekday		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Single-Family Detached Housing (210)	60	9.43	566	0.70	26:74	11	31	42	0.94	63:37	36	21	57

Reference: *Trip Generation Manual, 11th Edition, Institute of Transportation Engineers 2021*
Rates are reported in trips per dwelling unit.

Vehicle Miles Traveled (VMT)

Senate Bill (SB) 743 requires that relevant CEQA analysis of transportation impacts be conducted using a metric known as vehicle miles traveled (VMT) instead of Level of Service (LOS). VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto roads, the project may cause a significant transportation impact.

The State CEQA Guidelines were amended to implement SB 743 by adding Section 15064.3. Among its provisions, Section 15064.3 confirms that, except with respect to transportation projects, a project's effect on automobile delay shall not constitute a significant environmental impact. Therefore, LOS as a measure of impacts on traffic facilities is no longer a relevant CEQA criteria for transportation impacts.

CEQA Guidelines Section 15064.3(b)(4) states that "[a] lead agency has discretion to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revision to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section."

The City of Fresno adopted *CEQA Guidelines for Vehicle Miles Traveled Thresholds*, dated June 25, 2020, pursuant to SB 743 to be effective as of July 1, 2020. The thresholds described therein are referred to herein as the City of Fresno VMT Thresholds. The City of Fresno VMT Thresholds document was prepared and adopted consistent with the requirements of CEQA Guidelines Sections 15064.3 and 15064.7. The December 2018 *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory) published by the Governor's Office of Planning and Research (OPR) was utilized as a reference and guidance document in the preparation of the City of Fresno VMT Thresholds.

The City of Fresno VMT Thresholds adopted a screening standard and criteria that can be used to screen out qualified projects that meet the adopted criteria from a requirement to prepare a detailed VMT analysis.

The City of Fresno VMT Thresholds Section 3.0 regarding Project Screening discusses a variety of projects that may be screened out of a VMT analysis including specific development and transportation projects. For development projects, conditions may exist that would allow the presumption that a development project will have a less-than-significant impact. These conditions may be size, location, proximity to transit, or trip-making potential. For transportation projects, the primary attribute to consider with transportation projects is the potential to increase vehicle travel, sometimes referred to as "induced travel."

The proposed Project is located within a green area when plotted on Figure 6, City of Fresno - Existing VMT per Capita (attached), indicating that the Project is proposed within an area that is known to generate low VMT per capita. Therefore, no additional analyses are required and the lead agency may presume that the Project will create a less-than-significant transportation impact.

Thank you for the opportunity to perform this VMT analysis. Please feel free to contact our office if you have any questions.

PETERS ENGINEERING GROUP

John Rowland, PE, TE

Attachment: Site Plan
Figure 6, City of Fresno - Existing VMT per Capita

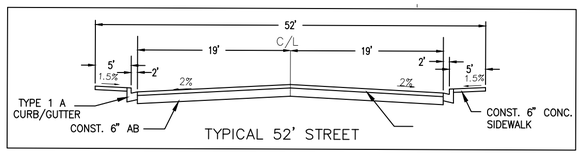
TENTATIVE TRACT MAP No. 6411
CHURCHWOOD ESTATES

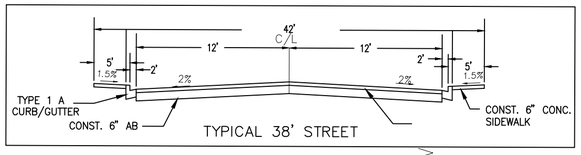
CONSISTING OF 2 SHEETS
SHEET 2 OF 2

LEGEND:

- ▲ NOW OFFERED FOR DEDICATION FOR PUBLIC STREET AND UTILITY PURPOSES
- △ PREVIOUSLY DEDICATED FOR PUBLIC STREET AND UTILITY PER R-1
- INDICATES SUBJECT PARCEL BOUNDARY.
- INDICATES EASEMENT LINE, IF ANY
- INDICATES PROPOSED EASEMENT LINE, IF ANY
- INDICATES CENTER LINE
- INDICATES PROPOSED LOT LINE
- INDICATES EX. PROPERTY LINE
- RIGHT OF WAY
- F.C.R. FRESNO COUNTY RECORD
- O.R.F.C. OFFICIAL RECORD FRESNO COUNTY
- INDICATES PROPOSED ACCESS RELINQUISHMENT
- ① INDICATES PROPOSED 5' LANDSCAPE EASEMENT WITH A 6' MASONRY WALL

NOTE:





CURVE TABLE			
CURVE	RADIUS	DELTA	LENGTH
C1	62.00'	25°27'10"	27.54'
C2	62.00'	18°36'40"	20.14'
C3	62.00'	17°18'30"	18.73'
C4	62.00'	29°21'20"	31.77'
C5	20.00'	30°43'50"	10.73'
C6	20.00'	60°00'00"	20.94'
C7	20.00'	60°00'00"	20.94'
C8	20.00'	29°16'10"	10.22'
C9	62.00'	14°00'00"	15.15'
C10	62.00'	17°25'20"	18.85'
C11	62.00'	15°06'30"	16.35'
C12	62.00'	20°00'20"	21.65'
C13	20.00'	89°26'40"	31.22'
C14	20.00'	90°33'20"	31.61'
C15	20.00'	89°21'20"	31.19'
C16	20.00'	90°38'40"	31.64'
C17	20.00'	89°21'20"	31.19'
C18	20.00'	90°43'50"	31.67'
C19	20.00'	89°16'10"	31.16'
C20	20.00'	90°43'50"	31.67'
C21	20.00'	89°21'40"	31.19'
C22	41.00'	89°21'40"	63.94'
C23	62.00'	21°03'49"	22.79'

NW COR., SW ¼ NE ¼ SEC. 17

N89°10'05"E 1308.85'

WEST FLORENCE AVENUE

NE ¼ SEC. 17 NE COR., SW ¼

FRESNO COLONY LOT 14

THE APPROXIMATE LIMIT OF THE BRALY CANAL WAS DETERMINED BY APN MAP, AERIAL IMAGE AND OTHER RECORD INFORMATION AVAILABLE. (NO EXACT LOCATION WAS DEFINED IN DOCUMENT RECORDED ON SEPTEMBER 2, 1881 IN BOOK 'D', PAGE 271, OFFICIAL RECORDS OF FRESNO COUNTY)

BRALY CANAL

N89°15'54"E 63.54'

N63°08'57"W 88.04'

N89°10'27"E 185.74'

N89°15'54"E 625.56'

S81°52'24"W 153.38'

N72°22'24"E 184.32'

152.87

WEST BELGRAVIA AVENUE (NOT EXISTED)

60'

REMAINDER PARCEL 23,941 SF

6' HIGH BLOCK WALL

S89°15'54"W 196.01'

S89°15'54"W 227.35'

S89°15'54"W 101.22'

"D" STREET

"D" STREET

"D" STREET

RECORD OF SURVEY Bk. 26, Pg. 12 F.C.R.

47 4005 SF
48 4000 SF
49 4000 SF
50 4000 SF
51 4000 SF
52 4000 SF
53 4000 SF
54 4000 SF
55 4000 SF
56 5471 SF
57 4286 SF
58 4003 SF
59 4000 SF
60 4000 SF
46 4215 SF
45 4298 SF
44 4302 SF
43 4306 SF
42 4310 SF
41 4314 SF
40 4229 SF
33 4223 SF
34 4312 SF
35 4308 SF
36 4304 SF
37 4300 SF
38 4297 SF
39 4209 SF
32 4042 SF
31 4024 SF
30 4027 SF
29 4031 SF
28 4035 SF
27 4038 SF
26 4042 SF
25 4045 SF
24 3961 SF
15 3942 SF
16 4035 SF
17 4035 SF
18 4034 SF
19 4033 SF
20 4033 SF
21 4032 SF
22 4031 SF
23 3947 SF
14 4000 SF
13 4001 SF
12 4001 SF
11 4001 SF
10 4001 SF
9 4001 SF
8 4001 SF
7 4001 SF
6 4061 SF
1 4000 SF
2 4000 SF
3 4000 SF
4 4000 SF
5 4174 SF

"OUTLOT A" 5094 SF

"OUTLOT B" 3818 SF

GRADE BREAK

6' HIGH BLOCK WALL

"B" STREET

"C" STREET

"A" STREET

"D" STREET

SUBURBAN HOME TRACT Bk. 6, Pg. 30 F.C.R.

BASIS OF BEARINGS N0°00'00"E 1326.70'

SOUTH FRUIT AVENUE

SOUTH THORNE AVENUE

TRACT No. 1215 Bk. 15, Pg. 63 F.C.R.

EXISTING CURB/GUTTER/SIDEWALK

N89°10'50"E 656.50'

N89°10'50"E 656.50'

S89°10'50"W 1626.45'

WEST CHURCH AVENUE

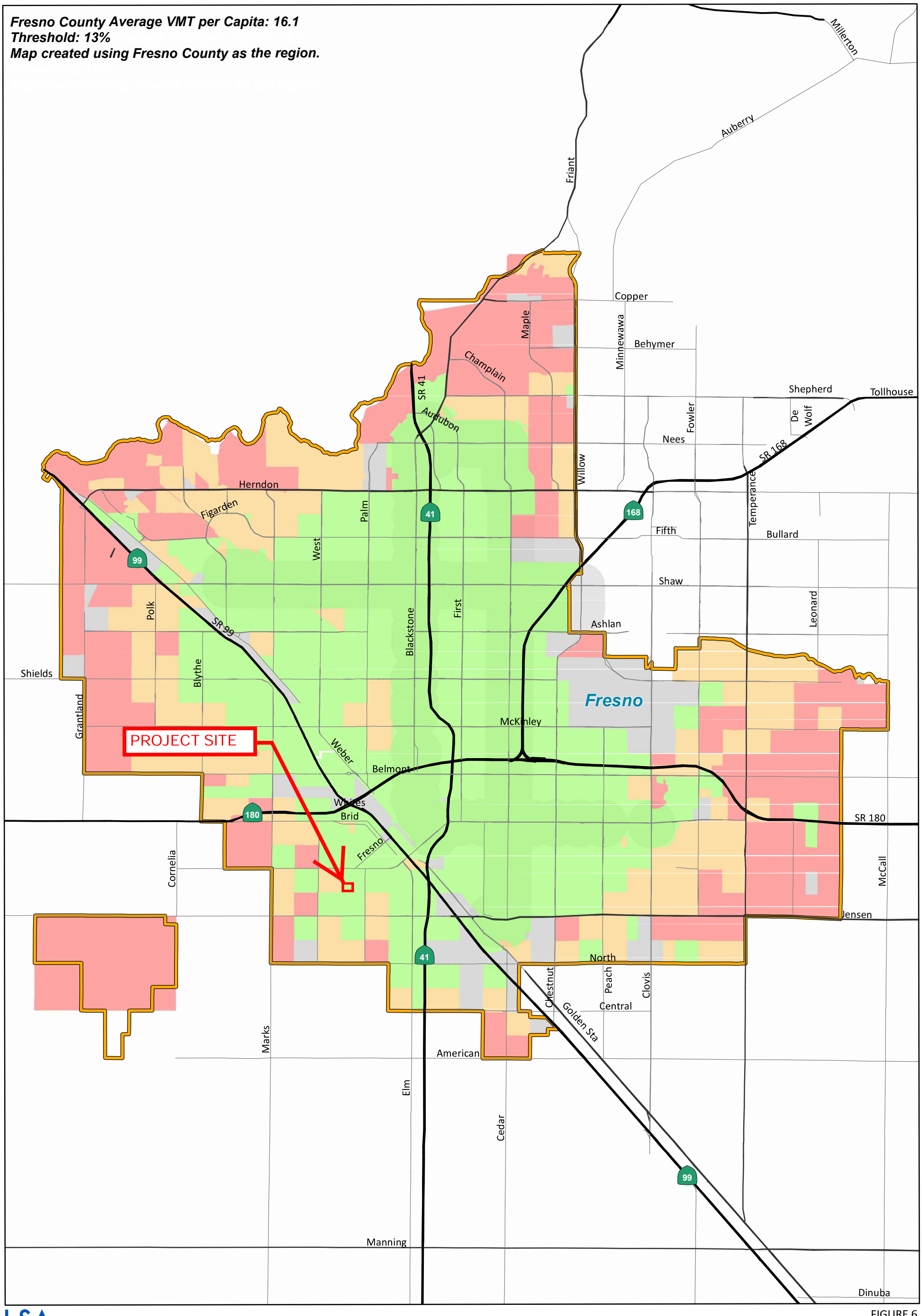
SOUTH LINE OF OFFICIAL PLAN LINE NO. 6

C ¼ COR. SEC. 17

SW COR., SW ¼ NE ¼ SEC. 17

SCALE 1"= 50'

Fresno County Average VMT per Capita: 16.1
Threshold: 13%
Map created using Fresno County as the region.



LSA

FIGURE 6

LEGEND

City with Sphere of Influence

VMT per Capita

- No Population
- Less than 14.0
- 14.0 - 18.2
- Greater than 18.2

N

0 5000 10000
FEET

SOURCE: Fresno COG Activity Based Travel Demand Model (2019)

R:\FCG1901 FresnoCOG VMT\GIS\VMT_Maps_04-20-2020\fig6_Fresno_COGAVG.mxd (4/28/2020)

CEQA Guidelines for Vehicle Miles Traveled Thresholds

City of Fresno - Existing VMT per Capita

SHREENATH
INTERNATIONAL CONSULTANTS

April 24, 2024

Prepared by:

Shreenath International Consultants, Inc.
P. O. Box 1807
Walnut, CA 91788

Tel: (951)313-0069

Prepared for:

DS Chouhan LLC

5185 W. Carmen Ave.
Fresno, CA 93722

Report of Environmental Site Assessment Limited Soil Sampling
Vacant Land Property
(APNs): 477-060-05 & 477-060-06, Fresno, CA

Mr. Sher Singh
DS Chouhan LLC **April 24, 2023**
5185 W. Carmen Ave.
Fresno, CA 93722

Subject: Subsurface Environmental Investigation – Property described as ~9.5 acres (~413,820 ft.^{2}) of vacant land with Assessor's Parcel Numbers (APNs): 477-060-05 & 477-060-06.

Dear Mr. Singh,

Shreenath Environmental is pleased to present this report of the recent environmental investigation of the above-referenced property. The property location is shown in the attached Figures 1 and 2.

Site History

The Subject Property currently is vacant, undeveloped land located in the County of Fresno, California. Fresno County is the fifth largest county in the State of California. The City of Fresno is located in the eastern section of the County.

The subject property is ~9.5 acres (413,820 ft.^{2}) of vacant land. The subject property is irregular in shape with frontage along West Church Avenue. The legal description as taken from the Grant Deed is as follows:

Parcel 1: APN 477-060-05

That portion of the East half of Lot 14 of Fresno Colony, lying South of the Braly Canal, according to the map recorded In Book 2 Page 8 of Plats, Fresno County Records

Abbreviated Description: SUBD: FRESNO COLONY PAR IN E1/2 LT 14 FRESNO COL S OF BRALY CANAL, Size: 4.78 Acres

Parcel 2: APN 477-060-06

The South 1/2 of the West 1/2 of Lot 14 of Fresno Colony, in the City of Fresno, County of Fresno, State of California, according to the map recorded in Book 2 page 8 of plats, Fresno County Records.

Abbreviated Description: 5 AC IN SW1/4 LOT 14 FRESNO COLONY
Size: 4.84 Acres

Geology and Hydrogeology

The subject property is located within the Mojave Desert Geomorphic Province of Southern California. The subsurface materials encountered during sampling generally were composed of silty, gravelly sand. The subject site is within the Upper Mojave River Valley Groundwater Basin. Groundwater is estimated to be present at a depth greater than 100 feet with a gradient toward the northeast, which is similar to the expression of the surface topography.

P.O. Box 1807,
Walnut, CA 91788
www.enviroinfotech.com

Report of Environmental Site Assessment Limited Soil Sampling
Vacant Land Property
(APNs): 477-060-05 & 477-060-06, Fresno, CA

Evaluation of the Subject Property

Due to the prospective acquisition of the subject property, a request was made to evaluate the environmental conditions of the site. Soil samples were collected in selected locations on the property and analyzed. Six soil borings were drilled using a hand augur at six locations as shown on Figure 2. Three borings were drilled on each of the two parcels.

TABLE 1
Soil Sample Summary
April 5, 2023

Client Sample	Lab Sample	Date Receive	Date Sample	Matrix
Soil Sample #1-9 inch	27826-008	4/5/2023	4/3/2023	Soil
Soil Sample #1 @ 5ft	27826-009	4/5/2023	4/3/2023	Soil
Soil Sample #2:4ft	27826-012	4/5/2023	4/3/2023	Soil
Soil t Sample #2:9ft	27826-013	4/5/2023	4/3/2023	Soil
Soil Sample #3:12-inch	27826-014	4/5/2023	4/3/2023	Soil
Soil Sample #3:5ft	27826-015	4/5/2023	4/3/2023	Soil
Soil Sample #3:10ft	27826-016	4/5/2023	4/3/2023	Soil
Soil Sample #4-12 inch	27826-001	4/5/2023	4/3/2023	Soil
Soil Sample #5 @ 12 inch	27826-002	4/5/2023	4/3/2023	Soil
Soil Sample #5 @ 5ft	27826-003	4/5/2023	4/3/2023	Soil
Soil Sample #5:10ft	27826-004	4/5/2023	4/3/2023	Soil
Soil Sample #6:12 inch	27826-005	4/5/2023	4/3/2023	Soil
Soil Sample #6:4ft	27826-006	4/5/2023	4/3/2023	Soil
Soil Sample #2:9 in	27826-011	4/5/2023	4/3/2023	Soil
Soil Sample #6:8ft	27826-007	4/5/2023	4/3/2023	Soil

Soil samples were obtained at each location at various depths of 09 inches to ten feet. The samples were handled and packaged in accordance with standard procedures and were stored in a chilled cooler pending transport to Orange Coast Analytical – a California-certified laboratory, in Tustin, California for analysis. Each of the samples was analyzed to detect total petroleum hydrocarbons (TPH) as gasoline, diesel, and oil using modified EPA method 8015.

Select soil samples also were analyzed to detect volatile organic compounds, including oxygenates, using EPA Method 8260B. Finally, select soil samples were analyzed to detect lead, arsenic, and pesticides by

EPA Methods 6010 and 8081A, respectively.
Copies of the official laboratory reports and the chain-of-custody record are included with this report. The results are summarized below in Table 2 and show that none of the tested compounds were detected in any of the samples that were analyzed.

P.O. Box 1807,
Walnut, CA 91788
www.enviroinfotech.com

Report of Environmental Site Assessment Limited Soil Sampling
Vacant Land Property
(APNs): 477-060-05 & 477-060-06, Fresno, CA

TABLE 2
Summary of Soil Sample Results
April 5, 2023

Sample ID	TPH-g	TPH-d	TPH-o	PCE	TCE	Pb	As	OCP	B
	mg/kg			µg/kg					
SS 1 B-9 in	ND	ND	ND	ND	ND	7.8	ND	ND	ND
SS 1 B- 5 ft	ND	ND	ND	ND	ND	2.7	ND	NA	ND
SS 1 B- 8 ft	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS 2 B-9 in	ND	ND	ND	ND	ND	2.6	ND	ND	ND
SS 2 B-4 ft	ND	ND	ND	ND	ND	2.4	ND	ND	ND
SS 2 B-9 ft	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS 3 B-1 ft	ND	ND	ND	ND	ND	23	ND	ND	ND
SS 3 B-5 ft	ND	ND	ND	ND	ND	4.4	ND	ND	ND
SS 3 B-10ft	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS 4 B-1 ft	ND	ND	ND	ND	ND	19	ND	ND	ND
SS 5 B-1 ft	ND	ND	ND	ND	ND	6.0	ND	ND	ND
SS 5 B-5 ft	ND	ND	ND	ND	ND	2.4	ND	ND	ND
SS 5 B 10 ft	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS 6 B-1 ft	ND	ND	ND	ND	ND	7.0	ND	ND	ND
SS 6 B-4 ft	ND	ND	ND	ND	ND	2.2	ND	ND	ND
SS 6 B-8 ft	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes: Soil Sample: SS
See official laboratory reports. All other compounds were not detected.
ND = Not detected at or above method detection limit
NA = Not Analyzed
TPH-g, d, o = Total Petroleum Hydrocarbons, as gasoline, diesel, oil
B = Benzene, OCP = Organochlorine Pesticides, Pb = total lead, As - Arsenic

Soil sampling results indicate that suspect compounds consisting of petroleum, VOCs nor OCP compounds **were not detected** in any of the soil samples analyzed.

The only analyte detected above detection limits was lead (Pb). Concentrations of that element ranged from 2.2 mg/Kg to 23 mg/Kg. The current human health-screening level for lead in a residential setting is 80 mg/Kg. **So, none of the lead levels detected present an environmental concern.**

P.O. Box 1807,
Walnut, CA 91788
www.enviroinfotech.com

Report of Environmental Site Assessment Limited Soil Sampling
Vacant Land Property
(APNs): 477-060-05 & 477-060-06, Fresno, CA

Conclusions

The findings of Shreenath International's recent Phase I Environmental did not indicate any substantial RECs on the Subject Property and no physical environmental testing was recommended. But a planned residential development on this Property initiated a request for physical testing of the underlying soil for suspect chemicals. Six borings were advanced throughout the subject property, and soil samples were collected and analyzed at multiple depths from each of the borings. Based on the findings of the recent soil sampling on this property; f other than lead, there were no detections of suspect contaminants at the locations sampled. However, this assessment was not intended to meet the requirements of a regulatory agency. Nevertheless, there appears to be a low likelihood of an adverse chemical release at this Site**.** **Therefore, Shreenath Environmental does not recommend any further physical testing.**

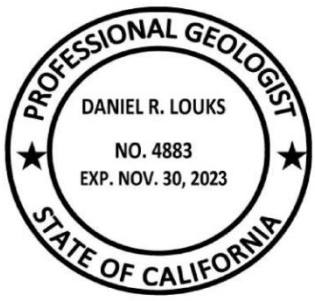
This opportunity to be of service to you is sincerely appreciated. Please do not hesitate to call if you have any questions pertaining to this report.

Respectfully submitted,

Deval Shah, MS, EIT
Sr. Environmental Engineer

Dr. Ted L. Carpenter, Ph.D. Date: 04/24/2023
Sr. Principle

.



Date 04-24-2023

Dan Louks, P.G., P.E.
Professional Geologist #4883

P.O. Box 1807,
Walnut, CA 91788
www.enviroinfotech.com

Report of Environmental Site Assessment Limited Soil Sampling
Vacant Land Property
(APNs): 477-060-05 & 477-060-06, Fresno, CA

7.0 LIMITATIONS

The conclusions and recommendations presented above are based upon the agreed limited scope of work outlined in the above report. Shreenath International Consultants Inc. makes no warranties or guarantees as to the accuracy or completeness of information obtained from, provided, or compiled by others. It is possible that information exists beyond the scope of this investigation that could change the conclusions presented herein.

Additional information, which was not found or available to the Consultant at the time of writing of this report, may result in a modification of the conclusions and recommendations presented.

This report is not a legal opinion. Use or misuse of this report, or reliance upon the findings hereof by any other parties is not authorized. The Consultant does not make any representation or warranty to such other parties as to the accuracy or completeness of this report or the suitability of its use by such other parties for any purpose whatever, known or unknown, to the Consultant.

The Consultant shall not have any liability to or indemnify or hold harmless third parties for any losses incurred by the actual or purported use or misuse of this report.

Shreenath International Consultants Inc. does not and cannot represent that the subject site does not contain any hazardous substances, contaminants, pollutants, petroleum hydrocarbons, or any other latent conditions beyond that observed by the Consultant during the course of the current scope of work. No warranty is made regarding the accuracy of any publicly documented information, or the opinions of officials consulted for this project.

A good-faith effort has been made to consult pertinent sources of data, and all discovered information has been disclosed by Shreenath International Consultants, Inc. to the client. If a client obtains information regarding environmental or hazardous substances issues at the site not contained in this report or the survey, such information shall be brought to Shreenath's attention forthwith. Shreenath International Consultants will evaluate such information and, on the basis of this evaluation, may modify the conclusions and/or recommendations stated in this report.

The scope of this evaluation did not include an evaluation of geotechnical conditions or hazards.

P.O. Box 1807,
Walnut, CA 91788
www.enviroinfotech.com

Report of Environmental Site Assessment Limited Soil Sampling
Vacant Land Property
(APNs): 477-060-05 & 477-060-06, Fresno, CA

FIGURES


Sampling Location Map
SS-3
SS-5
APN 477-060-06
APN 477-060-05
SS-4
SS-2
SS-6
SS-1
SHREENATH
INTERNATIONAL CONSULTANTS

NOTE

This map is for Assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.

SUBDIVIDED LAND IN POR. SEC. 17, T.14S., R.20E., M.D.B. & M.

Tax Rate Area

477-06

Fresno Colony, Plat Bk. 2, Pg. 8

Assessor's Map Bk. 477 - Pg. 06
County of Fresno, Calif.

NOTE - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

08-23-2014 DK 1/8

Report of Environmental Site Assessment Limited Soil Sampling
Vacant Land Property
(APNs): 477-060-05 & 477-060-06, Fresno, CA

LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORD

Orange Coast Analytical, Inc.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

3002 Dow Suite 532 Tustin, CA 92780

(714) 832-0064

Laboratory Certification (ELAP) No.:2576
Expiration Date: 2023
Los Angeles County Sanitation District Lab ID# 10206

Laboratory Director's Name:
Mark Noorani

Client:	Shreenath International
Laboratory Reference:	SHR 27826
Project Name:	Vacant Land-Church Ave, Fresno, CA
Project Number:	477-060-05 & 477-060-06
Date Received:	4/5/2023
Date Reported:	4/12/2023
Chain of Custody Received:	☑
Analytical Method:	8015B, 8081A, 8260B, 6010B,

Mark Noorani, Laboratory Director

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at -0ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #4-12 inch	27826-001	4/5/2023	4/3/2023	Soil
Soil Sample #5 @ 12 inch	27826-002	4/5/2023	4/3/2023	Soil
Soil Sample #5 @ 5ft	27826-003	4/5/2023	4/3/2023	Soil
Soil Sample #5:10ft	27826-004	4/5/2023	4/3/2023	Soil
Soil Sample #6:12 inch	27826-005	4/5/2023	4/3/2023	Soil
Soil Sample #6:4ft	27826-006	4/5/2023	4/3/2023	Soil
Soil Sample #6:8ft	27826-007	4/5/2023	4/3/2023	Soil
Soil Sample #1-9 inch	27826-008	4/5/2023	4/3/2023	Soil
Soil Sample #1 @ 5ft	27826-009	4/5/2023	4/3/2023	Soil
Soil Sample 1 @ 9ft	27826-010	4/5/2023	4/3/2023	Soil
Soil Sample #2:9 inch	27826-011	4/5/2023	4/3/2023	Soil
Soil Sample #2:4ft	27826-012	4/5/2023	4/3/2023	Soil
Soil Sample #2:9ft	27826-013	4/5/2023	4/3/2023	Soil
Soil Sample #3:12 inch	27826-014	4/5/2023	4/3/2023	Soil
Soil Sample #3:5ft	27826-015	4/5/2023	4/3/2023	Soil
Soil Sample #3:10ft	27826-016	4/5/2023	4/3/2023	Soil

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Extractable Fuel Hydrocarbons (EPA 8015B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #4-12 inch	27826-001	4/5/2023 15:55	4/3/2023 15:05	4/6/2023 15:00	4/11/2023 7:09	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	122
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #5 @ 12 inch	27826-002	4/5/2023 15:55	4/3/2023 15:29	4/6/2023 15:00	4/11/2023 7:52	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	114
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #5 @ 5ft	27826-003	4/5/2023 15:55	4/3/2023 16:11	4/6/2023 15:00	4/11/2023 8:34	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	114
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #6:12 inch	27826-005	4/5/2023 15:55	4/3/2023 17:08	4/6/2023 15:00	4/11/2023 9:16	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	111
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #6:4ft	27826-006	4/5/2023 15:55	4/3/2023 17:32	4/6/2023 15:00	4/11/2023 9:59	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	108
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Extractable Fuel Hydrocarbons (EPA 8015B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #1-9 inch	27826-008	4/5/2023 15:55	4/3/2023 8:03	4/6/2023 15:00	4/11/2023 10:38	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	105
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #1 @ 5ft	27826-009	4/5/2023 15:55	4/3/2023 8:33	4/6/2023 15:00	4/11/2023 10:59	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	109
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #2:9 inch	27826-011	4/5/2023 15:55	4/3/2023 10:08	4/6/2023 15:00	4/11/2023 11:21	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	124
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #2:4ft	27826-012	4/5/2023 15:55	4/3/2023 10:42	4/6/2023 15:00	4/11/2023 11:42	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	134
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #3:12 inch	27826-014	4/5/2023 15:55	4/3/2023 12:42	4/6/2023 15:00	4/11/2023 12:03	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	116
		* Acc Recovery:	40-160 %

Dilution Factor: 1
Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Extractable Fuel Hydrocarbons (EPA 8015B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #3:5ft	27826-015	4/5/2023 15:55	4/3/2023 13:39	4/6/2023 15:00	4/11/2023 12:24	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	127

Dilution Factor: 1
Data Qualifiers: None

* Acc Recovery: 40-160 %

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBLY0406232			4/6/2023 15:00	4/10/2023 20:19	Soil

ANALYTE	mg/kg	Surrogate:	% RC*
DROs	<10	Octacosane	108

Dilution Factor: 1
Data Qualifiers: None

* Acc Recovery: 40-160 %

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #4-12 inch	27826-001	4/5/2023 15:55	4/3/2023 15:05	4/6/2023 11:15	4/7/2023 14:45	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	85

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #5 @ 12 inch	27826-002	4/5/2023 15:55	4/3/2023 15:29	4/6/2023 11:15	4/7/2023 15:00	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	82

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #5 @ 5ft	27826-003	4/5/2023 15:55	4/3/2023 16:11	4/6/2023 11:15	4/7/2023 15:14	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	84

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #6:12 inch	27826-005	4/5/2023 15:55	4/3/2023 17:08	4/6/2023 11:15	4/7/2023 15:29	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	83

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #6:4ft	27826-006	4/5/2023 15:55	4/3/2023 17:32	4/6/2023 11:15	4/7/2023 15:44	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	89

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #1-9 inch	27826-008	4/5/2023 15:55	4/3/2023 8:03	4/6/2023 11:15	4/10/2023 11:01	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	79

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #1 @ 5ft	27826-009	4/5/2023 15:55	4/3/2023 8:33	4/6/2023 11:15	4/10/2023 11:16	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	79

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #2:9 inch	27826-011	4/5/2023 15:55	4/3/2023 10:08	4/6/2023 11:15	4/10/2023 11:30	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	87

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #2:4ft	27826-012	4/5/2023 15:55	4/3/2023 10:42	4/6/2023 11:15	4/10/2023 11:45	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	87

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #3:12 inch	27826-014	4/5/2023 15:55	4/3/2023 12:42	4/6/2023 11:15	4/10/2023 12:00	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	85

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #3:5ft	27826-015	4/5/2023 15:55	4/3/2023 13:39	4/6/2023 11:15	4/10/2023 12:14	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	73

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBBL0406231			4/6/2023 11:15	4/7/2023 11:07	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	83

* Acceptable Recovery: 35-130 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #4-12 inch	27826-001	4/5/2023 15:55	4/3/2023 15:05	4/6/2023 9:30	4/6/2023 13:05	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	89	65-130 %
Toluene-d8:	85	58-130 %
4-Bromofluorobenzene:	90	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #5 @ 12 inch	27826-002	4/5/2023 15:55	4/3/2023 15:29	4/6/2023 9:30	4/6/2023 13:26	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	91	65-130 %
Toluene-d8:	88	58-130 %
4-Bromofluorobenzene:	93	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #5 @ 5ft	27826-003	4/5/2023 15:55	4/3/2023 16:11	4/6/2023 9:30	4/6/2023 13:47	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	89	65-130 %
Toluene-d8:	85	58-130 %
4-Bromofluorobenzene:	90	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #6:12 inch	27826-005	4/5/2023 15:55	4/3/2023 17:08	4/6/2023 9:30	4/6/2023 14:07	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	90	65-130 %
Toluene-d8:	84	58-130 %
4-Bromofluorobenzene:	88	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #6:4ft	27826-006	4/5/2023 15:55	4/3/2023 17:32	4/6/2023 9:30	4/6/2023 14:27	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	90	65-130 %
Toluene-d8:	83	58-130 %
4-Bromofluorobenzene:	86	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #1-9 inch	27826-008	4/5/2023 15:55	4/3/2023 8:03	4/6/2023 9:30	4/6/2023 14:47	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	89	65-130 %
Toluene-d8:	83	58-130 %
4-Bromofluorobenzene:	87	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #1 @ 5ft	27826-009	4/5/2023 15:55	4/3/2023 8:33	4/6/2023 9:30	4/6/2023 15:08	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	89	65-130 %
Toluene-d8:	81	58-130 %
4-Bromofluorobenzene:	83	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #2:9 inch	27826-011	4/5/2023 15:55	4/3/2023 10:08	4/6/2023 9:30	4/6/2023 15:27	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	87	65-130 %
Toluene-d8:	81	58-130 %
4-Bromofluorobenzene:	81	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #2:4ft	27826-012	4/5/2023 15:55	4/3/2023 10:42	4/6/2023 9:30	4/6/2023 15:47	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	92	65-130 %
Toluene-d8:	87	58-130 %
4-Bromofluorobenzene:	93	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #3:12 inch	27826-014	4/5/2023 15:55	4/3/2023 12:42	4/6/2023 9:30	4/6/2023 16:07	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	88	65-130 %
Toluene-d8:	81	58-130 %
4-Bromofluorobenzene:	81	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Sample #3:5ft	27826-015	4/5/2023 15:55	4/3/2023 13:39	4/6/2023 9:30	4/6/2023 16:27	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	90	65-130 %
Toluene-d8:	87	58-130 %
4-Bromofluorobenzene:	93	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBHT0406231			4/6/2023 9:30	4/6/2023 11:01	Soil

ANALYTE	CAS #	µg/kg	ANALYTE	CAS #	µg/kg
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	m- & p-Xylenes	179601-23-1	<5.0
1,2-Dichloroethane	107-06-2	<2.5	o-Xylene	95-47-6	<2.5
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	90	65-130 %
Toluene-d8:	85	58-130 %
4-Bromofluorobenzene:	86	40-135 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Metals

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #4-12 inch	27826-001	4/5/2023 15:55	4/3/2023 15:05	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 15:47	--	1
Lead	6010B	19	mg/kg	04/06/23 16:00	04/10/23 15:47	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #5 @ 12 inch	27826-002	4/5/2023 15:55	4/3/2023 15:29	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 15:59	--	1
Lead	6010B	6.0	mg/kg	04/06/23 16:00	04/10/23 15:59	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #5 @ 5ft	27826-003	4/5/2023 15:55	4/3/2023 16:11	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:05	--	1
Lead	6010B	2.4	mg/kg	04/06/23 16:00	04/10/23 16:05	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #6:12 inch	27826-005	4/5/2023 15:55	4/3/2023 17:08	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:07	--	1
Lead	6010B	7.0	mg/kg	04/06/23 16:00	04/10/23 16:07	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #6:4ft	27826-006	4/5/2023 15:55	4/3/2023 17:32	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:09	--	1
Lead	6010B	2.2	mg/kg	04/06/23 16:00	04/10/23 16:09	--	1

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Metals

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #1-9 inch	27826-008	4/5/2023 15:55	4/3/2023 8:03	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:11	--	1
Lead	6010B	7.8	mg/kg	04/06/23 16:00	04/10/23 16:11	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #1 @ 5ft	27826-009	4/5/2023 15:55	4/3/2023 8:33	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:13	--	1
Lead	6010B	2.7	mg/kg	04/06/23 16:00	04/10/23 16:13	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #2:9 inch	27826-011	4/5/2023 15:55	4/3/2023 10:08	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:15	--	1
Lead	6010B	2.6	mg/kg	04/06/23 16:00	04/10/23 16:15	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #2:4ft	27826-012	4/5/2023 15:55	4/3/2023 10:42	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:17	--	1
Lead	6010B	2.2	mg/kg	04/06/23 16:00	04/10/23 16:17	--	1

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #3:12 inch	27826-014	4/5/2023 15:55	4/3/2023 12:42	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:19	--	1
Lead	6010B	23	mg/kg	04/06/23 16:00	04/10/23 16:19	--	1

Mr. Deval Shah
Shreenath International
P.O. Box 1807
Walnut, CA, 91788

Lab Reference #: SHR 27826
Project Name: Vacant Land-Church Ave, Fresno, CA
Project #: 477-060-05 & 477-060-06

Metals

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Sample #3:5ft	27826-015	4/5/2023 15:55	4/3/2023 13:39	Soil

ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 16:21	--	1
Lead	6010B	4.4	mg/kg	04/06/23 16:00	04/10/23 16:21	--	1

Method Blank — Soil

MB ID	ANALYTE	EPA Method	Result	Units	Date Extracted	Date Analyzed	Qual	DF
MBIR0406232	Arsenic	6010B	<2.0	mg/kg	04/06/23 16:00	04/10/23 15:41	--	1
MBIR0406232	Lead	6010B	<0.80	mg/kg	04/06/23 16:00	04/10/23 15:41	--	1

QA/QC Report
for
Extactable Fuel Hydrocarbons (EPA 8015B/8015M)
Reporting units: ppm

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 4/6/2023 15:00
Date of Analysis: 4/10/2023 22:05
Dup Date of Analysis: 4/10/2023 22:27
Laboratory Sample #: 27812-001
MS/MSD Qualifiers: None
Reference #: SHR 27826

Analyte	R	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
EFH as Diesel	11.0	1000	1560	1450	155	144	7	8-193	20	☐

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Octacosane	154	142	☐

LCS	LCSD	Qual
111	102	☐

ACP % RC
40-160

Laboratory Control Sample

Date of Extraction: 4/6/2023 15:00
Date of Analysis: 4/10/2023 21:01
Dup Date of Analysis: 4/10/2023 21:22
Laboratory Sample #: LY0406232
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
EFH as Diesel	1000	1060	1020	106	102	4	17-180	42	☐

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 4/6/2023 11:15
Date of Analysis: 4/7/2023 13:18
Dup Date of Analysis: 4/7/2023 13:32
Laboratory Sample #: 27827-003
MS/MSD Qualifiers: None
Reference #: SHR 27826

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Aldrin	0.00	20.0	13.4	14.4	67	72	7	14-130	28	--
alpha-BHC	0.00	20.0	13.0	14.0	65	70	7	13-130	29	--
beta-BHC	0.00	20.0	14.3	15.5	72	77	8	13-140	26	--
gamma-BHC (Lindane)	0.00	20.0	13.1	14.2	66	71	8	15-130	26	--
4,4'-DDD	0.00	20.0	15.7	16.5	78	82	5	18-169	20	--
4,4'-DDE	0.00	20.0	16.3	17.8	81	89	9	30-165	20	--
4,4'-DDT	0.00	20.0	18.3	20.3	91	101	10	34-170	20	--
delta-BHC	0.00	20.0	15.7	16.9	78	84	7	18-143	27	--
Dieldrin	0.00	20.0	15.0	16.2	75	81	8	24-147	20	--
Endosulfan I	0.00	20.0	15.5	16.7	77	84	7	13-158	23	--
Endosulfan II	0.00	20.0	15.4	16.4	77	82	6	19-143	29	--
Endosulfan sulfate	0.00	20.0	15.9	16.8	79	84	6	D-158	59	--
Endrin	0.00	20.0	15.0	15.8	75	79	5	26-156	25	--
Endrin Aldehyde	0.00	20.0	11.5	12.9	57	64	11	D-148	59	--
Endrin ketone	0.00	20.0	14.2	15.3	71	76	7	D-147	36	--
Heptachlor	0.00	20.0	13.1	14.1	66	71	7	10-130	30	--
Heptachlor epoxide	0.00	20.0	13.7	14.8	69	74	8	19-134	24	--
Methoxychlor	0.00	20.0	18.4	19.3	92	96	5	12-165	32	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Decachlorobiphenyl	86	96	☐

LCS	LCSD	Qual
89	91	☐

ACP % RC
35-130

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 4/6/2023 11:15
Date of Analysis: 4/7/2023 11:21
Dup Date of Analysis: 4/7/2023 11:36
Laboratory Sample #: BL0406231
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Aldrin	20.0	13.8	14.5	69	73	5	7-130	31	--
alpha-BHC	20.0	13.4	14.4	67	72	7	10-130	25	--
beta-BHC	20.0	13.5	15.7	68	78	15	12-137	23	--
gamma-BHC (Lindane)	20.0	12.9	14.3	64	72	10	14-130	22	--
4,4'-DDD	20.0	15.0	16.7	75	84	11	25-161	20	--
4,4'-DDE	20.0	16.7	17.5	84	88	5	20-154	20	--

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)

Reporting Units: ppb

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
4,4'-DDT	20.0	17.7	18.7	89	94	5	26-164	20	--
delta-BHC	20.0	15.0	16.6	75	83	10	17-137	24	--
Dieldrin	20.0	14.5	16.0	73	80	10	18-138	21	--
Endosulfan I	20.0	15.8	16.5	79	82	4	14-142	23	--
Endosulfan II	20.0	14.9	15.8	75	79	6	18-148	20	--
Endosulfan sulfate	20.0	15.5	16.4	77	82	6	11-159	32	--
Endrin	20.0	14.7	16.2	74	81	10	22-141	21	--
Endrin Aldehyde	20.0	10.5	12.1	52	61	14	2-140	40	--
Endrin ketone	20.0	13.6	15.2	68	76	11	12-145	22	--
Heptachlor	20.0	12.9	14.2	64	71	10	5-130	29	--
Heptachlor epoxide	20.0	13.9	14.6	69	73	5	14-130	22	--
Methoxychlor	20.0	17.8	17.6	89	88	1	29-157	20	--

QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 4/6/2023 9:30
Date of Analysis: 4/6/2023 12:24
Dup Date of Analysis: 4/6/2023 12:45
Laboratory Sample #: 27826-001
MS/MSD Qualifiers: None
Reference #: SHR 27826

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	0.00	10.0	9.86	9.91	99	99	1	70-138	20	--
Chlorobenzene	0.00	10.0	10.0	10.0	100	100	0	70-132	20	--
1,1-Dichloroethene	0.00	10.0	7.71	7.27	77	73	6	46-130	20	--
Toluene	0.00	10.0	9.50	9.55	95	96	1	70-130	20	--
Trichloroethene	0.00	10.0	9.60	9.45	96	94	2	70-135	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Dibromofluoromethane	88	89	☐	90	88	☐	65-130
Toluene-d8	84	84	☐	85	83	☐	58-130
4-Bromofluorobenzene	88	85	☐	90	89	☐	40-135

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 4/6/2023 9:30
Date of Analysis: 4/6/2023 11:42
Dup Date of Analysis: 4/6/2023 12:03
Laboratory Sample #: HT0406231
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	10.0	9.66	9.06	97	91	6	70-134	20	--
Chlorobenzene	10.0	9.72	9.11	97	91	6	70-130	20	--
1,1-Dichloroethene	10.0	7.72	7.12	77	71	8	48-130	20	--
Toluene	10.0	9.65	8.77	96	88	10	70-130	20	--
Trichloroethene	10.0	9.44	8.83	94	88	7	70-132	20	--

QA/QC Report
for
Metals

Reference #: SHR 27826 Reporting units: ppm

Matrix Spike (MS) / Matrix Spike Duplicate (MSD) **6010B**

Laboratory Sample #: 27826-001 **Date of Extraction:** 04/06/23 16:00

Analyte	MS Date of Analysis	MSD Date of Analysis	R1	SPC CONC	MS	MSD	% MS	% MSD	RPD	ACP %MS	ACP RPD	Qualifiers
Arsenic	04/10/23 15:50	04/10/23 15:52	0.00	20.0	16.2	17.5	81	88	8	75-125	20	--
Lead	04/10/23 15:50	04/10/23 15:52	19.0	20.0	33.4	35.0	72	80	5	75-125	20	M3,

Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD) **6010B**

Laboratory Sample #: IR0406232 **Date of Extraction:** 04/06/23 16:00

Analyte	LCS Date of Analysis	LCSD Date of Analysis		SPC CONC	LCS	LCSD	% LCS	% LCSD	RPD	ACP %LCS	ACP RPD	Qualifiers
Arsenic	04/10/23 15:43	04/10/23 15:45	--	20.0	19.3	19.2	96	96	1	80-120	20	--
Lead	04/10/23 15:43	04/10/23 15:45	--	20.0	20.2	19.9	101	99	1	80-120	20	--

Data Qualifier Definitions

Qualifier

M3 = The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The associated blank spike recovery was acceptable.

27826-001	6010B	Lead	MS

Definition of terms:

R	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

Analysis Request & Chain of Custody Record

Lab Job No.: 22826 Page: 1 of 2

ORANGE COAST ANALYTICAL, INC.

3002 Dow Avenue, Suite 532
Tustin, CA 92780
Phone: (714) 832-0064 Fax: (714) 832-0067

www.ocalab.com

4620 East Elwood Street, Suite 4
Phoenix, AZ 85040
Phone: (480) 736-0960 Fax: (480) 736-0970

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Shreenath International Consultants	Project Name:	Vacant Land-Church Ave, Fresno, CA
Send Report To:	Deval Shah, MS, EIT	Project Number:	APNs: 477-060-05 & 477-060-06
Email:		PO #:	SIC2023.03.04.SherSingh
Address:	P. O. Box 1807 Walnut, CA 91788	Address (City / State):	East half of Lot 14 of Fresno Colony
		EDD Required:	The South 1/2 of the West 1/2 of Lot 14
Phone:	951-313-0069 Fax:	Sampled By:	Deval Shah / Andy

REQUESTED TURN-AROUND-TIME
Standard: Standard
72 Hour:
48 Hour:
24 Hour:

	Customer Sample IDs	No. of Containers	Sample Date	Sample Time	Sample Matrix	Container Type	8081A	8260B	6010 Lead / Argon ICP	8015B - d							REMARKS / INSTRUCTIONS
1	Soil Sample# 4-12 inch	1	04/03/23	3:05 PM	Soil	Glass	X	X	X	X							477-060-05
2	Soil Sample # 5 @ 12 inch	1	04/03/23	3:29 PM	Soil	Glass	X	X	X	X							477-060-05
3	Soil Sample#5 @5 ft	1	04/03/23	4:011 PM	Soil	Glass	X	X	X	X							477-060-05
4	Soil Sample #5 : 10 ft	1	04/03/23	4:32 PM	Soil	Glass											477-060-05
5	Soil Sample #6 : 12 inch	1	04/03/23	5:08 PM	Soil	Glass	X	X	X	X							477-060-05
6	Soil Sample #6: 4 ft	1	04/03/23	5:32 PM	Soil	Glass	X	X	X	X							477-060-05
7	Soil Sample #6: 8 ft	1	04/03/23	6:08 PM	Soil	Glass	X	X	X	X							477-060-05
																	* Hold samples above, SRT

No. of Samples: 16 Method of Shipment: Drop-off

Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By: Deval Shah	Date: 04/05/23 Time: 3:55	Received By:	Date: Time:
Company: Shreenath Intern. P.M.		Company:	
Relinquished By:	Date: Time:	Received By:	Date: Time:
Company:		Company:	
Relinquished By:	Date: Time:	Received For OCA By:	Date: 4/5/23 Time: 1555
Company:		Company: OCACA	

Sample Matrix: DW - Drinking Water; GW - Groundwater; AQ - Aqueous; WW - Wastewater; SS - Soil / Solid; SW - Stormwater; OT - Other

Sample Integrity: 0.0-0°C Intact: ____ On Ice: (Yes) No @ IR3 °C

Analysis Request & Chain of Custody Record

Lab Job No.: [illegible] Page: 2 of 2

ORANGE COAST ANALYTICAL, INC.

www.ocalab.com

3002 Dow Avenue, Suite 532
Tustin, CA 92780
Phone: (714) 832-0064 Fax: (714) 832-0067

4620 East Elwood Street, Suite 4
Phoenix, AZ 85040
Phone: (480) 736-0960 Fax: (480) 736-0970

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Shreenath International Consultants	Project Name:	Vacant Land-Church Ave, Fresno, CA
Send Report To:	Deval Shah, MS, EIT	Project Number:	APNs: 477-060-05 & 477-060-06
Email:	[illegible]	PO #:	SIC2023.03.04.SherSingh
Address:	P. O. Box 1807 Walnut, CA 91788	Address (City / State):	East half of Lot 14 of Fresno Colony
		EDD Required:	The South 1/2 of the West 1/2 of Lot 14
Phone:	951-313-0069 Fax:	Sampled By:	Deval Shah / Andy

REQUESTED TURN-AROUND-TIME

Standard: Standard
72 Hour: ____
48 Hour: ____
24 Hour: ____

ANALYSIS REQUEST / PRESERVATION (6010: Lead / Arsenic)

	Customer Sample IDs	No. of Containers	Sample Date	Sample Time	Sample Matrix	Container Type	8081A	8260B	6010	8015B							REMARKS / INSTRUCTIONS
8	Soil Sample# 1-9 inch	1	04/03/23	8:03 AM	Soil	Glass	X	X	X	X							477-060-06
9	Soil Sample # 1 @ 5 ft	1	04/03/23	8:33 AM	Soil	Glass	X	X	X	X							477-060-06
10	Soil Sample 1 @ 9 ft	1	04/03/23	9:14 AM	Soil	Glass											477-060-06
11	Soil Sample #2 : 9 inch	1	04/03/23	10:08 AM	Soil	Glass	X	X	X	X							477-060-06
12	Soil Sample #2 : 4 ft	1	04/03/23	10:42 AM	Soil	Glass	X	X	X	X							477-060-06
13	Soil Sample #2 : 9 ft –	1	04/03/23	11:22 AM	Soil	Glass											477-060-06
14	Soil Sample #3: 12 inch	1	04/03/23	12:42 PM	Soil	Glass	X	X	X	X							477-060-06
15	Soil Sample #3: 5 ft	1	04/03/23	1:39 PM	Soil	Glass	X	X	X	X							477-060-06
16	Soil Sample #3: 10 ft –	1	04/03/23	2:41 PM	Soil	Glass	X	X	X	X							477-060-06

No. of Samples: 16 Method of Shipment: Drop - Off. Preservative: 1 = Ice (circled) 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By: Deval Shah Date: 04/05/2023 Time: 3:55 pm Company: Shreenath International	Received By: Date: Time: Company:	Sample Matrix:	DW - Drinking Water GW - Groundwater AQ - Aqueous WW - Wastewater SS - Soil / Solid (circled) SW - Stormwater OT - Other
Relinquished By: Date: Time: Company:	Received By: Date: Time: Company:		
Relinquished By: Date: Time: Company:	Received For OCA By: [signature] Date: 4/5/23 Time: 1555 Company: OCA	Sample Integrity: 0 +0.0°C	Intact: ____ On Ice: Yes (circled) / No @ ____ °C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, by Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup samples upon completion of all analyses.

Sample Receipt Report

Laboratory Reference: **SHR 27826** Logged in by: MM

Received:	04/05/23 15:55	Company Name:	Shreenath International
Method of Shipment:	Hand Delivered	Project Manager:	Mr. Deval Shah
Shipping Container:	Cooler	Project Name:	Vacant Land-Church Ave, Fresno, CA
# Shipping Containers:	1	Project #:	477-060-05 & 477-060-06

Sample Quantity
16 Soil

Chain of Custody		Complete ☑	Incomplete ☐	None ☐
Samples On Ice		Yes, Wet ☑	Yes, Blue ☐	No ☐
Observed Temp. (°C):	0	Thermometer ID: IR#3	Adjusted Temp.:	0+(-0)=(-0)
Shipping Intact		Yes ☐	N/A ☑	No ☐
Shipping Custody Seals Intact		Yes ☐	N/A ☑	No ☐
Samples Intact		Yes ☑		No ☐
Sample Custody Seals Intact		Yes ☐	N/A ☑	No ☐
Custody Seals Signed & Dated		Yes ☐	N/A ☑	No ☐
Proper Test Containers		Yes ☑		No ☐
Proper Test Preservations		Yes ☑		No ☐
Samples Within Hold Times		Yes ☑		No ☐
VOAs Have Zero Headspace		Yes ☐	N/A ☑	No ☐
Sample Labels		Complete ☑	Incomplete ☐	None ☐
Sample Information Matches COC		Yes ☑	N/A ☐	No ☐

Notes

Client Notified _____ By _____ On _____