Draft Environmental Impact Report

Woodlake Holdings Industrial Park

Prepared for:

CITY OF WOODLAKE

350 N. Valencia Ave
Woodlake, CA 93286
(559) 564-8055
Contact: Rebecca Griswold

Prepared by:

Crawford & Bowen Planning, Inc.
113 N. Church Street, Suite 310
Visalia, CA 93291
(559) 840-4414
Contact: Emily Bowen, LEED AP

MAY 2023

State Clearinghouse Number: 2022040640

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE

SUMMARY

EXECUTIVE SUMMARY

Introduction

This Draft Environmental Impact Report (Draft EIR or EIR) has been prepared consistent with the California Environmental Quality Act (CEQA) for the proposed Woodlake Holdings Industrial Park Project. Its intent is to inform the public, regulatory agencies and the City of Woodlake (City) decision makers of the potential environmental impacts the proposed Project would have on environmental factors as specified in the CEQA Guidelines. This Draft EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts to the environmental resources identified in the CEQA Guidelines environmental checklist. The City of Woodlake is the "Lead Agency" pursuant to CEQA and is responsible for the preparation and distribution of the Draft EIR.

CEQA Process

The City of Woodlake circulated an Initial Study (IS) and Notice of Preparation (NOP) (referred to collectively as "IS/NOP") of the EIR for the proposed Project from May 4, 2022 to June 3, 2022 to trustee and responsible agencies, the State Clearinghouse (State Clearinghouse #2022040640), and the public. Following publication of the original NOP, changes were made to the proposed Project that consisted of an increase in project acreage and a change in Land Use Designation. The IS/NOP was recirculated to the public, trustee and responsible agencies, and the State Clearinghouse from October 12, 2022 to November 14, 2022 The next step in the process is circulation of this Draft EIR which will be distributed to the public for review and comment for at least 45 days. This EIR is organized as follows:

Executive Summary: Summarizes the analysis contained in the EIR.

Chapter 1 – Introduction: Provides a brief introduction to CEQA and the scope/contents of the DEIR.

Chapter 2 – Project Description: Describes the Project in detail. Includes Project location, objectives, environmental setting and regulatory context.

Chapter 3 – Environmental Analysis: Contains the CEQA checklist. Each topic discusses environmental/regulatory setting, Project impact analysis, mitigation measures and conclusions.

Chapter 4 – Alternatives: Describes and evaluates alternatives to the Project. The proposed Project is compared to each alternatives and potential environmental impacts are analyzed.

Chapter 5 – Other CEQA Sections: Describes other required sections such as environmental effects that cannot be avoided, social effects, growth inducement, etc.

Appendices: Following the text of the Draft EIR, several appendices and technical studies have been included as reference material.

Project Location

The proposed Project is located on approximately 113-acres along the western edge of the City of Woodlake in Tulare County and is located on the east side of Blair Road, south of Ropes Avenue. The Project is on assessor parcel numbers 060-170-105, -106, 060-160-044 and -059. See Figure 1 – Regional Location, Figure 2 – Site Aerial, Figure 3 – Tentative Parcel Map, and Figure 4 – Site Plan in Chapter Two – Project Description. The site lies within Section 36, Township 17 South, Range 26 East, Mount Diablo Base and Meridian of the Woodlake USGS 7.5 minute quadrangle.

Project Description Summary

The Project Applicant intends to expand an existing industrial area by developing a 113-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, distribution, testing and retail, which is allowable with a Conditional Use Permit.

Project Components

- Constructing and operating an industrial park with seventeen buildings ranging in size of 75,000 sf to 87,000 sf for a total of up to 1,500,000 sf of industrial space.
- Constructing internal access roads, 700 parking spaces and associated landscaping, as detailed on Figure 4 – Site Plan.
- Connecting the Project to the existing City water, wastewater, and storm drain systems. Any grow operations will utilize the existing well connection for water.

- Installation of perimeter security, including lighting and an alarm system, in accordance with Chapter 5.48 of the Woodlake Municipal Code.
- Constructing three new ponding basins of 7.93 Ac ft, 8.42 Ac ft, and 16.42 Ac ft.

Construction will begin in 2023 and will continue to buildout as the market demands.

Project Operations

The site will operate from 7am to 6pm Monday through Friday. The facility's electrical needs will continue to be serviced by existing Southern California Edison connections that have been assessed as sufficient for full operation of allowable industrial uses, including indoor/mixed light cannabis cultivation.

Once a business is established, water needs for the grow houses will be serviced by existing deep-water wells while water needs for the distribution facilities and sanitary facilities will be provided by the City. Stormwater will be kept on-site and wastewater will be connected to the City's existing system.

To accommodate this Project, the following entitlements are required:

- General Plan Amendment to change the designation of 61 acres from Urban Reserve to Industrial
- Conditional Use Permit to operate under a Cannabis Business License (Cultivation, Manufacturing, Retail, Testing and Distribution) for cannabis businesses
- Lot line adjustment as per the City's requirements
- Tentative Parcel Map to divide the existing parcel into 21 separate parcels (see Figure 3)

Refer to Chapter Two – Project Description for the full description of the Project.

Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the City of Woodlake's Project objectives:

- To create an economically sustainable industrial complex that will provide business and job opportunities within the City of Woodlake.
- To diversify the City of Woodlake's economic and general commercial base
- To ensure the provision of services and facilities needed to accommodate planned population densities in and around the City of Woodlake.

Summary of Environmental Impacts

As described in Chapter 3, it was determined that all impacts were either less than significant, or could be mitigated to a less than significant level with the exception of the following:

- Agriculture - Loss of Farmland (project and cumulative level)

Even with the mitigation measures described in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, of this Draft EIR, impacts in these issue areas would be significant and unavoidable. Mitigation measures are listed in Table ES-1, Mitigation Monitoring and Reporting Program.

Summary of Project Alternatives

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed Project that could feasibly attain most of the objectives of the proposed Project. This EIR analyzed the following alternatives:

- **No Project Alternative:** Under this Alternative, the Project would not be constructed and the site would remain as agricultural land.
- **Alternate Locations Alternative:** Under this Alternative, the Project would be developed on a different site of similar size and scale.
- **Reduced (50%) Project Alternative:** Under this Alternative, the site would be developed with reduced building square footage. This alternative would keep the same acreage, but would reduce the square footage of industrial space from 1,500,000 to 750,000. All other project components would remain (ponding basins, etc.).

See Chapter 4 – Alternatives for a full description of potential environmental impacts associated with each alternative.

Mitigation Monitoring and Reporting Program

State law requires that a public agency adopt a monitoring program for mitigation measures that have been incorporated into the approved Project to reduce or avoid significant effects on the environment. The purpose of the monitoring program is to ensure compliance with environmental mitigation during Project implementation and operation. Since there are potentially significant impacts requiring mitigation associated with the Project, a Mitigation Monitoring Program will be included in the Project's Final EIR and is included herein on the following pages.

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
Biological Resources				
BIO – 1: Protect San Joaquin kit fox To protect San Joaquin kit fox, a qualified biologist shall conduct a pre-construction survey within 30 days prior to the start of ground-disturbing activities to identify potential dens (burrows large than 4 inches in diameter) in suitable land cover types on and within 250 feet of the Project site. If potential dens for San Joaquin kit fox are present, their disturbance and destruction shall be avoided. Exclusion zones shall be implemented based on the type of den and current use: Potential Den—50 feet; Known Den—100 feet; Natal or Pupping Den—to be determined on a case-by-case basis in coordination with USFWS and CDFW. All pipes greater than 4 inches in diameter stored on the construction site shall be capped, and exit ramps shall be installed in trenches and other excavations to avoid direct mortality. When possible, construction shall be conducted outside of the breeding season from October 1 to November 30. If den avoidance is not possible, procedures in *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior or During Ground Disturbance* (USFWS 2011) shall be followed.	Project Applicant	Prior to issuance of grading or building permits	City of Woodlake and CDFW	
BIO – 2: 1. Conduct focused burrowing owl surveys to assess the presence/absence of burrowing owl in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1997). These involve conducting four pre-construction survey visits.	Project Applicant	Prior to issuance of grading or building permits	City of Woodlake and CDFW	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, guano, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or passive relocation shall be implemented in consultation with the CDFW.				
BIO -3: Protect Roosting Pallid Bat and Western Mastiff Bats A pre-construction clearance survey shall be conducted by a qualified biologist to ensure that no roosting pallid bats will be disturbed during the implementation of the Project. A preconstruction clearance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential roosting habitat in and immediately adjacent to the impact areas. If an active roost is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the roost. If work cannot proceed without disturbing the roosting bats, work may need to be halted or redirected to other areas until the roost is no longer in use.	Project Applicant	Prior to issuance of grading or building permits	City of Woodlake and CDFW	
BIO – 4: Protect Nesting Birds: 1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. 2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A preconstruction survey shall	Project Applicant	Prior to issuance of grading or building permits	City of Woodlake and CDFW	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.				
Cultural Resources				
CUL-1: Should evidence of prehistoric archeological resources be discovered during construction, the contractor shall halt all work within 25 feet of the find and the resource shall be evaluated by a qualified archaeologist. If evidence of any archaeological, cultural, and/or historical deposits is found, hand excavation and/or mechanical excavation shall proceed to evaluate the deposits for determination of significance as defined by the CEQA guidelines. The archaeologist shall submit reports, to the satisfaction of the City of Woodlake, describing the testing program and subsequent results. These reports shall identify any program mitigation that the project proponent shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources).	Project Applicant	During construction	Construction contractor / City of Woodlake	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
CUL-2: In order to ensure that the proposed project does not impact buried human remains during project construction, the project proponent shall be responsible for on-going monitoring of project construction. Prior to the issuance of any grading permit, the project proponent shall provide the City of Woodlake with documentation identifying construction personnel that will be responsible for on-site monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be halted until the Tulare County Coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e)	Project Applicant	During construction	City of Woodlake	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
if any of the circumstances established by that provision become applicable.				
Transportation				
TRA-1: Intersection improvements needed by the year 2042 to maintain or improve the operational level of service of the street system in the vicinity of the project is shown below: • Intersection: Blair Rd & Naranjo Blvd (SR 216) • Total Improvements Required by 2042: Add Signal • Project % Share for Local Mitigation: 61.25%	Project Applicant and City of Woodlake	Prior to issuance of grading permits	City of Woodlake	
TRA-2: The Project developer shall pay a total of $70,020 in improvement fees, prior to issuance of building permits, to the City of Woodlake to improve the ramps and sidewalks at the following locations: ○ Four (4) ADA compliant curb ramps at Acacia Street & W Ropes Avenue ○ Four (4) ADA compliant curb ramps at S Palm Street & W Ropes Avenue ○ Two (2) ADA compliant curb ramps at S Pepper Street & Ropes Avenue ○ Four (4) ADA compliant curb ramps at S Acacia Street & W Bravo Avenue	Project Applicant	Prior to issuance of building permits	City of Woodlake	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
○ 295' of sidewalk on the south side of W Ropes Avenue between Mulberry Street & Acacia St ○ 305' of sidewalk on the north side of W Ropes Avenue between S Pepper Street & S Palm Street ○ 285' of sidewalk on the south side of W Ropes Avenue between S Acacia Street & S Palm Street				

Chapter 1

INTRODUCTION

Chapter 1 – INTRODUCTION

This draft Environmental Impact Report (EIR) has been prepared on behalf of the City of Woodlake (City) in accordance with the California Environmental Quality Act (CEQA). This chapter outlines the purpose of and overall approach to the preparation of the EIR for the construction and operation of the Woodlake Holdings Industrial Park (Project). The proposed Project is more fully described in Chapter Two – Project Description.

An EIR responds to the requirements of CEQA as set forth in Sections 15126, 15175, and 15176 of the CEQA Guidelines. It is the intent of this EIR to provide the City of Woodlake, decision makers, and the general public with the relevant environmental information to use in considering the required approval for the proposed Project. The City will use this EIR for the discretionary approvals of entitlements required to develop the proposed Project.

1.1 Purpose of EIR

The City of Woodlake, as Lead Agency, determined that the proposed activities constitute a “project” within the definition of CEQA. The preparation of an EIR is required by CEQA prior to approving any project that may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

This Draft EIR has been prepared according to CEQA requirements to evaluate the potential environmental impacts associated with the implementation of the proposed Project. The Draft EIR also discusses alternatives to the Project, and proposes mitigation measures that will offset, minimize, or otherwise avoid significant environmental impacts. This Draft EIR has been prepared in accordance with CEQA, California Resources Code Section 21000 et seq.; the Guidelines for the California Environmental Quality Act (California Code of Regulations, Title 14, Chapter 3); and the rules, regulations, and procedures for implementing CEQA as adopted by the City of Woodlake.

An EIR must disclose the expected direct and indirect environmental impacts associated with a project, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed Project that could reduce or avoid its adverse environmental impacts.

CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development.

1.2 Type of EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project-level EIR pursuant to CEQA Guidelines Section 15161. A Project-level EIR is described in State CEQA Guidelines § 15161 as: "The most common type of EIR (which) examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation." The project-level analysis considers the broad environmental effects of a proposed project.

1.3 Intended Uses of the EIR

The City of Woodlake, as the Lead Agency, has prepared this EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from implementation of the proposed Project. The environmental review process enables interested parties to evaluate the proposed project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the Project. This EIR may also be used by other agencies within the area, including the San Joaquin Valley Air Pollution Control District, which may use this EIR during the permitting process.

1.4 Known Responsible and Trustee Agencies

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). The Project may require permits and approvals from Trustee and Responsible Agencies, which may include the following:

- California Department of Cannabis Control (CalCannabis)
- Regional (Central Valley) Water Quality Control Board (RWQCB)
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- California Native American Heritage Commission
- California Department of Health

1.5 Environmental Review Process

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

Initial Study and Notice of Preparation

The City of Woodlake circulated an Initial Study (IS) and Notice of Preparation (NOP) (referred to collectively as "IS/NOP") of the EIR for the proposed Project from May 4, 2022 to June 3, 2022 to trustee and responsible agencies, the State Clearinghouse (State Clearinghouse #2022040640), and the public. Following publication of the original NOP, changes were made to the proposed Project that consisted of an increase in project acreage and a change in Land Use Designation. The IS/NOP was recirculated to the public, trustee and responsible agencies, and the State Clearinghouse from October 12, 2022 to November 14, 2022 (refer to Appendix A).

The IS/NOP determined the Project could have potentially significant impacts in the areas of agricultural resources, air quality, energy, greenhouse gas emissions and transportation. This EIR concentrates on the potentially significant impacts of the project on five environmental issue areas: agricultural resources, air quality, energy, greenhouse gas emissions and transportation. All other impact areas were determined to either have no impact or have a less than significant impact (with or without mitigation). This EIR references the Initial Study prepared for the project for all other areas of impact analysis not provided in this EIR (see Appendix A).

Three agency comments on the IS/NOP related to the EIR analysis were presented or submitted during the review period. The IS/NOP and written comments provided to the City during the 30-day public review period for the IS/NOP are presented in Appendix A. The letters are summarized as follows:

1. **California Native American Heritage Commission –** Provided regulations pertaining to AB 52 and SB 18.
2. **California Department of Conservation – Division of Land Resource Protection:** Provided regulations pertaining to conversion of farmland to urban uses.
3. **California Department of Cannabis Control –** Provided information relating to role as Responsible Agency and to cannabis regulations. Also provided comments requesting project description details and general analysis requirements, in addition to a detailed table of specific comments.

Draft EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of the project's direct and indirect impacts on the environment, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR also identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the IS/NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Woodlake will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

Public Notice/Public Review

Concurrent with the NOC, the City of Woodlake will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA requirements, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Rebecca Griswold, Community Services Director
City of Woodlake
350 N. Valencia Avenue
Woodlake, CA 93286

Responses to Comments/Final EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments received during such review period.

Entitlement Procedures / Certification of the EIR / Project Consideration

The City of Woodlake is Lead Agency for the proposed Project, pursuant to the California Environmental Quality Act (CEQA). The Project will require the following approvals and/or entitlements from the City of Woodlake:

- Approval of a General Plan Amendment to change the designation of 61 acres from Urban Reserve to Industrial
- Approval of a Conditional Use Permit to operate a Cannabis Business License (Cultivation, Manufacturing, Distribution, Testing and Retail) for cannabis businesses
- Tentative Parcel Map to divide the site into 21 parcels
- Certification of the Project EIR
- Certification of the Final EIR
- Adoption of the Mitigation Monitoring and Reporting Program
- Adoption of 15091 and 15093 Findings and Statement of Overriding Considerations
- Issuance of Grading / Building Permits

The City of Woodlake will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the City Council may certify the Final EIR in accordance with CEQA. As set forth by CEQA Guidelines Section 15151, the standards of adequacy require an EIR to provide a sufficient degree of analysis to allow decisions to be made regarding the proposed Project that intelligently take account of environmental consequences.

Upon review and consideration of the Final EIR, the City Council may take action to approve, revise, or reject the project. A decision to approve the proposed Project, for which this EIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring and Reporting Program (MMRP) would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the Project to reduce or avoid significant effects on the environment. The MMRP will be designed to ensure that these measures are carried out during project implementation in a manner that is consistent with the EIR.

1.6 Organization and Scope

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the City of Woodlake, and responses to the IS/NOP. This Draft EIR is organized in the following manner:

Executive Summary

The Executive Summary summarizes the characteristics of the proposed Project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts and possible mitigation measures. This chapter also identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed Project.

Chapter 1 – Introduction

Chapter 1.0 briefly describes the proposed Project, the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, identifies the scope and organization of the Draft EIR, and summarizes comments received in response to the IS/NOP.

Chapter 2 – Project Description

Chapter 2.0 provides a detailed description of the proposed Project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, subsequent entitlement activities, and a list of related agency action requirements.

Chapter 3– Environmental Setting, Impacts and Mitigation Measures

Chapter 3 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this Draft EIR:

- Agriculture and Forestry Resources
- Air Quality
- Energy
- Greenhouse Gas Emissions
- Transportation and Traffic

Chapter 4 – Project Alternatives

Chapter 4 provides a comparative analysis between the merits of the proposed Project and the selected alternatives. State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the project.

Chapter 5 – Other CEQA-Required Topics

Chapter 5 evaluates and describes the following CEQA required topics: growth-inducing effects, significant and irreversible effects, significant and unavoidable impacts, substantial adverse effects on protected fish, wildlife, and plant species, substantial adverse effects on human beings, and effects not found to be significant.

Chapter 6 – Report Preparers

Chapter 6 lists all authors and agencies that assisted in the preparation of the Draft EIR, by name, title, and company or agency affiliation.

Appendices

This section includes the IS/NOP and responses to the IS/NOP in addition to agricultural conversion, air quality/greenhouse gas/energy, and traffic technical studies.

Chapter 2

PROJECT DESCRIPTION

Chapter 2 – Project Description

2.1 Project Location and Surrounding Use

The City of Woodlake is located in Tulare County in the southern part of the San Joaquin Valley. The proposed Project is located on the east side of Blair Road, south of Ropes Avenue on multiple APNs, including: 060-170-105, -106, 060-160-044 and -059. Woodlake is bisected by SR 216 and SR 245 and is situated five miles north of SR 198. See Figure 1.

The proposed Project site consists of existing buildings and vacant land and is part of an existing industrial area. The site is surrounded by a chain link perimeter fence and is further surrounded by active agricultural production and rural residences (see Figure 2). Trees are planted along its northern and western boundaries, and a driveway running east-west across the northern portion of the parcel.

Lands surrounding the proposed Project are described as follows:

- North: Industrial, Rural Residential, Roadway.
- South: Agriculture, Rural Residential.
- East: Vacant, Agriculture.
- West: Agriculture, Roadway.

2.2 Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the City of Woodlake's Project objectives:

- To create an economically sustainable industrial complex that will provide business and job opportunities within the City of Woodlake.
- To diversify the City of Woodlake's economic and general commercial base
- To ensure the provision of services and facilities needed to accommodate planned population densities in and around the City of Woodlake.

Figure 1 – Regional Location

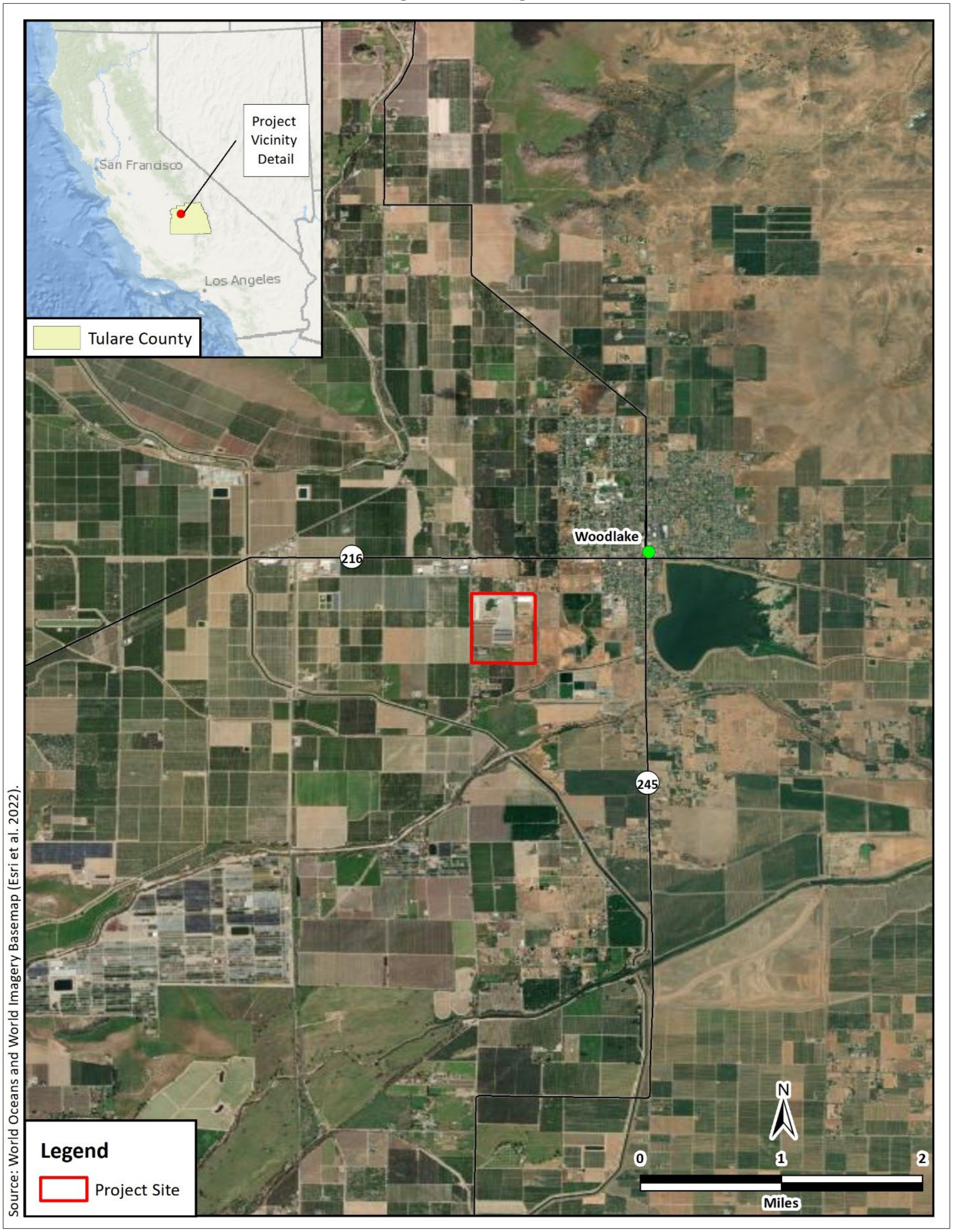
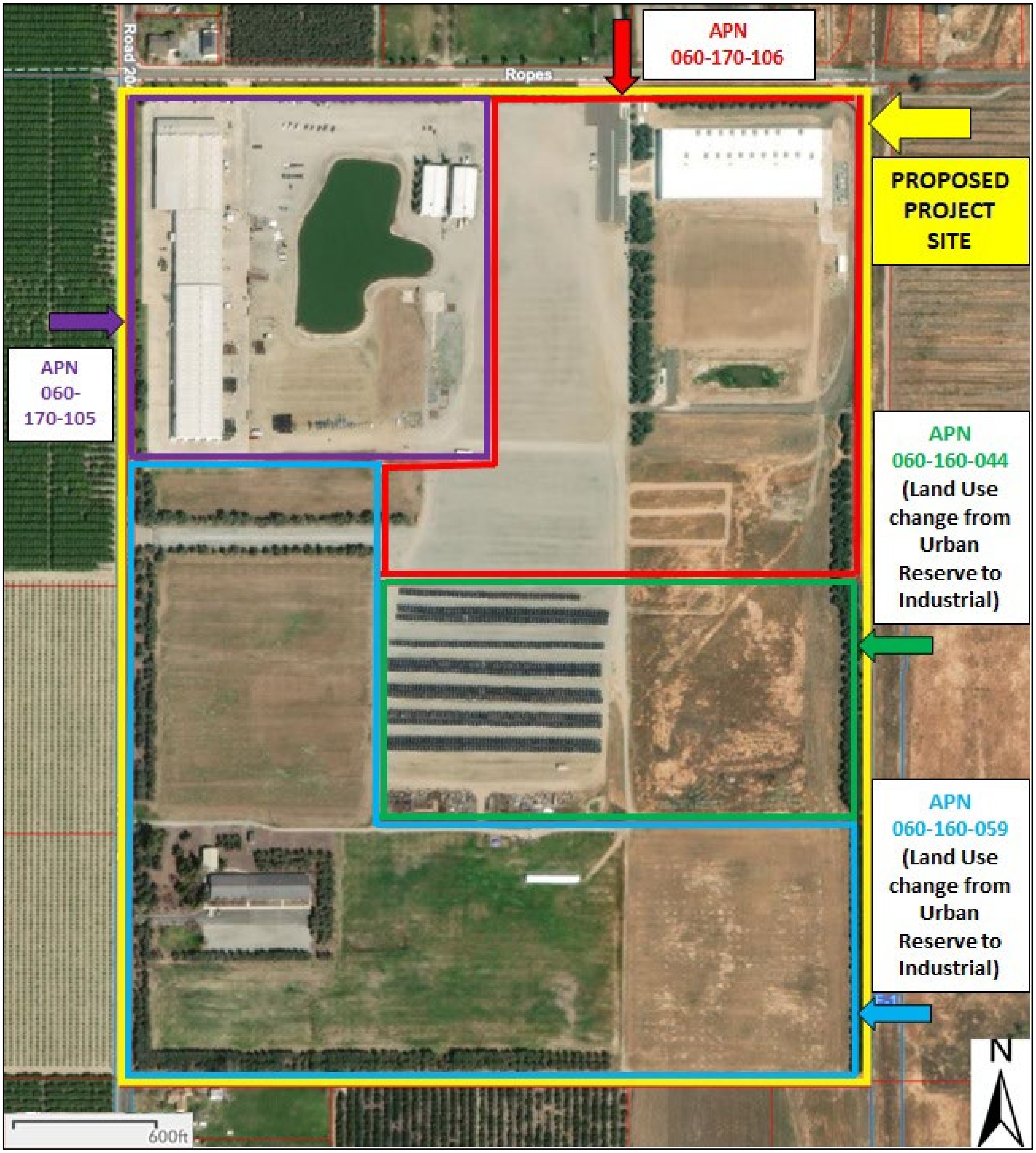


Figure 2 – Site Aerial



2.3 Project Description

The Project Applicant intends to expand an existing industrial area by developing a 113-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, distribution, testing and retail, which is allowable with a Conditional Use Permit.

Project Components

- Constructing and operating an industrial park with seventeen buildings ranging in size of 75,000 sf to 87,000 sf for a total of up to 1,500,000 sf of industrial space.
- Constructing internal access roads, 700 parking spaces and associated landscaping, as detailed on Figure 4 – Site Plan.
- Connecting the Project to the existing City water, wastewater, and storm drain systems. Any grow operations will utilize the existing well connection for water.
- Installation of perimeter security, including lighting and an alarm system, in accordance with Chapter 5.48 of the Woodlake Municipal Code.
- Constructing three new ponding basins of 7.93 Ac ft, 8.42 Ac ft, and 16.42 Ac ft.

Construction will begin in 2023 and will continue to buildout as the market demands.

Project Operations

The site will operate from 7am to 6pm Monday through Friday. The facility's electrical needs will continue to be serviced by existing Southern California Edison connections that have been assessed as sufficient for full operation of allowable industrial uses, including indoor/mixed light cannabis cultivation.

Once a business is established, water needs for the grow houses will be serviced by existing deep-water wells while water needs for the distribution facilities and sanitary facilities will be provided by the City. Stormwater will be kept on-site and wastewater will be connected to the City's existing system.

To accommodate this Project, the following entitlements are required:

- General Plan Amendment to change the designation of 61 acres from Urban Reserve to Industrial
- Conditional Use Permit to operate under a Cannabis Business License (Cultivation, Manufacturing, Distribution, Testing and Retail) for cannabis businesses
- Lot line adjustment as per the City's requirements

- Tentative Parcel Map to divide the existing parcel into 21 separate parcels (see Figure 3)

2.4 Other Public Agencies Involved

- State of California Native American Heritage Commission
- San Joaquin Valley Air Pollution Control District
- Central Valley Regional Water Quality Control Board
- California Department of Cannabis Control
- California Department of Health

Figure 3 – Tentative Parcel Map

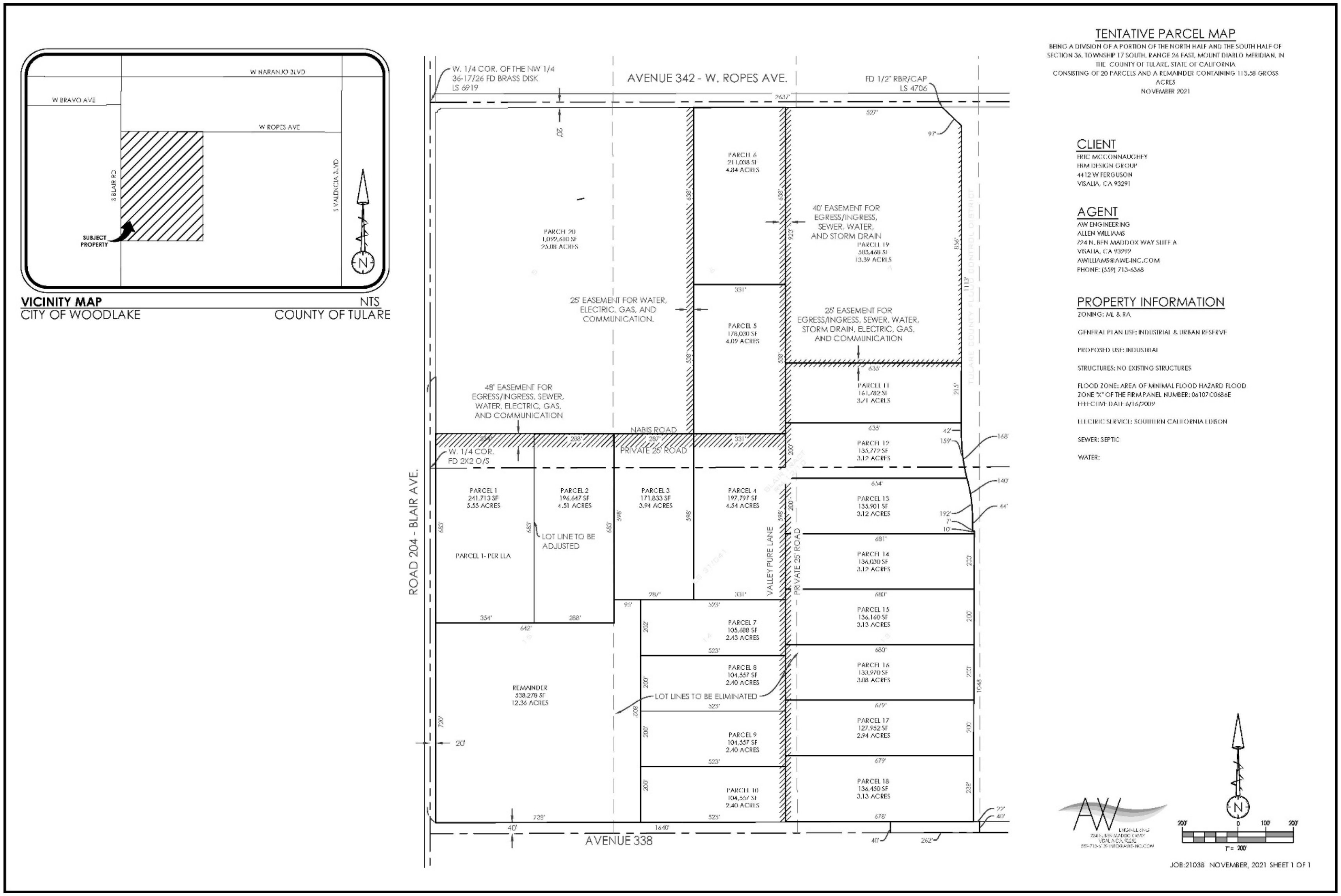
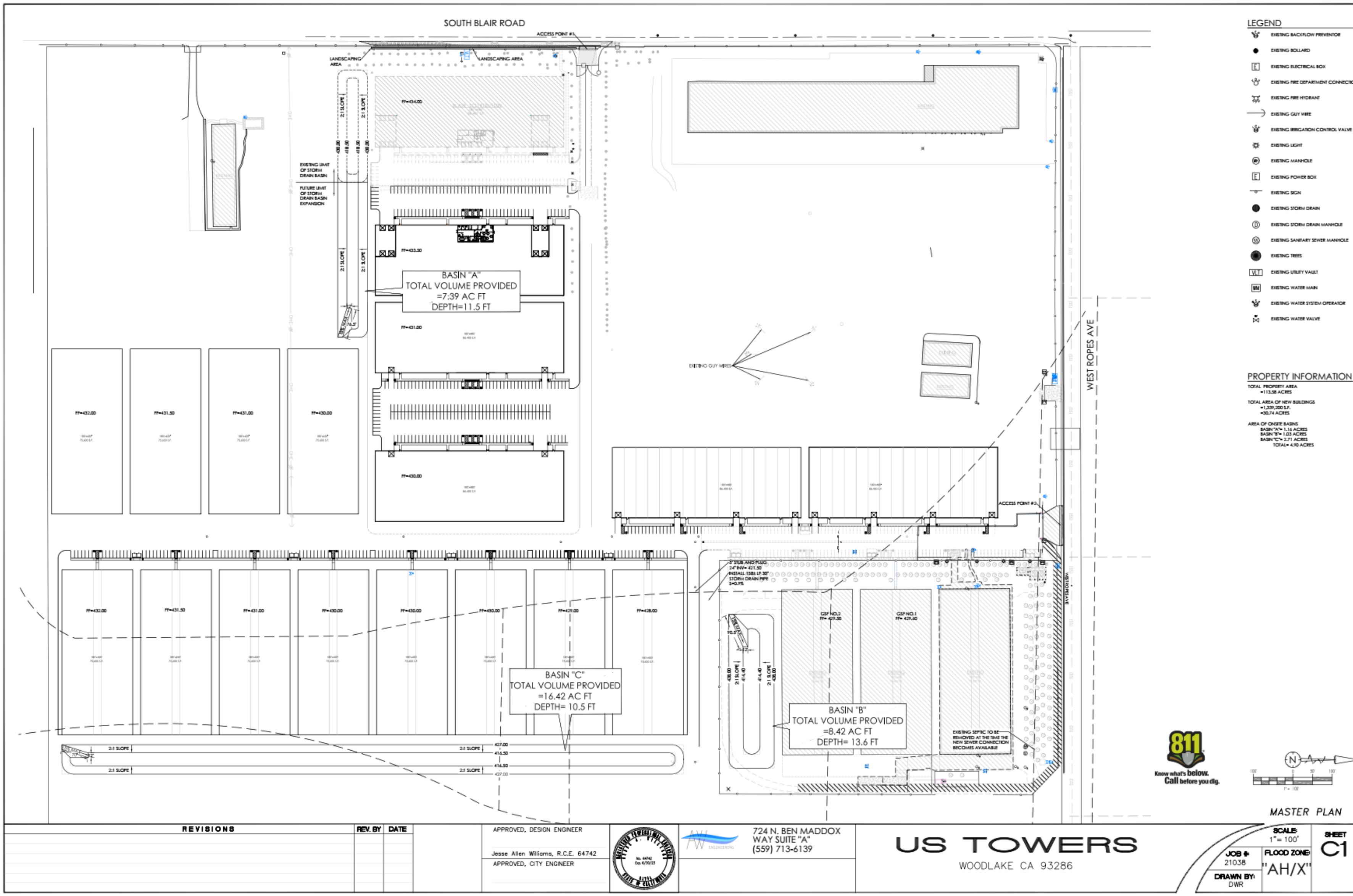


Figure 4 – Site Plan



Chapter 3

ENVIRONMENTAL ANALYSIS

Chapter 3 – ENVIRONMENTAL ANALYSIS

3.1 Agricultural Resources

This section of the EIR identifies potential impacts of the proposed Project pertaining to Agricultural Resources. Two NOP comments were received pertaining to this topic from California Department of Conservation (DOC) and from California Department of Cannabis (DCC). The letters provided recommendations pertaining to the evaluation of the loss of farmland including the type/amount of land being converted, impacts to current/future farming, proposed mitigation measures and compatibility with surrounding lands utilizing the California Agricultural Land Evaluation and Site Assessment Model (LESA)[1], which the California Department of Conservation developed to provide lead agencies with a methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process.

Environmental Setting

As described in Section 2.1, the Project site is located on an approximately 113-acre site in southwest Woodlake, to the east side of Blair Road, south of Ropes Avenue. The site is located entirely within the City of Woodlake and is comprised of multiple land parcels, including 060-170-105, -106, 060-160-044 and -059.

The proposed Project consists of a General Plan Amendment, Conditional Use Permit, Lot line adjustment, and a Tentative Parcel Map to allow for the expansion of an existing industrial area by developing an industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, distribution, testing and retail.

The Project site is part of an existing industrial area and consists of existing buildings and vacant land. The site is surrounded by a chain link perimeter fence and is further surrounded by industrial uses and rural residences to the north, and active agricultural uses and rural residences to the south. Agricultural uses and vacant land are located east of the Project site, with agricultural land and roadways to the west (see Figure 2). Trees are planted along its northern and western boundaries, and a driveway running east-west across the northern portion of the parcel.

[1] California Department of Conservation, Division of Land Resource Protection. Accessible at http://www.conservation.ca.gov/dlrp/Pages/qh_lesa.aspx. Accessed December 2022.

Of the 113-acre site, the northern 52 acres of the site is designated as Industrial by the City of Woodlake and as Semi-agricultural and Rural Commercial Land and Urban and Built-Up Land by the Farmland Mapping & Monitoring Program (FMMP).[2] The southern 61 acres is designated Urban Reserve by the City of Woodlake and as Prime Farmland and Farmland of Statewide Importance by the City of Woodlake. The entire 113-acre site is zoned Light Industrial (ML).

The FMMP map identifies areas to the southwest and northeast as prime agricultural land. Area to the north consists of land designated as urban, semi-agriculture, and rural residential. Land uses to the east consist of prime farmland, farmland of state and local importance. Areas to the south consist of prime farmland, farmland of state importance, and rural residential. The Project site does not contain land under Williamson Act Contract. Land parcels adjacent to and west of the Project site are under the Williamson Act Contract.

The majority of forest land occurs in the eastern portion of Tulare County, in the Sierra Nevada foothills and Sierra Nevada. The Project site does not contain any land defined as forest land (as defined by Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or land zoned Timberland Production (as defined by Government Code section 51104(g)).

Regulatory Setting

<u>Federal Regulations</u>

Farmland Protection Policy Act (7 U.S.C Section 4201)

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It additionally directs Federal programs to be compatible with State and local policies for the protection of farmlands. Congress passed the Agriculture and Food Act of 1981 (Public Law 97–98) containing the FPPA—Subtitle I of Title XV, Sections 1539–1549. The final rules and regulations were published in the Federal Register on June 17, 1994.

The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that, to the extent possible,

[2] California Department of Conservation. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed December 2022.

Federal programs are administered to be compatible with State, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. The FPPA does not authorize the Federal Government to regulate the use of private or non-Federal land or, in any way, affect the property rights of owners.

For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of Statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forestland, pastureland, cropland, or other land, but not water or urban built-up land.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.[3]

<u>State of California Regulations</u>

California Department of Conservation (DOC), Division of Land Resource Protection

The Division of Land Resource Protection (DLRP), within the Department of Conservation (DOC), serves as the State's leader in conserving California's irreplaceable agricultural lands. DLRP provides information, and technical and financial assistance to partners to protect California's agricultural land and promote sustainable growth.

The DOC applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands, and these agricultural designations are used in planning for the present and future of California's agricultural land resources. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being adsorbed into the surrounding classifications.

Farmland Mapping and Monitoring Program

The DOC established the Farmland Mapping and Monitoring Program (FMMP) in 1982. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use changes throughout California. The FMMP produces amps and statistical date used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and

---

[3] USDA Natural Resources Conservation Service. Farmland Protection Policy Act. http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/. Accessed December 2022.

irrigation status. The best quality land is called Prime Farmland with additional categories, including Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

The list below provides a description of all the categories mapped by the FMMP[4].

- **Prime Farmland**. Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- **Farmland of Statewide Importance**. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- **Unique Farmland**. Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

- **Farmland of Local Importance**. Lands that produce dryland grains (barley and wheat); lands that have physical characteristics that would qualify for "Prime" or "Statewide Important" farmlands except for the lack of irrigation water; and lands that currently support confined livestock, poultry, and/or aquaculture operations.

- **Grazing Land**. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

- **Urban and Built-up Land**. Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and

---

[4] California Department of Conservation Division of Land Resource Protection. Farmland Mapping and Monitoring Program. Important Farmland Categories. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx#:~:text=Important%20Farmland%20Categories.%201%20Rural%20Residential%20Land%20%28R%29,an%20extent%20of%20at%20least%2040%20acres.%20. Accessed December 2022.

other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- **Other Land**. Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is promulgated in California Government Code Sections 51200–51297.4. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses. In return, the landowners receive property tax assessment based on farming and open space uses, as opposed to full market value, thus resulting in a lower tax burden. Private land within locally designated agricultural preserve areas is eligible for enrollment under Williamson Act contracts. However, an agricultural preserve must consist of no less than 100 acres. In order to meet this requirement, two or more parcels may be combined if they are contiguous, or if they are in common ownership.

The Williamson Act program is administered by the DOC, in conjunction with local governments, which administer the individual contract arrangements with landowners. The landowner commits the parcel to a 10-year period wherein no conversion out of agricultural use is permitted. Each year the contract automatically renews unless a notice of non-renewal or cancellation is filed. In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. An application for immediate cancellation can also be requested by the landowner, provided that the proposed immediate cancellation application is consistent with the cancellation criteria stated in the California Land Conservation Act and those adopted by the affected county or city. Non-renewal or immediate cancellation does not change the zoning of the property. Participation in the Williamson Act program is dependent on county adoption and implementation of the program and is voluntary for landowners.

Public Resources Code Section 21060.1

The Public Resource Code (PRC) Section 21060.1 defines agricultural land for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California.

Local Regulations

City of Woodlake General Plan

Land Use Element of the City of Woodlake General Plan outlines policies for economic development[5]:

- Assist existing industries to expand their operations and increase employment by providing financial incentives.
    1. The City should contact on an annual basis existing industries to determine if they have plans for expansion and if there are tasks that the city could assist them with to make their expansion more successful.
        a. The Redevelopment Agency could use redevelopment or CDBG funds to finance an existing business.
- Increase the number of businesses operating in Woodlake in order to generate more sales, property, business and transient occupancy taxes.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item. Would the project:

- o 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?
- o Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- o 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

[5] City of Woodlake General Plan, Land Use Policies and Actions, pg 71.

section 51104(g))?

- Result in the loss of forest land or conversion of forest land to non-forest use?
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Impact Analysis

Impact AG-1: *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?*

Significant and Unavoidable. Of the 113-acre site, the northern 52 acres of the site is designated as Industrial by the City of Woodlake and as Semi-agricultural and Rural Commercial Land and Urban and Built-Up Land by the Farmland Mapping & Monitoring Program (FMMP).[6] The southern 61 acres is designated Urban Reserve by the City of Woodlake and as Prime Farmland and Farmland of Statewide Importance by the City of Woodlake. As such, the City has evaluated the Project's farmland conversion impacts to 61 acres of farmland utilizing the California Agricultural Land Evaluation and Site Assessment Model (LESA)[7], which the California Department of Conservation developed to provide lead agencies with a methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process. (See Public Resources Code §21095.)

The LESA is composed of six different factors, which are divided into two sets: Land Evaluation (LE) and Site Assessment (SA) factors. Two LE factors (Land Capability Classification Rating and Storie Index Rating) are based upon measures of soil resources quality and intended to measure the inherent, soil-based qualities of land as they relate to agricultural suitability. Four SA factors (Project Size Rating, Water Resource Availability Rating, Surrounding Agricultural Lands Rating, and Surrounding Protected Resource Lands Rating) are intended to measure social, economic, and geographic attributes that also contribute to the overall value of agricultural land.

---

[6] California Department of Conservation. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed December 2022.

[7] California Department of Conservation, Division of Land Resource Protection. Accessible at http://www.conservation.ca.gov/dlrp/Pages/qh_lesa.aspx. Accessed November 2022.

The two sets of factors are evenly weighted, meaning the two LE factors and four SA factors are of equal importance; however, for a given project, each of these six factors is separately rated in a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. This final project score becomes the basis for making a determination of the potential impacts' level of significance for the project, based upon a range of established scoring thresholds.

Land Evaluation Factors

The LESA includes two LE factors, discussed below, that are separately rated.

<u>The Land Capability Classification Rating (LCC)</u>: The LCC indicates the suitability of soils for most kinds of crops. Groupings are made according to the limitations of the soils when used to grow crops and the risk of damage to soils when used in agriculture. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I). Specific subclasses are also utilized to further characterize soils.

The Project site soils have Land Capability Classifications of 1, 2s, 3e, and 3s.

<u>The Storie Index Rating</u>: The Storie Index provides a numeric rating (based upon a zero to 100 scale) of the relative degree of suitability or value of a given soil for intensive agriculture. The rating is based upon soil characteristics only. Four factors that represent the inherent characteristics and qualities of the soil are considered in the Storie Index rating: profile characteristics, texture of the surface layer, slope, and other factors such as drainage or salinity. In some situations, only the United States Department of Agriculture's LCC information may be available. In those cases, the Storie Index ratings can be calculated from information contained in soil surveys by qualified soil scientists; however, if limitation of time and/or resources restrict the derivation of the Storie Index rating for a given project, it may be possible to adapt the Land Evaluation by relying solely upon the LCC rating.

The Project site soils have Storie Index Scores of 30 ad 90.

Site Assessment Factors

The four SA factors that are separately rated and included in the LESA are discussed below.

<u>The Project Size Rating</u>: The Project Size rating is based upon identifying acreage figures for three separate groupings of soil classes within the project site, and then determining what grouping generates the highest Project Size score. The Project Size Rating relies upon acreage figures that were tabulated under the Land Capability Classification Rating.

The highest Project Size Score for the proposed Project site is 60.

The Water Resources Availability Rating: The Water Resources Availability rating is based upon identifying the various water sources that may supply a given property, and then determining whether different restrictions in supply are likely to take place in years that are characterized as being periods of drought and non-drought.

The Project area and City of Woodlake is located in the Kaweah Subbasin of San Joaquin Valley basin within the Tulare Lake Hydrologic Region. The proposed Project site is served entirely by groundwater.

According to a recent joint report by the Department of Water Resources and Natural Resources Agency, Water Year 2020 was California's fifth driest year based on statewide runoff; Water Year 2021 has ended up as second driest.[8] According to the City of Woodlake's Draft EIR, over the last 30 to 40 years, an "overdraft" condition has occurred in the southern San Joaquin Valley and more specifically, in the Kaweah River Basin. This "overdraft" has caused local groundwater levels to drop.[9] According to DWR's current Water Supply Conditions Map, Groundwater Levels near Woodlake are less than 25th Percentile, indicating Below Normal Groundwater Levels.[10]

Although irrigation production is feasible in non-drought and drought years, based on above information, physical restrictions are also present at the Project site. Given the current low groundwater levels and prolonged overdraft condition of the San Joaquin Valley basin, it is possible that the cost of water becomes prohibitive to purchase. Consequently, based on the scoring criteria provided in the LESA Manual[11], Table 5, Water Resource Availability Scoring, the site receives a water resource score of 65 of 100 points.

The Surrounding Agricultural Land Rating: Determination of the Surrounding Agricultural Land rating is based upon identification of a project's Zone of Influence (ZOI), which is defined as that land near a given project, both directly adjoining and within a defined distance away, that is likely to influence, and be influenced by, the agricultural land use of the subject project site. The Surrounding Agricultural Land rating is designed to provide a measurement of the level of agricultural land use for lands close to a given project. The LESA rates the potential significance of the conversion of an agricultural parcel that has a large proportion of surrounding land in agricultural production more highly than one that

---

[8] Water Year 2021 Report, Department of Water Resources. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Water-Basics/Drought/Files/Publications-And-Reports/091521-Water-Year-2021-broch_v2.pdf. Accessed November 2022.
[9] Woodlake Draft Environmental Impact Report, pg 46.
[10] California Water Watch, Department of Water Resources. https://cww.water.ca.gov/maps?tab=gwLevels. Accessed November 2022.

has relatively small percentage of surrounding land in agricultural production. The definition of the ZOI that accounts for surrounding lands (up to a minimum of 0.25 mile from the project boundary) is the result of several iterations during model development for assessing an area that will generally be a representative sample of surrounding land use.

The Project site has a Surrounding Agricultural Land score of 40.

<u>The Surrounding Protected Resource Land Rating</u>: The Surrounding Protected Resource Land rating is essentially an extension of the Surrounding Agricultural Land rating, and it is scored in a similar manner. Protected resource lands are those lands with long-term use restrictions that are compatible with or supportive of agricultural uses of land. Included among them are the following:

- Williamson Act contracted lands
- Publicly owned lands maintained as a park, forest, or watershed resources
- Lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban and industrial uses

The Project site has a Surrounding Protected Resource Lands score of 30.

Final LESA Scoring

A single LESA score is generated for a given project after all the individual LE and SA factors have been scored and weighted. The LESA is weighted so that 50 percent of the total LESA score of a given project is derived from the LE factors and 50 percent is derived from the SA factors. The final LESA score was determined for the proposed Project and the modeling results are described in Table 3-1.

Table 3-1

Land Evaluation and Site Assessment Model Scoring Summary

Category	Factor	Raw Points	Factor Weight	Weighted Points
Land Evaluation	Land Capability Class	69.914	0.25	17.48
	Storie Index	50.391	0.25	12.6
	Subtotal		**0.50**	**30.08**
Site Assessment	Project Size	60	0.15	9
	Water Resource Availability	65	0.15	9.75

Category	Factor	Raw Points	Factor Weight	Weighted Points
	Surrounding Agricultural Land	40	0.15	6
	Surrounding Protected Resource Lands	30	0.05	1.5
	Subtotal		**0.50**	**26.25**
Final Score				**56.33**

LESA Thresholds of Significance

The LESA is designed to make determinations of the potential significance of a project's conversion of agricultural lands during the Initial Study phase of the CEQA process. Scoring thresholds are based upon both the total LESA score and the component LE and SA separate subscores. In this manner, the scoring thresholds are dependent upon the attainment of a minimum score for the LE and SA subscores so that a single threshold is not the result of heavily skewed subscores (i.e., a site with a very high LE score but a very low SA score, or vice-versa). The LESA scoring thresholds are described in Table 3-2.

Table 3-2

LESA Scoring Thresholds

Total LESA Score	Scoring Decision
0 to 39 points	Not considered significant
40 to 59 points	Considered significant only if LE and SA subscores are each greater than or equal to 20 points
60 to 79 points	Considered significant unless either LE or SA subscore is less than 20 points
80 to 100 points	Considered significant

LESA Results

According to the LESA Threshold of Significance, the total score of 56.33 for the proposed Project site is considered significant (see Appendix E).

Conversion of agricultural land to urban use is not directly mitigable, aside from preventing development altogether. There is no feasible mitigation measure that would reduce the impacts related to the Prime Farmland and Farmland of Statewide Importance converted as a result of development of the proposed Project. Therefore, impacts as a result of farmland conversion are considered ***significant and unavoidable.***

Mitigation Measures: None are required.

Impact AG-2: *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact.

Agricultural Zoning

The Project site is designated in the City of Woodlake General Plan as Industrial and Urban Reserve and is zoned as Light Industrial (ML), subject to an approved Conditional Use Permit (CUP), General Plan Amendment, Lot line adjustment, and a Tentative Parcel Map. Therefore, with the approval of these entitlements, no conflicts with agricultural zoning would occur and there would be ***no impact*** related to an agricultural zoning conflict.

Williamson Act Contract

As noted, the Project site is not subject to a Williamson Act contract, pursuant to Government Code Section 51200 et seq. Therefore, there would be no conflict with a Williamson Act Contract and as such, ***no impacts*** to this subject area.

Mitigation Measures

None are required.

Impact AG-3: *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)), or result in the loss of forest land or convert forest land to non-forest use?*

No Impact. The proposed Project site lies in the eastern portion of the Central Valley floor, where there is no forest land. The Project is not zoned for forestland, timberland, or timberland zoned Timberland Production and does not propose any zone changes related to forest or timberland. As such, there are ***no potential impacts*** resulting from forest or timber land conflicts or conversion of forest land to non-forest use.

Mitigation Measures

None are required.

Impact AG-4: *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

Less Than Significant Impact. As discussed in Impact AG-1 and AG-3, the proposed Project site consists of land designated as Prime Farmland and Farmland of Statewide Importance as designated by the FMMP and the northern portion of the site has been designated in the City of Woodlake General Plan as Industrial while the southern portion is designated as Urban Reserve. The entire 113-acre site is zoned as Light Industrial. The proposed entitlements are site-specific and do not apply to any properties other than the proposed Project site. Therefore, it is unlikely that the Project would result int eh conversion of other farmland. Additionally, there is no forest land in the Project vicinity. Potential impacts are ***less than significant.***

Mitigation Measures

None are required.

Cumulative Impacts

Significant, Unavoidable and Cumulatively Considerable. The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on the Statewide FMMP map. As discussed above, the Project includes the significant impact related to the conversion of protected farmland. As such, the Project would have a ***significant and unavoidable and cumulatively considerable impact*** on agricultural resources.

3.2 Air Quality

An Air Quality, Greenhouse Gas, and Energy Impact Assessment was prepared for the proposed Project by VRPA Technologies, Inc. (report date July 21, 2022) and is the basis for the information presented in this section. The complete impact assessment is provided in Appendix B of this EIR. The results of the report modeling and analysis are presented in the discussion below (3.2 Air quality, 3.3 Energy, and 3.4 Greenhouse Gas).

Environmental Setting[12,13]

The Project is located at the southeast corner of West Ropes Avenue and South Blair Road within the Sphere of influence (SOI) of City of Woodlake. The City of Woodlake is located in Tulare County one of the most polluted air basins in the country– the San Joaquin Valley Air Basin (SJVAB). The surrounding topography includes foothills and mountains to the east and west. These mountain ranges direct air circulation and dispersion patterns. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Woodlake is characterized by hot, dry summers and cool winters with the notable presence of Tule fog.

Geographical Location and Topographical Conditions

The SJVAB is comprised of the following counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Encompassing 24,840 square miles, the San Joaquin Valley is the second largest air basin in California. Cumulatively, counties within the Air Basin represent approximately 16 percent of the State's geographic area. The Air Basin is bordered by the Sierra Nevada Mountains on the east (8,000 to 14,492 feet in elevation), the Coastal Range on the west (4,500 feet in elevation), and the Tehachapi Mountains on the south (9,000 feet elevation). The San Joaquin Valley is open to the north extending to the Sacramento Valley Air Basin.

Tulare County is located within the San Joaquin Valley Air Basin [as determined by the California Air Resources Board (CARB)]. Air basins are geographic areas sharing a common "air shed." A description of the Air Basin in the County, as designated by CARB, is provided in the paragraph below. Air

[12] Appendix B - Ch.1 Introduction, Air Quality, Greenhouse Gas, and Energy Impact Assessment. Woodlake Cannabis Project. Page 1. Prepared by VRPA Technologies, Inc. July 21, 2022.

[13] Appendix B - Ch.2 Environmental Setting, Air Quality, Greenhouse Gas, and Energy Impact Assessment. Woodlake Cannabis Project. Page 18. Prepared by VRPA Technologies, Inc. July 21, 2022

pollution is directly related to the region's topographic features, which impact air movement within the Basin.

Wind patterns within the SJVAB result from marine air that generally flows into the Basin from the San Joaquin River Delta. The Coastal Range hinders wind access into the Valley from the west, the Tehachapi's prevent southerly passage of airflow, and the high Sierra Nevada Mountain Range provides a significant barrier to the east. These topographic features result in weak airflow that becomes restricted vertically by high barometric pressure over the Valley. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500-3,000 feet).

Climate Conditions[14]

The City of Woodlake is located in one of the most polluted air basins in the country. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Woodlake is characterized by warm, dry summers and cool winters with significant Tule fog.

Ozone, classified as a "regional" pollutant, often afflicts areas downwind of the original source of precursor emissions. Ozone can be easily transported by winds from a source area. Peak ozone levels tend to be higher in the southern portion of the Valley, as the prevailing summer winds sweep precursors downwind of northern source areas before concentrations peak. The separate designations reflect the fact that ozone precursor transport depends on daily meteorological conditions. Other primary pollutants, carbon monoxide (CO), for example, may form high concentrations when wind speed is low. During the winter, Tulare County experiences cold temperatures and calm conditions that increase the likelihood of a climate conducive to high CO concentrations.

Precipitation and fog tend to reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog block the required radiation. CO is slightly water soluble, so precipitation and fog tends to "reduce" CO concentrations in the atmosphere. PM10 is somewhat washed" from the atmosphere with precipitation. Precipitation in the San Joaquin Valley is strongly influenced by the position of the semi-permanent subtropical high-pressure belt located off the Pacific coast. In the winter, this high- pressure system moves southward, allowing Pacific storms to move through the San Joaquin Valley. These storms bring in moist, maritime air that produces considerable precipitation on the western, upslope side of the Coast Ranges. Significant precipitation also occurs on

[14] Ibid.

the western side of the Sierra Nevada. On the valley floor, however, there is some down slope flow from the Coast Ranges and the resultant evaporation of moisture from associated warming results in a minimum of precipitation. Nevertheless, the majority of the precipitation falling in the San Joaquin Valley is produced by those storms during the winter. Precipitation during the summer months is in the form of convective rain showers and is rare. It is usually associated with an influx of moisture into the San Joaquin Valley through the San Francisco area during an anomalous flow pattern in the lower layers of the atmosphere. Although the hourly rates of precipitation from these storms may be high, their rarity keeps monthly totals low.

The winds and unstable air conditions experienced during the passage of storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong low-level temperature inversions and very stable air conditions. This situation leads to the San Joaquin Valley's famous Tule Fogs. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog, is more likely to occur inland. Cooling may also be accomplished by heat radiation losses or by horizontal movement of a mass of air over a colder surface. This second type of fog, known as advection fog, generally occurs along the coast.

Conditions favorable to fog formation are also conditions favorable to high concentrations of CO and PM10. Ozone levels are low during these periods because of the lack of sunlight to drive the photochemical reaction. Maximum CO concentrations tend to occur on clear, cold nights when a strong surface inversion is present and large numbers of fireplaces are in use. A secondary peak in CO concentrations occurs during morning commute hours when a large number of motorists are on the road and the surface inversion has not yet broken. The water droplets in fog, however, can act as a sink for CO and nitrogen oxides (NOx), lowering pollutant concentrations. At the same time, fog could help in the formation of secondary particulates such as ammonium sulfate. These secondary articulates are believed to be a significant contributor of winter season violations of the PM10 and PM2.5 standards.

San Joaquin Valley Air Basin Monitoring

SJVAPCD and the CARB maintain numerous air quality monitoring sites throughout each County in the Air Basin to measure ozone, PM2.5, and PM10. It is important to note that the federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. The closest monitoring station to the Project is located in Visalia at 310 N. Church Street. The station monitors particulates, ozone, carbon monoxide, and nitrogen dioxide. Monitoring data for the past three years is summarized in Table 3-3.

Table 3-3

Maximum Pollutant Levels at Tulare's Visalia N-Church Monitoring Station Drummond Monitoring Stations[15]

Pollutant	Time Averaging	2018 Maximums	2019 Maximums	2020 Maximums	Standards National	Standards State
Ozone (O_3)	1 hour	0.112 ppm	0.093 ppm	0.127 ppm	0.107ppm	0.105 ppm
Ozone (O_3)	8 hour	0.101 ppm	0.093 ppm	0.114 ppm	0.085 ppm	0.085 ppm
Nitrogen Dioxide (NO_2)	1 hour	69.2ppm	70.7 ppm	53.4 ppm	55 ppm	70 ppm
Nitrogen Dioxide (NO_2)	Annual Average	*	*	*	10 ppm	9 ppm
Particulates (PM_{10})	24 hour	153.4µg/m3	411.1µg/m3	317.4µg/m3	59.4 µg/m^3	60.5 µg/m^3
Particulates (PM_{10})	Federal Annual Arithmetic Mean	52.5µg/m3	45.7µg/m3	59.4 µg/m^3	49.8 µg/m3	20 µg/m^3
Particulates ($PM_{2.5}$)	24 hour	86.8 µg/m^3	47.2 µg/m^3	127.1 µg/m^3	64 µg/m^3	20 µg/m^4
Particulates ($PM_{2.5}$)	Federal Annual Arithmetic Mean	17.3µg/m^3	12.9 µg/m^3	19.6 µg/m^3	12 µg/m^3	12 µg/m^3

Source: California Air Resources Board (ADAM) Air Pollution Summaries,2022

* Means there was insufficient data available to determine the value.

Table 3-4 identifies Tulare County's attainment status. As indicated, the SJVAB is nonattainment for Ozone (1 hour and 8 hour) and PM. In accordance with the FCAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. The FCAA contains provisions for changing the classifications using factors such as clean air progress rates and requests from States to move areas to a higher classification.

On April 16, 2004, EPA issued a final rule classifying the SJVAB as extreme nonattainment for Ozone, effective May 17, 2004 (69 FR 20550). The (federal) 1-hour ozone standard was revoked on June 6, 2005. However, many of the requirements in the 1-hour attainment plan (SIP) continue to apply to the SJVAB.

15 Appendix B - Ch.2 Environmental Setting, Air Quality, Greenhouse Gas, and Energy Impact Assessment. Woodlake Cannabis Project. Page 22. Prepared by VRPA Technologies, Inc. July 21, 2022

The current ozone plan is the (federal) 8-hour ozone plan adopted in 2007. The SJVAB was reclassified from a "serious" nonattainment area for the 8-hour ozone standard to “extreme” effective June 4, 2010.

Air Quality Standards

The FCAA, first adopted in 1963, and periodically amended since then, established National Ambient Air Quality Standards (NAAQS). A set of 1977 amendments determined a deadline for the attainment of these standards. That deadline has since passed. Other CAA amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources.

In 1988, the State of California passed the CCAA (State 1988 Statutes, Chapter 568), which set forth a program for achieving more stringent California Ambient Air Quality Standards. The CARB implements State ambient air quality standards, as required in the CCAA, and cooperates with the federal government in implementing pertinent sections of the FCAA Amendments (FCAAA). Further, CARB regulates vehicular emissions throughout the State. The SJVAPCD regulates stationary sources, as well as some mobile sources. Attainment of the more stringent State PM10 Air Quality Standards is not currently required.

The EPA uses six "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called the NAAQS.

The SJVAPCD operates regional air quality monitoring networks that provide information on average concentrations of pollutants for which State or federal agencies have established ambient air quality standards. Descriptions of nine pollutants of importance in Tulare County follow.

Ozone[16]

The most severe air quality problem in the Air Basin is the high level of ozone. Ozone occurs in two layers of the atmosphere. The layer surrounding the earth’s surface is the troposphere. Here, ground level, or “bad” ozone, is an air pollutant that damages human health, vegetation, and many common materials. It is a key ingredient of urban smog. The troposphere extends to a level about ten miles up, where it meets the second layer, the stratosphere. The stratospheric, or “good” ozone layer, extends upward from about 10 to 30 miles and protects life on earth from the sun’s harmful ultraviolet rays.

[16] Ibid, pg25

Table 3-4
Tulare County Attainment Status[17]

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone - 1 Hour	Revoked in 2005	Nonattainment/Severe
Ozone - 8 Hour	Nonattainment/Extreme [a]	No State Standard
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon Monoxide	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified/Attainment	Attainment
Lead (Particulate)	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: ARB Website, 2022
a. 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).
Notes:
National Designation Categories
Non-Attainment Area: Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Unclassified/Attainment Area: Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant or meets the national primary or secondary ambient air quality standard for the pollutant.

State Designation Categories
Unclassified: A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non-attainment.

Attainment: A pollutant is designated attainment if the State standard for that pollutant was not violated at any site in the area during a three-year period.

Non-attainment: A pollutant is designated non-attainment if there was at least one violation of a State standard for that pollutant in the area.

Non-Attainment/Transitional: A subcategory of the non-attainment designation. An area is designated non-attainment/transitional to signify that the area is close to attaining the standard for the pollutant.

[17] Ibid, pg 24.

"Bad" ozone is what is known as a photochemical pollutant. It needs reactive organic gases (ROG), NOx, and sunlight. ROG and NOx are emitted from various sources throughout Tulare County. In order to reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors.

Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. Ozone, the primary constituent of smog, is the most complex, difficult to control, and pervasive of the criteria pollutants. Unlike other pollutants, ozone is not emitted directly into the air by specific sources. Ozone is created by sunlight acting on other air pollutants (called precursors), specifically NOx and ROG. Sources of precursor gases to the photochemical reaction that form ozone number in the thousands. Common sources include consumer products, gasoline vapors, chemical solvents, and combustion products of various fuels. Originating from gas stations, motor vehicles, large industrial facilities, and small businesses such as bakeries and dry cleaners, the ozone-forming chemical reactions often take place in another location, catalyzed by sunlight and heat. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins. Approximately fifty million people lived in counties with air quality levels above the EPA's health-based national air quality standard in 1994. The highest levels of ozone were recorded in Los Angeles, closely followed by the San Joaquin Valley. High levels also persist in other heavily populated areas, including the Texas Gulf Coast and much of the Northeast.

While the ozone in the upper atmosphere absorbs harmful ultraviolet light, ground-level ozone is damaging to the tissues of plants, animals, and humans, as well as to a wide variety of inanimate materials such as plastics, metals, fabrics, rubber, and paints. Societal costs from ozone damage include increased medical costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as: forests and foothill communities; agricultural crops; and some man-made materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone accelerates aging and exacerbates pre-existing asthma and bronchitis and, in cases with high concentrations, can lead to the development of asthma in active children. Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. Additionally, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

People who work or play outdoors are at a greater risk for harmful health effects from ozone. Children and adolescents are also at greater risk because they are more likely than adults to spend time engaged in vigorous activities. Research indicates that children under 12 years of age spend nearly twice as much time outdoors daily than adults. Teenagers spend at least twice as much time as adults in active sports and outdoor activities. In addition, children inhale more air per pound of body weight than adults, and they breathe more rapidly than adults. Children are less likely than adults to notice their own symptoms and avoid harmful exposures.

Ozone is a powerful oxidant—it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract, causing inflammation and irritation, and it can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation and lung tissue damage and a reduction in the amount of air inhaled into the lungs.

The CARB found ozone standards in Tulare County nonattainment/extreme of Federal and no standard for State standards

Suspended PM (PM10 and PM2.5)[18]

Particulate matter pollution consists of very small liquid and solid particles that remain suspended in the air for long periods. Some particles are large or concentrated enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter is emitted from stationary and mobile sources, including diesel trucks and other motor vehicles; power plants; industrial processes; wood-burning stoves and fireplaces; wildfires; dust from roads, construction, landfills, and agriculture; and fugitive windblown dust. PM10 refers to particles less than or equal to 10 microns in aerodynamic diameter. PM2.5 refers to particles less than or equal to 2.5

[18] Ibid, pg 27.

microns in aerodynamic diameter and are a subset of PM10. Particulates of concern are those that are ten microns or less in diameter. These are small enough to be inhaled, pass through the respiratory system and lodge in the lungs, possibly leading to adverse health effects.

In the western United States, there are sources of PM10 in both urban and rural areas. Because particles originate from a variety of sources, their chemical and physical compositions vary widely. The composition of PM10 and PM2.5 can also vary greatly with time, location, the sources of the material and meteorological conditions. Dust, sand, salt spray, metallic and mineral particles, pollen, smoke, mist, and acid fumes are the main components of PM10 and PM2.5. In addition to those listed previously, secondary particles can also be formed as precipitates from chemical and photochemical reactions of gaseous sulfur dioxide (SO2) and NOx in the atmosphere to create sulfates (SO4) and nitrates (NO3). Secondary particles are of greatest concern during the winter months where low inversion layers tend to trap the precursors of secondary particulates.

The District's 2008 PM2.5 Plan built upon the aggressive emission reduction strategy adopted in the 2007 Ozone Plan and strives to bring the valley into attainment status for the 1997 NAAQS for PM2.5. The District's 2012 PM2.5 Plan provides multiple control strategies to reduce emissions of PM2.5 and other pollutants that form PM2.5. The plan's comprehensive control strategy includes regulatory actions, incentive programs, technology advancement, policy and legislative positions, public outreach, participation and communication, and additional strategies.

PM10 and PM2.5 particles are small enough—about one-seventh the thickness of a human hair, or smaller—to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system's natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health-related effects include reduced visibility and soiling of buildings. PM10 can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. PM10 and PM2.5 can aggravate respiratory disease and cause lung damage, cancer, and premature death.

Although particulate matter can cause health problems for everyone, certain people are especially vulnerable to adverse health effects of PM10. These "sensitive populations" include children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis. Of greatest concern are recent studies that link PM10 exposure to the premature death of people who already have heart and lung disease, especially the elderly. Acidic PM10 can also damage manmade materials and is a major cause of reduced visibility in many parts of the United States.

The CARB found PM10 standards in Tulare County in attainment of Federal standards and nonattainment for State standards. The CARB found PM2.5 standards in Tulare County nonattainment of Federal and State standards.

Carbon Monoxide[19]

Carbon monoxide (CO) is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive. CO is a byproduct of motor vehicle exhaust, contributes more than two thirds of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators. Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO.

CO enters the bloodstream and binds more readily to hemoglobin than oxygen, reducing the oxygen-carrying capacity of blood and thus reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and in prolonged, enclosed exposure, death.

The adverse health effects associated with exposure to ambient and indoor concentrations of CO are related to the concentration of carboxyhemoglobin (COHb) in the blood. Health effects observed may include an early onset of cardiovascular disease; behavioral impairment; decreased exercise performance of young, healthy men; reduced birth weight; sudden infant death syndrome (SIDS); and increased daily mortality rate.

[19] Ibid, pg 28

Most of the studies evaluating adverse health effects of CO on the central nervous system examine high-level poisoning. Such poisoning results in symptoms ranging from common flu and cold symptoms (shortness of breath on mild exertion, mild headaches, and nausea) to unconsciousness and death.

The CARB found CO standards in Tulare County as unclassified/attainment of Federal standards and attainment for State standards.

Nitrogen Dioxide (NO2)[20]

Nitrogen oxides (NOx) is a family of highly reactive gases that are primary precursors to the formation of ground-level ozone and react in the atmosphere to form acid rain. NOx is emitted from combustion processes in which fuel is burned at high temperatures, principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NOx is a strong oxidizing agent that reacts in the air to form corrosive nitric acid, as well as toxic organic nitrates. EPA regulates only nitrogen dioxide (NO2) as a surrogate for this family of compounds because it is the most prevalent form of NOx in the atmosphere that is generated by anthropogenic (human) activities.[21]

NOx is an ozone precursor that combines with Reactive Organic Gases (ROG) to form ozone. See the ozone section above for a discussion of the health effects of ozone. Direct inhalation of NOx can also cause a wide range of health effects. NOx can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza.

Short-term exposures (e.g., less than 3 hours) to low levels of nitrogen dioxide (NO2) may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO2 may lead to increased susceptibility to respiratory infection and may cause irreversible alterations in lung structure. Other health effects associated with NOx are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO2 may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NOx can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NOx can also impair visibility. NOx is a major component of acid deposition in California. NOx may affect both terrestrial and aquatic ecosystems. NOx in the air is a potentially significant contributor to a number of environmental effects such as acid rain and eutrophication in coastal waters.

---

[20] Ibid, pg 29.

[21] United States Environmental Protection Agency (EPA), Nitrogen Oxides (NOx). Why and How They Are Controlled, 456/F-99-006R, November 2019

Eutrophication occurs when a body of water suffers an increase in nutrients that reduce the amount of oxygen in the water, producing an environment that is destructive to fish and other animal life.

NO2 is toxic to various animals as well as to humans. Its toxicity relates to its ability to combine with water to form nitric acid in the eye, lung, mucus membranes, and skin. Studies of the health impacts of NO2 include experimental studies on animals, controlled laboratory studies on humans, and observational studies.

In animals, long-term exposure to NOx increases susceptibility to respiratory infections, lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of NO2, can suffer lung irritation and, potentially, lung damage. Epidemiological studies have also shown associations between NO2 concentrations and daily mortality from respiratory and cardiovascular causes as well as hospital admissions for respiratory conditions.

NOx contributes to a wide range of environmental effects both directly and when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication as discussed above. Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms.

The CARB found NO2 standards in Tulare County as unclassified/attainment of Federal standards and attainment for State standards.

Sulfur Dioxide (SO2)[22]

The major source of sulfur dioxide (SO2) is the combustion of high-sulfur fuels for electricity generation, petroleum refining and shipping. High concentrations of SO2 can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of asthmatic individuals to elevated SO2 levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of

[22] Ibid, pg 30.

SO_2, in conjunction with high levels of PM, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. SO_2 also is a major precursor to $PM_{2.5}$, which is a significant health concern and a main contributor to poor visibility. In humid atmospheres, sulfur oxides can react with vapor to produce sulfuric acid, a component of acid rain.

The CARB found SO_2 standards in the Tulare County as unclassified for federal standards and attainment for State standards.

Lead[23]

Lead, a naturally occurring metal, can be a constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used until recently to increase the octane rating in automobile fuel. Since the 1980s, lead has been phased out in gasoline, reduced in drinking water, reduced in industrial air pollution, and banned or limited in consumer products. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels; however, the use of leaded fuel has been mostly phased out. Since this has occurred the ambient concentrations of lead have dropped dramatically.

Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children. Effects on the nervous systems of children are one of the primary health risk concerns from lead. In high concentrations, children can even suffer irreversible brain damage and death. Children 6 years old and under are most at risk, because their bodies are growing quickly.

The CARB found Lead standards in Tulare County as unclassified/attainment of Federal standards and attainment for State standards.

Toxic Air Contaminants[24]

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TAC) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence

[23] Ibid, pg 31.
[24] Ibid.

of criteria documents. The identification, regulation and monitoring of TAC is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TAC are regulated on the basis of risk rather than specification of safe levels of contamination. The ten TAC are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (diesel PM). Caltrans' guidance for transportation studies references the Federal Highway Administration (FHWA) memorandum titled "Interim Guidance on Air Toxic Analysis in NEPA Documents" which discusses emissions quantification of six "priority" compounds of 21 Mobile Source Air Toxics (MSAT) identified by the United States Environmental Protection Agency (USEPA). The six "priority" compounds are diesel exhaust (particulate matter and organic gases), benzene, 1,3-butadiene, acetaldehyde, formaldehyde, and acrolein.

Some studies indicate that diesel PM poses the greatest health risk among the TAC listed above. A 10-year research program (California Air Resources Board 1998) demonstrated that diesel PM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to diesel PM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Diesel PM differs from other TAC in that it is not a single substance but a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TAC, however, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The CARB has made preliminary concentration estimates based on a diesel PM exposure method. This method uses the CARB emissions inventory's PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of diesel PM. Table 3-5 depicts the CARB Handbook's recommended buffer distances associated with various types of common sources.

Table 3-5

Recommendations on Siting New Sensitive Land Uses such as Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*[25]

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads [1]	- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). - Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	- Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. - Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

1: The recommendation to avoid siting new sensitive land uses within 500 feet of a freeway was identified in CARB's Air Quality and Land Use Handbook published in 2005. CARB recently published a technical advisory to the Air Quality and Land Use Handbook indicating that new research has demonstrated promising strategies to reduce pollution exposure along transportation corridors.

*Notes:

- These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.
- Recommendations are based primarily on data showing that the air pollution exposures addressed here (i.e., localized) can be reduced as much as 80% with the recommended separation.
- The relative risk for these categories varies greatly (see Table 1-2). To determine the actual risk near a particular facility, a site-specific analysis would be required. Risk from diesel PM will decrease over time as cleaner technology phases in.
- These recommendations are designed to fill a gap where information about existing facilities may not be readily available and are not designed to substitute for more specific information if it exists. The recommended distances take into account other factors in addition to available health risk data (see individual category descriptions).
- Site-specific project design improvements may help reduce air pollution exposures and should also be considered when siting new sensitive land uses.
- This table does not imply that mixed residential and commercial development in general is incompatible. Rather it focuses on known problems like dry cleaners using perchloroethylene that can be addressed with reasonable preventative actions.
- A summary of the basis for the distance recommendations can be found in the ARB Handbook: Air Quality and Land Use Handbook: A Community Health Perspective.

Source: SJVAPCD 2022

Existing air quality concerns within Woodlake and the entire SJVAB are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Odors[26]

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection

---

[25] Ibid, pg 33.

[26] Ibid, pg 34.

threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJVAB. The types of facilities that are known to produce odors are shown in Table 3-6 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The Project does not propose any uses that would be considered traditional potential odor sources; however, the information presented in Table 3-6 will be used as a screening level analysis to determine if the Project would be impacted by existing odor sources in the study area. Such information is presented for informational purposes, but it is noted that the environment's effect on the Project, including exposure to potential odors, would not be an impact for CEQA purposes.

Table 3-6

Screening Levels for Potential Odor Sources[27]

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Compositing Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

Source: SJVAPCD 2022

[27] Ibid, pg 34.

Naturally Occurring Asbestos[28]

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Asbestos is commonly found in ultramafic rock and near fault zones. The amount of asbestos that is typically present in these rocks' ranges from less than 1% up to approximately 25% and sometimes more. It is released from ultramafic rock when it is broken or crushed. This can happen when cars drive over unpaved roads or driveways, which are surfaced with these rocks, when land is graded for building purposes, or at quarrying operations. Asbestos is also released naturally through weathering and erosion. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. Asbestos is hazardous and can cause lung disease and cancer dependent upon the level of exposure. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem.

The proposed Project's construction phase may cause asbestos to become airborne due to the construction activities that will occur on site. The Project would be required to submit a Dust Control Plan under the SJVAPCD's Rule 8021.

Regulatory Setting[29]

Air quality within the project area is regulated by several jurisdictions including the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

<u>Federal Regulations</u>[30]

U.S. Environmental Protection Agency

The Federal Clean Air Bill first adopted in 1967 and periodically amended since then, established federal ambient air quality standards. A 1987 amendment to the Bill set a deadline for the attainment

[28] Ibid, pg 35.

[29] Ibid, pg 1.

[30] Ibid.

of these standards. That deadline has since passed. The other Clean Air Act (CAA) Bill Amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources. The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the 1990 amendments.

The CAA and the national ambient air quality standards identify levels of air quality for six "criteria" pollutants, which are considered the maximum levels of ambient air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants include ozone, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide, particulate matter, and lead.

CAA Section 176(c) (42 U.S.C. 7506(c)) and EPA transportation conformity regulations (40 CFR 93 Subpart A) require that each new RTP and Transportation Improvement Program (TIP) be demonstrated to conform to the State Implementation Plan (SIP) before the RTP and TIP are approved by the Metropolitan planning organization (MPO) or accepted by the U.S. Department of Transportation (DOT). The conformity analysis is a federal requirement designed to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS). However, because the State Implementation Plan (SIP) for particulate matter ten microns or less in diameter (PM10), particulate matter 2.5 microns or less in diameter (PM2.5), and Ozone address attainment of both the State and federal standards, for these pollutants, demonstrating conformity to the federal standards is also an indication of progress toward attainment of the State standards. Compliance with the State air quality standards is provided on the pages following this federal conformity discussion.

The EPA approved San Joaquin Valley reclassification of the ozone (8-hour) designation to extreme nonattainment in the Federal Register on May 5, 2010, even though the San Joaquin Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard. In accordance with the CAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. In the Federal Register on October 26, 2015, the EPA revised the primary and secondary standard to 0.070 parts per million (ppm) to provide increased public health protection against health effects associated with long- and short-term exposures. The previous ozone standard was set in 2010 at 0.075 ppm.

State Implementation Plan (SIP)/ Air Quality Management Plans (AQMPs)

To ensure compliance with the NAAQS, EPA requires states to adopt SIP aimed at improving air quality in areas of nonattainment or a Maintenance Plan aimed at maintaining air quality in areas that have attained a given standard. New and previously submitted plans, programs, district rules, state regulations, and federal controls are included in the SIPs. Amendments made in 1990 to the federal

CAA established deadlines for attainment based on an area's current air pollution levels. States must enact additional regulatory programs for nonattainment's areas in order to adhere with the CAA Section 172. In California, the SIPs must adhere to both the NAAQS and the California Ambient Air Quality Standards (CAAQS).

To ensure that State and federal air quality regulations are being met, Air Quality Management Plans (AQMPs) are required. AQMPs present scientific information and use analytical tools to identify a pathway towards attainment of NAAQS and CAAQS. The San Joaquin Valley Air Pollution Control District (SJVAPCD) develops the AQMPs for the region where the Tulare County Association of Governments (TCAG) operates. The regional air districts begin the SIP process by submitting their AQMPs to the California Air Resources Board (CARB). CARB is responsible for revising the SIP and submitting it to EPA for approval. EPA then acts on the SIP in the Federal Register. The items included in the California SIP are listed in the Code of Federal Regulations Title 40, Chapter 1, Part 52, Subpart 7, Section 52.220.

<u>Transportation Control Measures</u>

One particular aspect of the SIP development process is the assessment of available transportation control measures (TCMs) as a part of making progress towards clean air goals. TCMs are defined in Section 108(f)(1) of the CAA and are strategies designed to reduce vehicle miles traveled, vehicle idling, and associated air pollution. These goals are generally achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

<u>Energy Policy Act of 1992 (EPAct)</u>

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of alternative fueled vehicles (AFVs). States are also required by the act to consider a variety of incentive programs to help promote AFVs.

State of California Regulations[31]

California Air Resources Board (CARB)

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing its own air quality legislation called the California Clean Air Act (CCAA), adopted in 1988. CARB was created in 1967 from the merging of the California Motor Vehicle Pollution Control Board and the Bureau of Air Sanitation and its Laboratory.

CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. Whereas CARB has primary responsibility and produces a major part of the SIP for pollution sources that are statewide in scope, it relies on the local air districts to provide additional strategies for sources under their jurisdiction. CARB combines its data with all local district data and submits the completed SIP to the EPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by CARB, and attainment plans adopted by the Air Pollution Control Districts (APCDs) and Air Quality Management District's (AQMDs) and approved by CARB.

States may establish their own standards, provided the State standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to California Health and Safety Code (CH&SC) [§39606(b)] and its predecessor statutes.

The CH&SC [§39608] requires CARB to "identify" and "classify" each air basin in the State on a pollutant-by-pollutant basis. Subsequently, CARB designated areas in California as nonattainment based on violations of the CAAQSs. Designations and classifications specific to the SJVAB can be found in the next section of this document. Areas in the State were also classified based on severity of air pollution problems. For each nonattainment class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five percent-per year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. In addition, air districts in violation of CAAQS are required to prepare an Air Quality Attainment Plan (AQAP) that lays out a program to attain and maintain the CCAA mandates.

CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the Tulare

[31] Ibid, pg 6.

County Association of Governments (TCAG) region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. TCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects that the Tulare County region would achieve the prescribed emissions targets. That plan is currently being updated.

Other CARB duties include monitoring air quality. CARB has established and maintains, in conjunction with local APCDs and AQMDs, a network of sampling stations (called the State and Local Air Monitoring [SLAMS] network), which monitor the present pollutant levels in the ambient air.

Tulare County is in the CARB-designated, SJVAB. A map of the SJVAB is provided in Appendix B, Figure 3. In addition to Tulare County, the SJVAB includes Fresno, Kern, Madera, Merced, San Joaquin, Stanislaus, and Kings Counties. Federal and State standards for criteria pollutants are provided in Table 3-7.

Table 3-7
Ambient Air Quality Standards[32]

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 $\mu g/m^3$)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 $\mu g/m^3$)		0.070 ppm (137 $\mu g/m^3$)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 $\mu g/m^3$	Gravimetric or Beta Attenuation	150 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 $\mu g/m^3$		–		
Fine Particulate Matter (PM2.5)[9]	24 Hour	–	–	35 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 $\mu g/m^3$	Gravimetric or Beta Attenuation	12.0 $\mu g/m^3$	15 $\mu g/m^3$	
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)[10]	1 Hour	0.18 ppm (339 $\mu g/m^3$)	Gas Phase Chemiluminescence	100 ppb (188 $\mu g/m^3$)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 $\mu g/m^3$)		0.053 ppm (100 $\mu g/m^3$)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 $\mu g/m^3$)	Ultraviolet Fluorescence	75 ppb (196 $\mu g/m^3$)	–	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 $\mu g/m^3$)	
	24 Hour	0.04 ppm (105 $\mu g/m^3$)		0.14 ppm (for cetain areas)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for cetain areas)[11]	–	
Lead[12,13]	30 Day Average	1.5 $\mu g/m^3$	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 $\mu g/m^3$ (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 $\mu g/m^3$		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 $\mu g/m^3$	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 $\mu g/m^3$)	Gas Chromatography			

[32] Ibid, pg 9

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the State. Rather than mandating the use of specific technology or the reliance on a specific fuel, CARB's motor vehicle standards specify the allowable grams of pollutant per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved.

California Clean Air Act

The CCAA was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CCAA establishes more stringent ambient air quality standards than those included in the Federal CAA. CARB is the agency responsible for administering the CCAA. CARB established ambient air quality standards pursuant to the CH&SC [§39606(b)], which are similar to the federal standards. The SJVAPCD is one of 35 AQMDs that have prepared air quality management plans to accomplish a five percent (5%) annual reduction in emissions documenting progress toward the State ambient air quality standards.

Tanner Air Toxics Act

California regulates Toxic Air Contaminants (TACs) primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted EPA's list of Hazardous Air Pollutants (HAPs) as TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and offroad diesel equipment (e.g., tractors, generators). These rules and standards provide for:

▪ More stringent emission standards for some new urban bus engines, beginning with 2002 model year engines.

▪ Zero-emission bus demonstration and purchase requirements applicable to transit agencies

▪ Reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

AB 1493 (Pavley)

AB 1493 (Pavley) enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB would apply to 2009 and later model year vehicles. CARB estimated that the regulation would reduce climate change emissions from light duty passenger vehicles by an estimated 18 percent in 2020 and by 27 percent in 2030 [Association of Environmental Professionals (AEP) 2007)]. In 2005, the CARB requested a waiver from U.S. EPA to enforce the regulation, as required under the CAA. Despite the fact that no waiver had ever been denied over a 40-year period, the then Administrator of the EPA sent Governor Schwarzenegger a letter in December 2007, indicating he had denied the waiver. On March 6, 2008, the waiver denial was formally issued in the Federal Register. Governor Schwarzenegger and several other states immediately filed suit against the federal government to reverse that decision. On January 21, 2009, CARB requested that EPA reconsider denial of the waiver. EPA scheduled a re-hearing on March 5, 2009. On June 30, 2009, EPA granted a waiver of CAA preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. December 31, 2020, is the deadline for achieving the 2020 GHG emissions cap. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions.

CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan adopted in December of 2008. The current plan has identified new policies and actions to accomplish the State's 2030 GHG limit.

Senate Bill 375

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the Tulare County Association of Governments (TCAG), CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. TCAG 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is currently being updated, projects that the Tulare County region would achieve the prescribed emissions targets.

This law also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

Executive Order B-30-15

Executive Order B-30-15, which was signed by Governor Brown in 2016, establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

California Global Warming Solutions Act of 2006: emissions limit, or SB 32

SB 32 is a California Senate bill expanding upon AB 32 to reduce greenhouse gas (GHG) emissions. The lead author is Senator Fran Pavley, and the principal co-author is Assembly member Eduardo Garcia. SB 32 was signed into law on September 8, 2016, by Governor Brown. SB 32 sets into law the mandated reduction target in GHG emissions as written into Executive Order B-30-15. SB 32 requires that there be a reduction in GHG emissions to 40% below the 1990 levels by 2030. Greenhouse gas emissions include carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. The California Air Resources Board (CARB) is responsible for ensuring that California meets this goal. The provisions of SB 32 were added to Section 38566 of the Health and Safety Code subsequent to the bill's approval. The bill went into effect January 1, 2017. SB 32 builds onto Assembly Bill (AB) 32 written by Senator Fran Pavley and Assembly Speaker Fabian Nunez passed into law on September 27, 2006. AB 32 required California to reduce greenhouse gas emissions to 1990 levels by 2020 and SB 32 continues that timeline to reach the targets set in Executive Order B-30-15. SB 32 provides another intermediate target between the 2020 and 2050 targets set in Executive Order S-3-05.

Regional Agencies[33]

San Joaquin Valley Air Pollution Control District

The SJVAPCD is the agency responsible for monitoring and regulating air pollutant emissions from stationary, area, and indirect sources within Tulare County and throughout the SJVAB. The District also has responsibility for monitoring air quality and setting and enforcing limits for source emissions. CARB is the agency with the legal responsibility for regulating mobile source emissions. The District is precluded from such activities under State law.

The District was formed in mid-1991 and prepared and adopted the San Joaquin Valley Air Quality Attainment Plan (AQAP), dated January 30, 1992, in response to the requirements of the State CCAA.

[33] Ibid, pg 15

The CCAA requires each non-attainment district to reduce pertinent air contaminants by at least five percent (5%) per year until new, more stringent, 1988 State air quality standards are met.

Activities of the SJVAPCD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

The SJVAPCD has prepared the following State Implementation Plans to address ozone, PM10 and PM2.5 that currently apply to non-attainment areas:

- The 2016 Ozone Plan (2008 standard) was adopted by SJVAPCD on June 16, 2016 and subsequently adopted by ARB on July 21, 2016.
- The 2013 1-Hour Ozone Plan (revoked 1997 standard) was adopted by the SJVAPCD on September 19, 2013. EPA withdrew its approval of the plan due to litigation. The District plans to submit a "redesignation substitute" to EPA to maintain its attainment status for this revoked ozone standard.
- The 2007 PM-10 Maintenance Plan (as revised in 2015) was approved by EPA on July 8, 2016 (effective September 30, 2016).
- The 2012 PM2.5 Plan (as revised in 2015) was approved by EPA on August 16, 2016 (effective September 30, 2016).

The SJVAPCD Plans identified above represent SJVAPCD's plan to achieve both state and federal air quality standards. The regulations and incentives contained in these documents must be legally enforceable and permanent. These plans break emissions reductions and compliance into different emissions source categories.

The SJVAPCD also prepared the *Guide for Assessing and Mitigation Air Quality Impacts* (GAMAQI), dated March 19, 2015. The GAMAQI is an advisory document that provides Lead Agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality impacts in environmental documents. Local jurisdictions are not required to utilize the methodology outlined therein. This document describes the criteria that SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

SJVAPCD Regulations

The SJVAPCD has adopted numerous rules and regulations to implement its air quality plans. Following, are significant rules that will apply to the Project.

Regulation VIII – Fugitive PM10 Prohibitions

Regulation VIII is comprised of District Rules 8011 through 8081, which are designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc. The proposed Project will be required to comply with this regulation. Regulation VIII control measures are provided below:

1. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.

2. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.

3. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.

4. When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.

5. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.

6. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.

7. Within urban areas, track out shall be immediately removed when it extends fifty or more feet from the site and at the end of each workday.

Rule 8021 – Construction, Demolition, Excavation, and Other Earthmoving Activities

District Rule 8021 requires owners or operators of construction projects to submit a Dust Control Plan to the District if at any time the project involves non-residential developments of five or more acres of disturbed surface area or moving, depositing, or relocating of more than 2,500 cubic yards per day of bulk materials on at least three days of the project. The proposed Project will meet these criteria and will be required to submit a Dust Control Plan to the District in order to comply with this rule.

Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

If asphalt paving will be used, then paving operations of the proposed Project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Rule 9510 – Indirect Source Review (ISR)

The purpose of this rule is to fulfill the District's emission reduction commitments in the PM10 and Ozone Attainment Plans, achieve emission reductions from construction activities, and to provide a mechanism for reducing emissions from the construction of and use of development projects through off-site measures. The rule is expected to reduce nitrogen oxides and particulates throughout the San Joaquin Valley by more than 10 tons per day.

<u>Local Regulations</u>

City of Woodlake General Plan

California State Law requires every city and county to adopt a comprehensive General Plan to guide its future development. The General Plan essentially serves as a "constitution for development"— the document that serves as the foundation for all land use decisions. The updated City of Woodlake General Plan (2008 to 2028) includes Land Use element, Circulation Element and open Space, Parks, recreation and Conservation Element to local concerns and achieve the goals.

Impact Analysis

Impact AIR-1: *Conflict with or obstruct implementation of the applicable air quality plan?*

Less Than Significant. The primary way of determining consistency with the air quality plan's (AQP's) assumptions is determining consistency with the applicable General Plan to ensure that the Project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. City of Woodlake uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards.

The applicable General Plan for the Project is the City of Woodlake General Plan. The Project is consistent with the currently adopted General Plan and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the applicable AQPs. As a result, the Project will not conflict with or obstruct implementation of any air quality plans. Hence, no mitigation is needed.

The Project would not conflict with or obstruct implementation of the applicable AQPs. Thus, any impacts to air resources would be considered ***less than significant***.

Mitigation Measures: None are required.

Impact AIR-2: *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. The Tulare County area is nonattainment for Federal and State air quality standards for ozone, in attainment of Federal standards and nonattainment for State standards for PM10, and nonattainment for Federal and State standards for PM2.5. The SJVAPCD has prepared the 2016 and 2013 Ozone Plans, 2007 PM10 Maintenance Plan, and 2012 PM2.5 Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone and PM. Inconsistency with any of the plans would be considered a cumulatively adverse air quality impact. As discussed in Impact AIR-1, the Project is consistent with the currently adopted City of Woodlake General Plan and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the project is consistent with the growth assumptions used in 2011 Air Quality Plan.

Project specific emissions that exceed the thresholds of significance for criteria pollutants would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the County is in non-attainment under applicable federal or state ambient air quality standards. It should be noted that a project is not characterized as cumulatively insignificant when project emissions fall below thresholds of significance. The SJVAPCD has established thresholds of significance for determining environmental significance which are provided in Table 3-8.

Table 3-8

SJVAPCD Air Quality Thresholds of Significance

Project Type	Ozone Precursor Emissions (tons/year)					
	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Construction Emissions	100	10	10	27	15	15
Operational Emissions (Permitted Equipment and Activities)	100	10	10	27	15	15
Operational Emissions (Non-Permitted Equipment and Activities)	100	10	10	27	15	15

Source: SJVAPCD 2022

Short-Term Impacts

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust and exhaust pollutants generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture. Exhaust pollutants are the non-useable gaseous waste products produced during the combustion process. Engine exhaust contains CO, HC, and NOx pollutants which are harmful to the environment.

Adverse effects of construction activities cause increased dust-fall and locally elevated levels of total suspended particulate. Dust-fall can be a nuisance to neighboring properties or previously completed developments surrounding or within the Project area and may require frequent washing during the construction period.

PM10 emissions can result from construction activities of the Project. The SJVAPCD has determined that compliance with Regulation VIII and other control measures will constitute sufficient mitigation to reduce PM10 impacts to a level considered less-than significant for most development projects. Even with implementation of District Regulation VIII and District Rule 9510, large development projects may not be able to reduce project specific construction impacts below District thresholds of significance.

Ozone precursor emissions are also an impact of construction activities and can be quantified through calculations. Numerous variables factored into estimating total construction emission include level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and amount of materials to be transported onsite or offsite. Additional exhaust emissions would be associated with the transport of workers and materials. Because the specific mix of construction equipment is not presently known for this Project, construction emissions were estimated using CalEEMod Model defaults for construction equipment.

Table 3-9 shows the CalEEMod estimated construction emissions that would be generated from construction of the Project. The construction emission from Project will not exceed the SJVAPCD emission thresholds for criteria pollutants.

Table 3-9

Construction Emissions - SJVAPCD Significance Thresholds[34]

Summary Report	CO	NOx	ROG	SOx	PM10	PM2.5	CO2e
Project Construction Emissions	4.9	3.9	3.73	0.02	1.2	0.45	1405.4
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard	No	No	No	No	No	No	No

[34] Ibid, 7.2.

Long-Term Impacts

Long-Term emissions from the Project would be generated primarily by stationary source (operation of the Project) and mobile source (Autos and Trucks) emissions from the Project site and area sources such as Importing of the products, employee's commute, use of motors to operate the facility etc.

Localized Operational Emissions – Ozone/Particulate Matter

Significance criteria have been established for criteria pollutant emissions as documented in Section 3.2. Operational emissions have been estimated for the Project using the CalEEMod Model and detailed results are included in Appendix A of this report.

Results of the CalEEMod analysis are shown in Table 3-10. Results indicate that the annual operational emissions from the Project is less than the SJVAPCD emission thresholds for criteria pollutants.

Table 3-10

Operational Emissions - SJVAPCD Significance Thresholds[35]

Summary Report	CO	NOx	ROG	SOx	PM10	PM2.5	CO2e
Project Operational Emissions	41.4	8.84	9.8	0.1	9.86	2.76	13160.45
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard	No	No	No	No	No	No	No

Carbon Monoxide

The SJVAPCD is currently in unclassified/attainment for Federal standards and attainment for State standards for CO. An analysis of localized CO concentrations is typically warranted to ensure that standards are maintained. Also, an analysis is required to ensure that localized concentrations do not reach potentially unhealthful levels that could affect sensitive receptors (residents, school children, hospital patients, the elderly, etc.).

[35] Ibid, 7.2.

As demonstrated in Tables 3-9 and 3-10, results of the analysis show that emissions generated from construction and operation of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants. Hence, there will be no significant impact and mitigation measures are not required.

Typically, high CO concentrations are associated with roadways or intersections operating at an unacceptable Level of Service (LOS). "Hot Spot" modeling is required if a traffic study reveals that the project will reduce the LOS on one or more streets to E or F or if the project will worsen an existing LOS F.

To analyze the Future horizon year with Project "worst case" CO concentrations at study roadway segments, the analysis methodology considered the highest annual maximum CO concentration reported in 2013, using 1.0 PPM as an estimate of the background concentration for the 8-hour standard and 2.2 PPM for the 1-hour standard (source: CARB annual publications). Other modeling assumptions include a wind speed of .5 m/s, flat topography, 1,000-meter mixing height, and a 5-degree wind deviation.

Toxic Air Contaminants (TAC)

Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, this is a Type A Project in that it may potentially place toxic sources in the vicinity of existing sensitive receptors. The SJVAPCD's Guidance Document, Guidance for Assessing and Mitigating Air Quality Impacts – 2015, identifies the need for projects to analyze the potential for adverse air quality impacts to sensitive receptors.

The first step in evaluating the potential for impacts to sensitive receptors for TACs from the Project is to perform a screening level analysis that includes all sources of emissions. The recommended screening method by the SVAPCD is a 'prioritization' using the latest approved California Air Pollution Control Officer's Association (CAPCOA) methodology. A prioritization score of 10 or greater triggers the need for a refined Health Risk Assessment (HRA).

Health risks such as cancer risk, chronic hazard index, and acute hazard index needs to be calculated for a variety of receptor locations. Receptors of primary interest are those at residential locations, at sensitive population locations, and at off-site worker locations. However, in order to get a more complete picture of the patterns of exposure, and for consistency with the HARP software, concentrations and risk needs to be calculated along the proposed Project's boundary. The receptors used to analyze project impacts include on-site and off-site worker locations and residences adjacent to the Project. Sensitive receptor locations are depicted in Figure 4. The nearest residential location is at 175m (approx. 575 ft). An ambient air quality screening analysis and a health risk screening analysis were prepared to evaluate potential localized air quality impacts and health risk impacts associated with the proposed Project. See Impact AIR-3.

Odors

The proposed Project may generate odorous emission given the nature or characteristics of cannabis grow facility. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The types of facilities that are known to produce odors are shown in Table 3-11 below along with a reasonable distance from the source within which, the degree of odors could possibly be significant. It should be noted that other facilities known to generate odorous emissions are also located near or adjacent to the Project. In addition, Project operations will be in compliance with City of Woodlake regulations regarding odor control and will include carbon filtration, masking or the use of odor neutralizing tanks to reduce Project generated odors. Impacts from odors are less than significant.

Table 3-11

Screening Levels for Potential Odor Sources

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Compositing Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

Naturally Occurring Asbestos (NOA)

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Construction of the Project may cause asbestos to become airborne due to the construction activities that will occur on site. The Project would be required to submit a Dust Control Plan under the SJVAPCD's Rule 8021. Compliance with Rule 8021 would limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities associated with the Project.

The Dust Control Plan may include the following measures:

1. Water wetting of road surfaces
2. Rinse vehicles and equipment
3. Wet loads of excavated material, and
4. Cover loads of excavated material

Indirect Source Review

The Project is subject to the SJVAPCD's ISR program, which is also known as Rule 9510. Rule 9510 and the Administrative ISR Fee Rule (Rule 3180) are the result of state requirements outlined in the California Health and Safety Code, Section 40604 and the State Implementation Plan (SIP). The purpose of the SJVAPCD's ISR program is to reduce emissions of NOx and PM10 from new projects. In general, new developments contribute to the air-pollution problem in the Valley by increasing the number of vehicles and vehicle miles traveled.

As discussed above in Short-Term and Long-Term Impacts, results of the analysis show that emissions generated from construction and operation of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants. Impacts are ***less than significant*** to this resource item.

Mitigation Measures: None are required.

Impact AIR-3: *Expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant. An ambient air quality screening analysis and a health risk screening analysis were prepared to evaluate potential air quality impacts related to the generation of toxic air contaminants (TACs) from construction and operations of the proposed Woodlake Cannabis Project located southeast of W Ropes Avenue and S Blair Road in Woodlake, CA. The Ambient Air Quality Screening and Health Risk Screening Analysis was performed by Johnson Johnson and Miller Air Quality Consulting Services on behalf of the Project. The study report can be found in its entirety in Appendix C.

The purpose of the Health Risk Analysis (HRA) is to assess potential elevated TAC concentrations and associated health impacts that could result from the proposed project, consistent with guidelines and methodologies from San Joaquin Valley Air Pollution Control District (SJVAPCD), California Air Resources Board (CARB), Office of Environmental Health Hazard Assessment (OEHHA), and the U.S. Environmental Protection Agency (U.S. EPA).

Ambient Air Quality Analysis: When assessing the significance of project-related impacts on air quality, the impacts may be significant when on-site emission increases from construction activities or operational activities exceed the 100-pounds-per-day screening level of any criteria pollutant after implementation of all enforceable mitigation measures. Projects that exceed the screening threshold would require an ambient air quality analysis using dispersion modeling to determine if projects would result in or contribute to a violation of the ambient air quality standard.

Toxic Air Contaminants: A Toxic Air Contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

The California Almanac of Emissions and Air Quality—2009 Edition presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data.1 The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk.2 In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Carcinogenic (cancer) risk is expressed as cancer cases per one million. Noncarcinogenic (acute and chronic) hazard indices (HI) are expressed as a ratio of expected exposure levels to acceptable exposure levels. The significance of the impacts of TAC emissions from both permitted and non-permitted equipment and activities is evaluated under a single threshold (currently 20 in one million).

The non-carcinogenic effects can be further divided into long-term (chronic) health effects such as birth defects, neurological damage, or genetic damage; and short-term (acute) effects such as eye irritation, respiratory irritation, and nausea. Projects with acute or chronic risk that exceed a HI score of 1 would result in a significant non-cancer impact.

Model Selection and Parameters

Project modeling quantifies emissions that will occur during construction and operation of the proposed Project. The modeling is based on the size of the project, the timing of construction and operation, the type of land use, trip generation, energy consumption, and other factors.

- Basic Project Information
  - o Region: Tulare County (the project is located in the Woodlake, CA)
  - o Construction Schedule: September 1, 2022 – August 31, 2023 (based on Air Quality Report)
  - o Start of Project Operations: 2024 (based on Air Quality Report)
- CalEEMod Assumptions used in the Ambient Air Quality Screening Analysis
  - o Consistent with those presented in the Woodlake Cannabis Project Air Quality & Greenhouse Gas and Energy Impact Assessment prepared by VRPA Technologies Inc., dated June 2022.
- Operational Assumptions Used in the Operational HRA
  - o Trip generation based on the most recent Transportation Impact Analysis (see Attachment B of this memorandum)
  - o On-site vehicle speeds: 5 miles per hour
  - o Off-site vehicle speeds: weighted average of 5-25 miles per hour

The analysis addresses localized criteria pollutant and toxic air contaminant emissions during project construction and operation using the CalEEMod 2020.4.0 emission model and EMFAC 2021.

The following criteria air pollutants were assessed in this analysis: reactive organic gases (ROG),3 oxides of nitrogen (NOX), carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM10), and particulate matter less than 2.5 microns in diameter (PM2.5). Note that the proposed project would emit ozone precursors ROG and NOX. However, the proposed project would not directly emit ozone since it is formed in the atmosphere during the photochemical reaction of ozone precursors.

The health risk screening uses PM10 exhaust as a surrogate for DPM per SJVAPCD guidance.

Dispersion modeling

An air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. The air dispersion model applied in this assessment was the United States Environmental Protection Agency (U.S. EPA) AERMOD (version 21112) air dispersion model. Specifically, AERMOD was used to estimate levels of air emissions at sensitive receptor locations from potential sources of project generated TACs. The use of AERMOD provides a refined methodology for estimating construction impacts by utilizing long-term, measured representative meteorological data for the project site and a representative construction schedule.

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. Direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. Terrain elevations were obtained for the project site using the AERMAP model, the AERMOD terrain data pre-processor. The air dispersion model assessment used meteorological data from the Visalia 93144 Station. The meteorological data used was preprocessed for use with AERMOD by the SJVAPCD and included data for the years 2007 to 2010; all years were used in the assessment. To evaluate the proposed project's localized impacts at the point of maximum impact, all receptors were placed within the breathing zone at 1.5 meters above ground level.

Air Toxics Generated during Operations—DPM

The project would generate passenger vehicle and truck trips from visitors traveling to and from the project site. The main source of DPM from the long-term operations of the proposed project would be from combustion of diesel fuel in diesel-powered engines in on-road trucks. On-site motor vehicle emissions refer to DPM exhaust emissions from the motor vehicle traffic that would travel and idle within the project site each day.

Emission factors are assigned to the expected vehicle mix as a function of vehicle age, vehicle class, speed, and fuel type. The operational fleet mix and daily diesel truck trips used to assess emissions from the proposed project are included as part of Attachment B of Appendix C.

Each operational emission source to be evaluated requires geometrical and emission release specifications for use in the air dispersion model. The emission source configurations applied in this assessment of operational DPM emissions are shown in Attachment B of Appendix C.

Operational emissions for the proposed project were assessed assuming the first year of operations would occur in 2024. Exhaust emissions of DPM (as PM10 exhaust) were estimated using EMFAC2021. The emission factors, AERMOD data, and emission estimation spreadsheets used to estimate motor vehicle DPM emissions during project operations are provided in Attachment B.

Cancer Risk

The model was run to obtain annual average concentration in micrograms per cubic meter [µg/m3] at future on-site sensitive residential receptors. Consistent with SJVAPCD guidance, a health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year exposure scenario. Cancer risk calculations were completed using HARP2. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA Human Health Evaluation Manual (1991) and the Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual (2015).[36],[37] A summary of the methodology is provided in the Appendix C.

Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation can be used to determine the non-cancer risk:

Hazard Quotient = Ci/RELi

[36] U.S. Environmental Protection Agency (EPA). 1991. Human Health Evaluation Manual. Website: https://www.epa.gov/sites/default/files/2015-11/documents/defaultExposureParams.pdf Accessed November, 2022.

[37] California Office of Environmental Health Hazards Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Website: http://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf Accessed November, 2022

Where:

Ci = Concentration in the air of substance i (annual average concentration in μg/m3)

RELi = Chronic noncancer Reference Exposure Level for substance i (μg/m3)

The non-cancer chronic hazard index was calculated in HARP2. The primary source of the emissions responsible for chronic risk are from diesel trucks. DPM does not have an acute risk factor; however, HARP2 was run to obtain the following for each receptor: cancer risk, chronic hazard index, and acuate hazard index. As DPM does not have an acute risk factor, the acuate hazard index for all modeled receptors was found to be zero.

Significance Threshold

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures would require additional analysis to determine if the preparation of an ambient air quality analysis is needed. The criteria pollutants of concern for localized impact in the Air Basin are PM10, PM2.5, NOX, and CO. There is no localized emission standard for ROG and most types of ROG are not toxic and have no health-based standard; however, ROG was included for informational purposes only.

Sensitive Receptors

Health risks were estimated for sensitive receptors located within approximately ¼-mile of the project boundary and extended to the nearest sensitive receptors in each direction. Sensitive receptors are facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of sensitive receptors include schools, hospitals, and residential areas.

Criteria Pollutant Air Quality Impact Screening Analysis

Emissions occurring at or near the project have the potential to create a localized impact, also referred to as an air pollutant hotspot. Localized emissions are considered significant if when combined with background emissions, they would result in exceedance of any health-based air quality standard. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard.

An analysis of maximum daily emissions during construction and operation was conducted using CalEEMod to determine if emissions would exceed 100 pounds per day for any pollutant of concern. The maximum daily operational emissions would occur at project buildout, which modeled in earliest year of operations (2024). Operational emissions include those generated on-site by area sources such as consumer products, and landscape maintenance, energy use from natural gas combustion, and motor vehicles operation at the project site. Motor vehicle emissions are estimated for on-site operations and travel within one (1) mile of the site. The results of the construction screening analysis are presented in Table 3-10. The highest daily NOX, PM10, and PM2.5, emissions occur during grading activities. The highest ROG emissions occur during application of architectural coatings. The maximum daily operational emissions are shown by source in Table 3-12.

Table 3-12

Localized Concentrations of ROG, PM10, PM2.5, CO, and NOX for Construction

Source	On-site Emissions (pounds per day)				
	ROG	NOX	CO	PM10	PM2.5
Maximum Daily 2022	3.21	33.10	20.72	10.47	6.03
Maximum Daily 2023	3.36	34.53	28.22	10.13	5.71
Maximum Daily 2024	3.08	18.96	25.04	1.49	0.83
Maximum Daily 2025	2.87	17.92	24.62	1.40	0.75
Maximum Daily 2026	128.94	17.86	24.33	1.40	0.75
Maximum Daily On-site Emissions	**128.94**	**34.53**	**28.22**	**10.47**	**6.03**
Significance Thresholds	—	100	100	100	100
Exceed Significance Thresholds?	—	No	No	No	No

Note: Overlap of construction activities is based on the construction schedule shown in Attachment A; overlap of construction activities is not anticipated to occur.

Source of Emissions: Modeling Assumptions and Results (Attachment A).

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19.

Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed August 1, 2022.

Table 3-13

Localized Concentrations of ROG, PM10, PM2.5, CO, and NOX for Operations

Source	Localized Emissions (pounds per day)				
	ROG	NOX	CO	PM10	PM2.5
Area	34.16	0.0	0.22	0.0	0.0
Energy	0.74	6.7	5.63	0.51	0.51
Mobile (Vehicles)	21.54	15.78	90.65	7.53	2.08
Total	**56.44**	**22.48**	**96.5**	**8.04**	**2.59**
Significance Thresholds	—	100	100	100	100
Exceed Significance Thresholds?	—	No	No	No	No

Source of Emissions: Modeling Assumptions and Results (Attachment A). Maximum daily emissions of NOX, CO, PM10, and PM2.5
were highest in the Winter scenario, while maximum daily emissions of ROG were highest in the Summer scenario.
Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air
Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF.
Accessed August 1, 2022.

As shown in Table 3-12, construction emissions are below the applicable screening thresholds and, therefore, are less than significant on a project basis. As shown in Table 3-13, operational emissions are below the significance thresholds and, therefore, are less than significant on a project basis.

Health Risk Impacts from Toxic Air Pollutant Emissions

An analysis of TACs (including DPM) was performed using the EPA approved AERMOD model. AERMOD version 21112 was used for this analysis. Health risk calculations were completed using HARP2. The full operational HRA is included as Attachment B of Appendix C.

Significance Thresholds

The SJVAPCD thresholds of significance for cancer and non-cancer risk are listed in Table 3-14.

Table 3-14

Health Risk Assessment Thresholds

Health Risk Metric	Applicable Threshold of Significance
Maximum Cancer Risk (Risk per Million)	Maximally exposed individual receptor equals or exceeds 20 in one million
Non-Cancer Hazard Index	Maximally exposed individual receptor equals or exceeds 1.0
Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed August 21, 2022.	

Health Risk Impacts

Results of the health risk analysis are summarized in Table 3-15 and Table 3-16. The complete construction and operational HRAs prepared for the proposed project, including HARP2 calculations and AERMOD output data, are included in Attachment B of Appendix C. SJVAPCD considers impacts from construction and operations separately. Because breathing rates and age sensitivity factors are highest in the zero (0) to two (2) years age of life, the combined health risk of construction and operations would be less than the sum of the health risks for construction and operations calculated separately (which both assume the third trimester as the start of exposure). Consistent with SJVAPCD guidance, the health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year exposure scenario for project operations.

Table 3-15

Summary of the Health Impacts from Construction of Proposed Project

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
Exposure at the MER During Construction (from DPM Emissions)	6.58	0.00316	0.00000
Applicable Threshold of Significance	**20**	**1**	**1**
Threshold Exceeded?	**No**	**No**	**No**

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
Notes: MER = Maximally Exposed Receptor DPM = Diesel Particulate Matter Woodlake Cannabis Project – Construction DPM MER UTM: (310260.20, 4031543.83) Source: Attachment B.			

Table 3-16

Summary of the Health Impacts from Operations of the Proposed Project (70-year Scenario)

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acute Non-Cancer Hazard Index
70-Year Exposure at the MER (DPM Emissions during Operations)	13.58	0.00259	0.00000
Applicable Threshold of Significance	**20**	**1**	**1**
Threshold Exceeded?	**No**	**No**	**No**
Notes: MER = Maximally Exposed Receptor DPM = Diesel Particulate Matter Woodlake Cannabis Project – Operations DPM MER UTM: (310219.12, 4031545.11) Source: Attachment B.			

As shown in Table 3-15, project construction would not exceed the cancer risk, chronic hazard, or acute hazard threshold levels. The primary source of the emissions responsible for chronic risk are from diesel powered off-road construction equipment and diesel trucks. DPM does not have an acute risk factor. Since the project does not exceed the applicable SJVAPCD thresholds for cancer risk, acute risk, or chronic risk, the impact related to the project's potential to expose sensitive receptors to substantial pollutant concentrations from the project's generation of TACs during project construction would be less than significant.

As shown in Table 3-16, operations of the proposed project would not exceed the cancer risk, chronic risk, or acute risk threshold levels. Therefore, the project's potential to expose sensitive receptors to substantial pollutant concentrations from the project's generation of TACs during project operations would be less than significant. As such, impacts resulting from exposing sensitive receptors to substantial pollutant concentrations are ***less than significant.***

Mitigation Measures: None are required.

Impact AIR-4: *Result in other emissions (such as those leading to odors) affecting a substantial number of people?*

Less Than Significant. The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

> Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
>
> Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 3-6 above along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The cannabis grow facility might generate localize construction and operational odors associated with the equipment operation, which could be potential odor sources for nearby residents.

Chapter 5.48 (N) of the City of Woodlake Municipal Code states, "Cannabis business shall provide a sufficient odor absorbing ventilation and exhaust system so that odor generated inside the facility that is distinctive to its operation is not detected outside the Premises, outside the building housing the Cannabis business, or anywhere on adjacent property of public rights-of-way." As such, the proposed Project and it future tenants are not expected to produce any offensive odors that would result in frequent odor complaints. Any impacts would be ***less than significant***.

Mitigation Measures: None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. The geographical area for considering cumulative impacts to air quality resources is the San Joaquin Valley Air Basin. Although the proposed Project would generate emissions, as discussed in the previous section, air quality impacts due to construction and operational emissions would fall below established significant thresholds.

The proposed Project is located in a rural area, along the western edge of the city of Woodlake. There are other stationary and mobile emissions sources in the immediate area; however, as discussed above, emissions of ROG, NOX, PM10, and PM2.5 associated with the construction and operation of the Project would not exceed the District's significance thresholds. The Project would not result in CO hotspots that would violate CO standards. Therefore, the emissions from the proposed Project operations are not expected to be cumulatively significant. As such, cumulative impacts are considered ***less than cumulatively considerable***.

3.3 Energy

Environmental Setting

Energy is fundamental to the economy and the quality of life of the Tulare County region. The primary energy source for the U.S. is petroleum (also referred to as "oil"), which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily since 1983; as of 2016, world consumption of oil had reached 99.5 million barrels per day by 2021 Dec (IEA Oil Market Report). The world supply of oil is anticipated to peak (i.e., reach the point of maximum production) sometime between now and 2042, before beginning a terminal decline that will put a significant strain on the economy if not anticipated and mitigated. However, the timing of the peak depends on multiple, uncertain factors that will affect how quickly remaining oil is consumed, such as the amount of oil that still remains in the ground; how much of the amount in the ground can be extracted and produced based on technological, economic, and environmental feasibility; and future demand for oil.

California's transportation sector is equally dependent upon oil, with petroleum-based fuels currently providing nearly all (96 percent) of California's transportation energy needs (CEC 2018). Furthermore, transportation-related activities represent almost half (48 percent) of California's petroleum-based fuel consumption. California refineries increasingly rely on imported petroleum products to meet this demand. In 2003 the CEC and ARB adopted a two-part strategy to reduce the state's petroleum demand: promoting improved vehicle efficiency and increasing the use of alternative fuels. In 2006, CEC and ARB set a goal that 20 percent of all transportation energy in 2020 comes from alternative fuels.

Similar to California and the U.S. as a whole, the Tulare region relies primarily on oil to meet its transportation needs. Motor vehicles are the largest consumer of fuels in the region's transportation sector. After gasoline, diesel fuel is the most utilized transportation energy source. The primary consumers of diesel fuel in the transportation sector are heavy-duty trucks, with medium-duty trucks, buses, light-duty passenger cars, and railway locomotives accounting for remaining diesel fuel consumption.

Alternative fuels are defined as fuels not derived from petroleum, such as natural gas, ethanol, and electricity. However, like petroleum, alternative fuels like natural gas and ethanol (which is primarily composed of diesel fuel) are also nonrenewable, finite resources. Electricity is also considered nonrenewable when generated from natural gas or coal, but considered renewable when generated from sources like solar, hydroelectric, or wind energy. Most alternative fuel facilities in the region supply compressed natural gas (CNG) or electricity. The region's limited alternative fuel infrastructure severely constrains the use of alternative fuel passenger vehicles.

Although average fuel efficiency for autos and trucks has experienced some improvements during the last quarter-century, fuel consumption associated with the large increase in VMT has exceeded the fuel consumption reductions achieved by improved efficiency, and the total amount of annual fuel consumption has continued to increase. The equipment and vehicles involved in the construction of residential and commercial development also consume energy. Currently, construction equipment and vehicles are generally dependent on petroleum-based fuels.

Fuel consumption in Tulare County is supposed to be decreased by the year 2046 due to implementation of electric charging station plan, as mentioned in the TCAG 2022 RTP/SCS Draft report. Along with that supply of alternative transportation fuels will further reduce fuel consumption. The fuel consumption outputs reflect a decreasing trend of fuel consumption per capita. The 2022 RTP/SCS shows that the VMT in 2021 baseline condition is 10,617,248 which will increase to 12,465,620, however with the proposed RTP/SCS it will decrease to 12,241,939 which would be an approximately 2%. This analysis shows that with implementation of the various multi-modal improvements (bike/pedestrian facilities, transit infrastructure/service, etc.), considering future land use development under the 2022 RTP/SCS, VMT and fuel consumption will decrease.

Regulatory Setting

<u>Federal Regulations</u>

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Energy and Policy Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards.

Energy Policy Act of 2005

This Act addresses energy efficiency; renewable energy requirement; oil, natural gas and coal; alternative-fuel use; tribal energy, nuclear security; vehicles and vehicle fuels, hydropower and geothermal energy, and climate change technology. The Act provides revised annual energy reduction goals (two percent per year beginning in 2006), revised renewable energy purchase goals, federal procurement of Energy Star or Federal Energy Management Program-designated products, federal green building standards, and fuel cell vehicle and hydrogen energy system research/demonstration.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was enacted to promote the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs), such as Tulare CAG, were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process for specific projects would then address these policies. Another requirement was to consider the consistency of transportation planning with federal, State, and local energy goals. Through this requirement, energy consumption was expected to become a decision criterion, along with cost and other values that determine the best transportation solution.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (EISA) set increased Corporate Average Fuel Economy (CAFÉ) standards for motor vehicles and includes the following provisions related to energy efficiency:

- Renewable fuel standards (RFS)
- Appliance and lighting efficiency standards
- Building energy efficiency

EISA requires increasing levels of renewable fuels to replace petroleum. The EPA is responsible for developing and implementing regulations to ensure transportation fuel sold into the U.S. contains a minimum volume of renewable fuel.

The RFS program regulations were developed in collaboration with refiners, renewable fuel products, and other stakeholders and were created under the Energy Policy Act of 2005 and was expanded and extended by the 2007 EISA. The RFS program established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under EISA, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of the nation's renewable fuels sector. The EISA-updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline:
  - EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
  - EISA established new categories of renewable fuel and set separate volume requirements for each one; and
- EISA was required by the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.[38]

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternate energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Federal Vehicle Standards

In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of carbon dioxide (CO2) in model year 2025, on an average industry fleetwide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-

[38] U.S. EPA. Renewable Fuel Standard Program. Overview for Renewable Fuel Standard. https://www.epa.gov/renewable-fuel-standard-program/overview-renewable-fuel-standard. Accessed February 2021.

duty trucks for model years 2014 – 2018. The standards for CO2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018-2027 for certain trailers, and model years 2021-2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO2 emissions by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.[39]

In August 2018, The USEPA and NHTSA released a notice of proposed rulemaking called Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). This rule would modify the existing CAFÉ standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks, and establish new standards covering model years 2021-2026. SAFE standards are expected to uphold model year 2020 standards through 2026.[40]

State of California Regulations

Integrated Energy Policy Report

Senate Bill 138 (Bowen Chapter 568, Statues of 2002) requires the California Energy Commission to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public and safety (Public Resources Code §25301(a)).

[39] U.S. Department of Transportation. Briefing Room. EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Heavy-Duty Trucks. https://www.transportation.gov/briefing-room/epa-and-dot-finalize-greenhouse-gas-and-fuel-efficiency-standards-heavy-duty-trucks. Accessed February 2021.

[40] U.S. Department of Transportation. SAFE. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. https://www.nhtsa.gov/corporate-average-fuel-economy/safe#:~:text=The%20Safer%20Affordable%20Fuel%2DEfficient%20(SAFE)%20Vehicles%20Rule%20proposed,model%20years%202021%20through%202026. Accessed February 2021.

The 2019 Integrated Energy Policy Report[41] (IEPR) was adopted in February 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, transportation fuel supply reliability issues, and the California Energy Demand Forecast.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce energy consumption in California. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to this standard, which are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality." The CALGreen Code is not intended to substitute or be identified as

[41] California Energy Commission. 2019 Integrated Energy Policy Report Update. https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report. Accessed February 2021.

meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC).

CALGreen contains both mandatory and voluntary measures. For nonresidential land uses, there are 39 mandatory measures including, but not limited to, exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to nonresidential land uses, for a total of 36 additional elective measures.

California's Building Energy Efficiency Standards (Title 24) are updated on an approximately three-year cycle. Starting in 2020, the 2019 standards improve upon existing standards, focusing on three key areas: proposing new requirements for installation of solar photovoltaics for newly constructed low-rise residential buildings; updating current ventilation and Indoor Air Quality (IAQ) requirements; and extending Title 24 Part 6 to apply to healthcare facilities. The 2019 Building Energy Efficiency Standards are approximately 53 percent more efficient than the 2016 Title 24 Energy Standards for residential development and approximately 30 percent more efficient for nonresidential development.

Warrant-Alquist Energy Resources Conservation and Development Act

The Warren-Alquist Energy Resources Conservation and Development Act (Warren-Alquist Act), initially passed in 1974 and amended since, created the CEC, the State's primary energy and planning agency. The seven responsibilities of the Commission are: forecasting future energy needs, promoting energy efficiency and conservation through setting standards, supporting energy related research, developing renewable energy resources, advancing alternative and renewable transportation fuels and technologies, certifying thermal power plants 50 megawatts or larger, and planning for and directing State response to energy emergencies. The State Energy Commission regulates energy resources by incentivizing research into energy supply and demand dynamics to reduce the rate of growth of energy consumption. Additionally, the Warren-Alquist Act acknowledges the need for renewable energy resources and encourages the Commission to explore renewable energy options that would be in line with environmental and public safety goals.

Executive Order B-30-15

Executive Order B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, set a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase the amount of renewable electricity provided state-wide to 50 percent;

- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner;
- Reduce petroleum use in cars and trucks by up to 50 percent;
- Reduce emissions of short-lived climate pollutants; and
- Manage farms, rangelands, forests, and wetlands to increasingly store carbon.

Senate Bill (SB) 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California SB 375, known as the Sustainable Communities and Climate Protection Act, went into effect. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce GHG emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In 2010, CARB released the proposed GHG reduction targets for the MPOs. The proposed reduction targets for the Kern COG region were five percent by year 2020 and ten percent by year 2035 through September of 2018, then six percent by 2020 and 13 percent by 2035 beginning in October of 2018.[42]

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. The 2003 Integrated Energy Policy Report recommended accelerating that goal to 20 percent by 2010, and the 2004 Energy Report Update further recommended increasing the target to 33 percent by 2020. The state's Energy Action Plan also supported this goal. In 2006 under Senate Bill 107, California's 20 percent by 2010 RPS goal was codified. The legislation required retail sellers of electricity to increase renewable energy purchases by at least one percent

[42] California Air Resources Board. Regional Plan Targets. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed February 2021.

each year with a target of 20 percent renewables by 2010. Publicly owned utilities set their own RPS goals, recognizing the intent of the legislature to attain the 20 percent by 2010 target.

In 2008, Governor Schwarzenegger signed Executive Order S-14-08 requiring that "all retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." The following year, Executive Order S-21-09 directed CARB to enact regulations to achieve the goal of 33 percent renewables by 2020.

In 2015, Governor Brown signed Senate Bill 350 to codify ambitious climate and clean energy goals. One key provision of SB 350 is for retail sellers and publicly owned utilities to procure "half of the state's electricity from renewable sources by 2030."

The State's RPS program was further strengthened by SB 100 in 2018. SB 100 revised the State's RPS Program to require retail sellers of electricity to serve 50 percent and 60 percent of the total kilowatt-hours sold to retail end-use customers be served by renewable energy sources by 2026 and 2030, respectively, and to require that 100 percent of all electricity supplied come from renewable sources by 2045.

Executive Order B-55-18

In 2018, Governor Brown signed EO B-55-18 to achieve carbon neutrality by moving California to 100 percent clean energy by 2045. This Executive Order also includes specific measures to reduce GHG emissions via clean transportation, energy efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of the state's forest land.

Low Carbon Fuel Standard Regulation

CARB initially approved the Low Carbon Fuel Standard (LCFS) regulation in 2009, identifying it as one of the nine discrete early action measures in its 2008 Scoping Plan to reduce California's GHG emissions. The LCFS regulation defines a Carbon intensity, or "CI," reduction target (or standard) for each year, which the rule refers to as the "compliance schedule." The LCFS regulation requires a reduction of at least 10 percent in the CI of California's transportation fuels by 2020 and maintains that target for all subsequent years.

CARB has begun the rulemaking process for strengthening the compliance target of the LCFS through the year 2030. For a new LCFS target, the preferred scenario in its 2017 Scoping Plan Update identifies an 18 percent reduction in average transportation fuel carbon intensity, compared to a 2010 baseline, by 2030 as one of the primary measures for achieving the state's GHG 2030 target. Achieving the SB 32 reduction goals will require the use of a low carbon transportation fuels portfolio beyond the amount expected to result from the current compliance schedule.[43]

Advanced Clean Cars Program

In 2012, CARB approved the Advanced Clean Cars (ACC) Program (formerly known as Pavley II) for model years 2017-2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the Zero-Emission Vehicle (ZEV) regulation. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of zero-emission vehicles into a single package of standards. By 2025, new automobiles under California's Advanced Clean Car program will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

EO B-48-18, issued by Governor Brown in 2018, establishes a target to have five million ZEVs on the road in California by 2030. This Executive Order is supported by the State's 2018 ZEV Action Plan Priorities Update, which expands upon the State's 2016 ZEV Action Plan. While the 2016 plan remains in effect, the 2018 update functions as an addendum, highlighting the most important actions State agencies are taking in 2018 to implement the directives of EO B-48-18.

California Environmental Quality Act (CEQA)

Section 21100(b) of the California Environmental Quality Act (CEQA) Guidelines (State CEQA Guidelines) requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, or unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives.

In accordance with the intent of Appendix F of the State CEQA Guidelines, which requires an EIR to include a discussion of the potential energy impacts of a proposed project with an emphasis on

[43] California Air Resources Board. CARB amends Low Carbon Fuel Standard for wider impact. https://ww2.arb.ca.gov/index.php/news/carb-amends-low-carbon-fuel-standard-wider-impact. Accessed February 2023.

avoiding or reducing inefficient, wasteful, or unnecessary consumption of energy, this Draft EIR includes relevant information and analyses that address the energy implications of the Project. This section represents a summary of the Project's anticipated energy needs, impacts, and conservation measures.

Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of an energy impact are based on the following thresholds of significance, which come from Appendix G of the CEQA Guidelines. Accordingly, energy impacts resulting from the Project are considered significant if the Project would:

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?

Impact Analysis

Impact ENE-1: R*esult in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?*

Less Than Significant.

Short-Term (Construction)

The operation of off-road equipment, trucks, and worker traffic would be the primary source of energy consumption during the construction of the Project. Energy consumption generated during the construction phase was estimated using CalEEMod Model defaults for construction equipment since the specific mix of construction equipment is not presently known for this Project. It should be noted that energy usage from construction of the Project would be temporary in nature and would cease upon completion of the Project.

The estimated consumption of diesel fuel, considering the construction schedule and hours of use determined by CalEEMod, is 1,117 gallons for the development/construction of the Project.

Vehicle Miles Traveled (VMT) estimates during the construction of the Project were also determined by data points in the CalEEMod program. Worker, vendor, and haul trips would result in 2,549 VMT for the duration of construction activities. As noted in Table 3-17 below, construction trips would account for approximately 256 gallons of motor vehicle fuel.

Table 3-17

Project Construction Energy Consumption

<table>
<tr><th>Activity</th><th>Variable</th><th>Consumption Rate</th><th>Total Consumption</th></tr>
<tr><td rowspan="2">Construction Equipment-Diesel</td><td>Equipment Use – hp-hr</td><td>0.05 gallons/hp-hr</td><td rowspan="2">1,117 gallons (diesel)</td></tr>
<tr><td>Hours of Use</td><td>148 hours</td></tr>
<tr><td>Construction Worker VMT</td><td>VMT</td><td>VMT = 622
mpg = 25.73</td><td>24 gallons (gasoline)</td></tr>
<tr><td>Construction Vendor VMT</td><td>VMT</td><td>VMT = 1927
mpg = 8.29</td><td>232 gallons (diesel)</td></tr>
<tr><td colspan="4">Source: CalEEMod 2016.3.2 / EMFAC 2011 Tulare County 2022
Notes:
hp-hr = horsepower per hour
VMT = Vehicle Miles Traveled
mpg = miles per gallon</td></tr>
</table>

Long-Term (Operational)

The Project includes the development of indoor growth of cannabis, along with other light industrial uses. Electricity is the primary source of energy that would be used for lighting, cooling dehumidification during indoor growing of cannabis. Table 3-18 provides an estimate of energy use for the proposed Project. High intensity discharge grow lights will be used that will produce significant amount of heat and light. Estimated electricity, natural gas, and motor vehicle gasoline consumption were derived from estimates included in the CalEEMod program. As shown below, the Project would consume approximately 3,578,000 kWh of electricity, 24,945,000 Btu of natural gas, and 1,002,601 gallons of gasoline per year.

Table 3-18

Project Operational Energy Consumption

Land Use	Electricity Use (kWh/year)	Natural Gas (Btu/year)	Vehicle Gasoline
Cannabis Project	3,578,000	24,945,000	1,002,601
Source: CalEEMod 2020.4.0 / Emfac 2020 Tulare County 2022 Notes: kWh = kilowatt hours Btu = British thermal units			

As noted above, the Project is subject to CCR, Title 24 building standards. Compliance with Title 24 of the CCR would improve energy efficiency and consumption. As a result, construction of the Project will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Operation of the Project would include the use of electricity for lighting, cooling dehumidification during indoor growing of cannabis. As discussed above, the Title 24 California Building Standards Code is a wide-ranging set of requirements for energy conservation and green design that apply to the structural, mechanical, electrical, and plumbing systems in a building. For the cannabis production energy documents will be required for lighting, cooling, heating, water heating and building modifications envelopes to be compliance with Building energy efficiency standards and other applicable building codes. These will be submitted with building plans prior to construction at the time of approval. As a result, the electricity use will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

The Project will result in an annual VMT increase of 257,96,914 considering CalEEMod calculations, which results in 1,002,601 gallons of gasoline per year as noted in Table 3-18 (assuming 25.73 mpg). However, new vehicles accessing the Project site would be in compliance with the federal fuel economy standards described above. As a result, fuel efficiency from vehicles accessing the site would increase over the life of the Project. Therefore, energy impacts related to fuel consumption during Project operations would be less than significant. Based on the assessment above, the Project will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. Therefore, any impacts would be ***less than significant***.

Impact ENE-2: *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Less Than Significant. As discussed above in Impact ENE-1, the Project is subject to CCR, Title 24 building standards. Compliance with Title 24 of the CCR would improve energy efficiency and consumption. Therefore, the Project would be consistent with applicable plans related to renewable energy and energy efficiency. As a result, the Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Mitigation Measures: None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. Development associated with buildout of the proposed Project would require the consumption of electricity, natural gas, and vehicle fuel resources. As discussed above, new development and land use turnover would be required to comply with Statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CALGreen Code), which could decrease estimated electricity and natural gas consumption in new and retrofitted structures. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, as applicable, further reducing the inefficient use of energy. Future development would also be required to meet even more stringent requirements, including the objectives set forth in the AB 32 Scoping Plan, which seek to make all newly constructed buildings produce a sustainable amount of renewable energy through the use of on-site photovoltaic solar systems. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects. Furthermore, energy consumed by development in the Project area would continue to be subject to the regulations described in the Regulatory Setting of this Section. For these reasons, the electrical and natural gas energy that would be consumed by the Project is not considered unnecessary, inefficient, or wasteful. Impacts are ***less than cumulatively considerable.***

3.4 Greenhouse Gas Emissions

Environmental Setting[44]

Climate Change

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance, specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report[45], the IPCC predicted that the global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios. The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

An individual project cannot generate enough GHG emissions to cause a discernible change in global climate. However, the project participates in the potential for global climate change by its incremental contribution of GHGs and, when combined with the cumulative increase of all other sources of GHGs, constitute potential influences on global climate change.

Consequences of Climate Change in California

In California, climate change may result in consequences such as the following:

---

[44] Appendix B - Ch.1 Introduction, Air Quality, Greenhouse Gas, and Energy Impact Assessment. Woodlake Cannabis Project. Page 36. Prepared by VRPA Technologies, Inc. July 21, 2022.

[45] IPCC, 2007: *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp. https://www.ipcc.ch/report/ar4/syr/. Accessed December 2022.

- **Reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.

- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.

- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.

- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.

- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

- **An increase in temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.

- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Greenhouse Gases (GHGs)

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are:

Carbon Dioxide (CO2): Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement, asphalt paving, truck trips). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

Methane (CH4): Methane is 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.

Nitrous Oxide (N2O): Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Fluorinated Gases: Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (i.e., CFCs, HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases ("High GWP gases").

Human Health Effects of GHG Emissions

GHG emissions from development projects would not result in concentrations that would directly impact public health. However, the cumulative effects of GHG emissions on climate change have the potential to cause adverse effects to human health.

In its report, Global Climate Change Impacts in the U.S. (2009), the U.S. Global Change Research Program has analyzed the degree to which impacts on human health are expected to impact the United States. Potential effects of climate change on public health include:

- Direct Temperature Effects: Climate change may directly affect human health through increases in average temperatures, which are predicted to increase the incidence of heat waves and hot extremes.
- Extreme Events: Climate change may affect the frequency and severity of extreme weather events, such as hurricanes and extreme heat and floods, which can be destructive to human health and well-being.
- Climate-Sensitive Diseases: Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects, such as malaria, dengue fever, yellow fever, and encephalitis.
- Air Quality: Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog (ground-level ozone) events and particulate air pollution.[46]

Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), carbon dioxide (CO_2), methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen.

Regulatory Setting

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) established an agreement with the goal of controlling GHG emissions, including CH_4. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs. Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of

---

[46] IPCC, 2007: *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp. https://www.ipcc.ch/report/ar4/syr/. Accessed December 2022.

compounds that deplete ozone in the stratosphere (chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform) were phased out by 2000 (methyl chloroform was phased out by 2005).

Global warming and climate change have received substantial public attention for more than 20 years. For example, the United States Global Change Research Program was established by the Global Change Research Act of 1990 to enhance the understanding of natural and human-induced changes in the Earth's global environmental system, to monitor, understand and predict global change, and to provide a sound scientific basis for national and international decision making. Even so, analytical tools have not been developed to determine the effect on worldwide global warming from a particular increase in GHG emissions, or the resulting effects on climate change in a particular locale. The scientific tools needed to evaluate the impacts that a specific project may have on the environment are even farther in the future.

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

<u>Federal Regulations</u>

Prior to the last decade, there were no concrete federal regulations of GHGs or major planning for climate change adaptation. Since then, federal activity has increased. The following are actions regarding the federal government, GHGs, and fuel efficiency.

Clean Air Act

The Federal Clean Air Act (FCAA) does not specifically regulate GHG emissions; however, on April 2, 2007 the U.S. Supreme Court in *Massachusetts v. U.S. Environmental Protection Agency*, determined that GHGs are pollutants that can be regulated under the FCAA. The EPA adopted an endangerment finding and cause or contribute finding for GHGs on December 7, 2009. Under the endangerment finding, the Administrator found that the current and projected atmospheric concentrations of the six, key, well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) threaten the public health and welfare of current and future generations. Under the cause or contribute finding, the Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Based on these findings, on April 1, 2010, the EPA finalized the light-duty vehicle rule controlling GHG emissions. This rule confirmed that January 2, 2011, is the earliest date that a 2012 model year vehicle meeting these rule requirements may be sold in the United States. On May 13, 2010, the EPA issued the final GHG Tailoring Rule. This rule set thresholds for GHG emissions that define when permits under the Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. Implementation of the federal rules is expected to reduce the level of emissions from new motor vehicles and large stationary sources.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks; and
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Clean Vehicles

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO2 per mile, equivalent to 35.5 miles per gallon; that is, if the automobile industry were to meet this CO2 level solely through fuel economy improvements. Together, these standards would cut CO2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012b). The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO2 in model year 2025, which is equivalent to 54.5 miles per gallon if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20-percent reduction in CO2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles, and a 15-percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10-percent reduction in fuel consumption and CO2 emissions from the 2014 to 2018 model years.

Mandatory Reporting of Greenhouse Gases

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

New Source Review

The EPA issued a final rule on May 13, 2010 that establishes thresholds for GHGs, which will define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, the EPA states:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Clean Power Plan and New Source Performance Standards for Electric Generating Units

On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits. Additionally, in March 2017, President Trump directed the EPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13693

Presidential Executive Order 13693, Planning for Federal Sustainability in the Next Decade, signed in 2015, seeks to maintain federal leadership in sustainability and greenhouse gas emission reductions. Its goal is to reduce agency Scope 1 and 2 GHG emissions by at least 40 percent by 2025, foster innovation, reduce spending, and strengthen communities through increased efficiency and improved environmental performance. Sustainability goals are set for building efficiency and management, energy portfolio, water use efficiency, fleet efficiency, sustainable acquisition and supply chain greenhouse gas management, pollution prevention, and electronic stewardship.

Presidential Executive Order 13783

Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth (March 28, 2017), orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

Cap-and-Trade

Cap-and-Trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. There is no federal GHG Cap-and-Trade program currently; however, some states have joined to create initiatives to provide a mechanism for Cap-and-Trade.

The Regional Greenhouse Gas Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently only California and Quebec are participating in the Cap-and-Trade program.

State Regulations

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include CO_2, methane, NO_X, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The ARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007 (ARB 2007). Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a BAU scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations. At that rate, a 28 percent reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.

Progress in Achieving AB 32 Targets and Remaining Reductions Required. The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is evident in updated emission inventories prepared by ARB, which showed that the State inventory dropped below 1990 levels for the first time in 2016. The GHG State inventories for 2017 and 2018 are also remain below the 2020 target. The 2017 Scoping Plan Update includes projections indicating that the State will meet or exceed the 2020 target with adopted regulations.

ARB Scoping Plan. The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32. The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The 2008 Scoping Plan strategy is fully implemented and will continue to be in place along with other new measures contained in the 2017 Scoping Plan to achieve later targets. The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas (GHG) emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The actions and outcomes in the plan will achieve: significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.[47]

The 2008 Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed Cap-and-Trade program. The Scoping Plan states that the

---

[47] California Air Resources Board. 2022 Scoping Plan Documents. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed January 2023.

inclusion of these emissions within the Cap-and-Trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the Cap-and-Trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.

Cap-and-Trade Program. The Cap-and-Trade Program is a key element of the Scoping Plan and California's strategy to reduce greenhouse has emissions. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest cost options to reduce emissions. The program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. Other significant milestones include linkage to Quebec's Cap-and-Trade system in January 2014 and starting the compliance obligation for distributors of transportation fuels, natural gas, and other fuels in January 2015.[48] The latest auction (Joint Auction 34) was conducted in February 2023.[49]

SB 32. The Governor signed SB 32 on September 8, 2016. SB 32 gives ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the next Scoping Plan update. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

1. SB 350
    - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.

---

[48] California Air Resources Board. Cap-and-Trade Program. About. https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program/about. Accessed February 2023.
[49] California Air Resources Board. Program Data. February 2023 Joint Auction Summary Results Report. https://ww2.arb.ca.gov/sites/default/files/2023-02/nc-feb_2023_summary_results_report.pdf. Access March 2023.

- Doubling of energy efficiency savings by 2030.

2. Low Carbon Fuel Standard (LCFS)

- Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).

3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)

- Maintaining existing GHG standards for light- and heavy-duty vehicles.
- Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
- Increase ZEV buses, delivery and other trucks.

4. Sustainable Freight Action Plan

- Improve freight system efficiency.
- Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
- Deploy over 100,000 zero-emission trucks and equipment by 2030.

5. Short-Lived Climate Pollutant (SLCP) Reduction Strategy

- Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
- Reduce emissions of black carbon 50 percent below 2013 levels by 2030.

6. SB 375 Sustainable Communities Strategies

- Increased stringency of 2035 targets.

7. Post-2020 Cap-and-Trade Program

- Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
- ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.

8. 20 percent reduction in greenhouse gas emissions from the refinery sector.

9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

SB 375—The Sustainable Communities and Climate Protection Act of 2008. SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375—as codified in Public Resources Code Section 21159.28—states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth-inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved Sustainable Communities Strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets;
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies); and
3. Incorporates the mitigation measures required by an applicable prior environmental document.

The ARB has prepared the Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets.

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.

The standards are to be phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation, rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles, and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

SB 1368—Emission Performance Standards. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs CO_2 per megawatt-hour (MWh).

SB 1078 and SBX1-2—Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November

17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. In 2011, the state legislature adopted this higher standard in SB X1-2. Renewable sources of electricity subject to the legislation include wind, small hydropower, solar, geothermal, biomass, and biogas.

SB 350—Clean Energy and Pollution Reduction Act of 2015. Signed into law on October 7, 2015, SB350 reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include: an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

SBX 7-7—The Water Conservation Act of 2009. The legislation directs urban retail water suppliers to set individual 2020 per capita water use targets and begin implementing conservation measures to achieve those goals. Meeting this statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet in urban water use in 2020.

SB 100 California Renewable Portfolio Standard (2018). The goal of the program is to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. The bill approved by Governor Brown on September 10, 2018 would require that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030.[50]

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. On June 1, 2005, former California Governor Arnold Schwarzenegger announced through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07—Low Carbon Fuel Standard. The governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on

---

[50] California Public Utilities Commission. Renewables Portfolio Standard (RPS) Program. https://www.cpuc.ca.gov/rps/#:~:text=In%202018%2C%20SB%20100%20(de,carbon%2Dfree%20resources%20by%202045. Accessed Jan 2023.

December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The Low Carbon Fuel Standard was subject to legal challenge in 2011. Ultimately, ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The Office of Administrative Law (OAL) approved the regulation on November 16, 2015.[51] The regulation was last amended in 2018.

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The executive order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMTCO2e. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this executive order is not legally enforceable against local governments and the private sector. Legislation that would update

[51] California Air Resources Board. LCFS Basics. https://ww2.arb.ca.gov/sites/default/files/2020-09/basics-notes.pdf. Accessed February 2023.

AB 32 to provide post-2020 targets was signed by the Governor in 2016. SB 32 includes a 2030 mandate matching the requirements of the Executive Order.

Executive Orders B-55-18 Carbon Neutrality by 2045 (2018). This Executive Order signed on September 10, 2018 sets a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. The executive order directs ARB to work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601–1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.[52]

Title 24 Energy Efficiency Standards. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC adopted the 2022 Building Energy Efficiency Standards on August 11, 2021. The updated standards are effective as of January 1, 2022.[53]

---

[52] California Energy Commission. Rules and Regulations. Appliance Efficiency Proceedings – Title 20. https://www.energy.ca.gov/rules-and-regulations/appliance-efficiency-regulations-title-20/appliance-efficiency-proceedings. Accessed February 2023.

[53] California Energy Commission. Programs and Topics. https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency. Accessed February 2023.

Title 24 California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided the ordinances include a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) requires:

- **Short-term bicycle parking**. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for five percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- **Long-term bicycle parking**. For buildings with over 10 tenant-occupants, provide secure bicycle parking for five percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- **Designated parking**. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- **Recycling by Occupants**. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of nonhazardous materials for recycling. (5.410.1).
- **Construction waste**. A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 80 percent for new homes and 80-percent for commercial projects. (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).
- **Wastewater reduction**. Each building shall reduce the generation of wastewater by one of the following methods:
  - The installation of water-conserving fixtures or

  - Using non-potable water systems (5.303.4).
- **Water use savings**. Twenty percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).
- **Water meters**. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).
- **Irrigation efficiency**. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).
- **Materials pollution control**. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard (5.404).
- **Building commissioning**. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected for the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update the ordinance through expedited regulation. The California Water Commission approved the revised ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the ordinance. The update requires:

- More efficient irrigation systems
- Incentives for graywater usage
- Improvements in on-site stormwater capture
- Limiting the portion of landscapes that can be planted with high water use plants
- Reporting requirements for local agencies.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states: "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)."

Section 21097 was also added to the Public Resources Code. This provided an exemption until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006—in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA. The Natural Resources Agency completed the approval process, and the Amendments became effective on March 18, 2010. The Natural Resources Agency adopted additional amendments related to greenhouse gases in the 2019 CEQA Guidelines Update adopted on December 28, 2018.

The 2010 CEQA Amendments along with the 2018 CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions:

- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or

- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

Section 15064.4(c) states that a lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

The 2018 CEQA Guidelines include the following discussion regarding thresholds of significance:

> (d) Using environmental standards as thresholds of significance promotes consistency in significance determinations and integrates environmental review with other environmental program planning and regulation. Any public agency may adopt or use an environmental standard as a threshold of significance. In adopting or using an environmental standard as a threshold of significance, a public agency shall explain how the particular requirements of that environmental standard reduce project impacts, including cumulative impacts, to a level that is less than significant, and why the environmental standard is relevant to the analysis of the project under consideration. For the purposes of this subdivision, an "environmental standard" is a rule of general application that is adopted by a public agency through a public review process and that is all of the following:
>
> (1) a quantitative, qualitative or performance requirement found in an ordinance, resolution, rule, regulation, order, plan or other environmental requirement;
>
> (2) adopted for the purpose of environmental protection;
>
> (3) addresses the environmental effect caused by the project; and,
>
> (4) applies to the project under review.

In addition, the 2018 amendments revised Appendix G Checklist questions to include a new question specifically on energy conservation.

CEQA emphasizes that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (see CEQA Guidelines Section 15130(f)).

California Supreme Court GHG Ruling

In a November 30, 2015 ruling, the *California Supreme Court in Center for Biological Diversity (CBD) v. California Department of Fish and Wildlife (CDFW)* on the Newhall Ranch project, concluded that whether the project was consistent with meeting statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25 to 27 of the ruling to address this issue summarized below.

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location.

- **Compliance with Regulatory Programs or Performance Based Standards**. "A lead agency might assess consistency with A.B. 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. (See Final Statement of Reasons, supra, at p. 64 [greenhouse gas emissions 'may be best analyzed and mitigated at a programmatic level.'].) To the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Resources Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance-based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions.' (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also id., § 15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions'].)".

- **Compliance with GHG Reduction Plans or Climate Action Plans (CAPs)**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis.

- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts.

San Joaquin Valley Air Pollution Control District Regulations

The SJVAPCD acknowledges the current absence of numerical thresholds and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

i. If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the Project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
ii. If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance Standards (BPS); and
iii. If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

California passed the California Global Warming Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. Under AB 32, CARB must adopt regulations by January 1, 2011, to achieve reductions in GHGs to meet the 1990 emission cap by 2020. On December 11, 2008, CARB adopted its initial Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan.

SB 375 requires MPOs to adopt a SCS or APS that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the TCAG region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. TCAG's 2018 RTP/SCS, projects that the Tulare County region would achieve the prescribed emissions targets.

Executive Order B-30-15 establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. City of Woodlake uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. The applicable General Plan for the Project is City of Woodlake General Plan.

Thresholds of Significance

The State CEQA Guidelines indicate that a project would normally have a significant adverse GHG impact is the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Impact Analysis

Impact GHG-1: *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant. The following emissions estimate is consistent with CEQA Guidelines 15064.4. CalEEMod was used to estimate the Project's GHG emissions. Modeling assumptions are described in Appendix B.

Constructions Emission Inventory

Construction GHGs would be emitted by the off-road construction equipment and vehicle travel by workers and material deliveries to the project site. The estimated construction GHG emissions are shown in Table 3-19. Because construction GHG emissions are temporary and reduction measures are limited, a common professional practice is to amortize the construction emissions over the life of the project. An industrial project is conservatively assumed to have a life of 30 years.

Table 3-19

Construction Greenhouse Gas Emissions

Construction Year	$MTCO_2e$
2022	79
2023	1,405
2024	623
Total	2,107
Amortized over 30 years	70.2

Operational Emission Inventory

Operational or long-term emissions occur over the life of the project. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, waste generation, and area sources, such as landscaping activities. Operational GHG emissions associated with the project were estimated using CalEEMod 2020.4.0.

Operational GHG emissions are shown in Table 3-20.

Table 3-20

Operational Greenhouse Gas Emissions

Source	Emissions ($MTCO_2e$ per year)
Area	0.04
Energy	1,976.89
Mobile	9,441.39
Waste	935.40

Source	Emissions (MTCO2e per year)
Water	806.74
Subtotal	*13,160.46*
Amortized Construction Emissions	70.2
Total	13,230.66

Source: VRPA, 2022, CalEEMod 2020.4.0 (Appendix A of Appendix B).

The proposed project's GHG impact is determined by its consistency with applicable statewide and regional GHG reduction plans. As shown in Impact GHG-2, the proposed project would be consistent with the CARB's 2017 Scoping Plan goals that aim to reduce air quality and energy (which in turn reduce GHG emissions), as such the Project will comply with applicable reduction plans and GHG emissions are less than significant.

The proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; the impact is ***less than significant.***

Mitigation Measures: None are required.

Impact GHG- 2: *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Less Than Significant. California passed the California Global Warming Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. Under AB 32, CARB must adopt regulations by January 1, 2011, to achieve reductions in GHGs to meet the 1990 emission cap by 2020. On December 11, 2008, CARB adopted its initial Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan.

SB 375 requires MPOs to adopt a SCS or APS that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the TCAG region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. TCAG's 2018 RTP/SCS, projects that the Tulare County region would achieve the prescribed emissions targets.

Executive Order B-30-15 establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan. The current plan has identified new policies and actions to accomplish the State's 2030 GHG limit. Below is a list of applicable strategies in the Scoping Plan and the Project's consistency with those strategies.

- California Light-Duty Vehicle GHG Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs for long-term climate change goals.
    - The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to light-duty vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.

- Energy Efficiency – Pursuit of comparable investment in energy efficiency from all retail providers of electricity in California. Maximize energy efficient building and appliance standards.
    - The Project is consistent with this reduction measure. Though this measure applies to the State to increase its energy standards, the Project would comply with this measure through existing regulation. The Project would not conflict or obstruct this reduction measure.

- Low Carbon Fuel – Development and adoption of the low carbon fuel standard.
    - The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to the fuel

used by vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.

As the proposed Project is consistent with the applicable plans, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, any impacts to this checklist item are ***less than significant***.

Mitigation Measures: None are required.

Cumulative Impacts

Less Than Cumulatively Considerable. The State of California, through AB 32, has acknowledged that GHG emissions are a Statewide impact. The adopted CEQA Guidelines provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and global climate change impacts. Although the Project is expected to emit GHGs, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change. The resultant consequences of climate change can cause adverse environmental effects. A project’s GHG emissions typically would be very small in comparison to state or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change. The State has mandated a goal of reducing Statewide emissions to 1990 levels by 2020 and reducing Statewide emissions to 40% below 1990 levels by 2030, even though Statewide population and commerce are predicted to continue to expand. In order to achieve this goal, CARB is in the process of establishing and implementing regulations to reduce Statewide GHG emissions. Currently, there are no applicable CARB, SJVAPCD, or the City significance thresholds or specific reduction targets, and no approved policy or guidance to assist in determining significance at the project or cumulative levels.

Emission generated by the Project combined with past, present, and reasonably probable future projects could contribute to this impact. The California Governor’s Office of Planning and Research acknowledges that although climate change is cumulative in nature, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment.

CEQA Guidelines Section 15130 notes that sometimes the only feasible mitigation for cumulative impacts may be to adopt ordinances or regulations rather than impose conditions on a project-by-project basis. Global climate change is this type of issue. GHG impacts are considered to be exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA, 2008). Causes and effects are not just regional or Statewide, they are worldwide. Feasible reductions in GHG emissions would be accomplished through CARB regulations adopted pursuant to AB 32. Cumulative impacts of the Project on global climate change would be less than significant.

As discussed above, the proposed Project would not generate significant GHG emissions and would be consistent with GHG reduction plans. Therefore, the proposed Project's incremental contribution would be ***less than cumulatively considerable.***

3.5 Transportation

Environmental Setting

The proposed project consists of 432,000 square feet of industrial building space and 1,068,000 square feet of warehousing for a total development of 1,500,000 square feet. Based on the City of Woodlake's General Plan, the current land use designation for the project site is Neighborhood Commercial and zoning is Light Industrial and Urban Reserve. The project site is currently being used for agricultural purposes. Primary access to the project is anticipated from Blair Road. Existing land uses in the immediate vicinity of the project include agriculture to the south, east and west. Light industrial uses exist to the north and farther east. Residential housing also exists to the east.

A Traffic Study was prepared for the proposed Project by Ruettgers & Schuler Civil Engineers (report date August 2022). The complete report is provided in Appendix D of this EIR. The results of the report modeling and analysis are presented in the discussion below.

Roadway Descriptions[54]

- *Millwood Drive* is generally a north-south roadway that extends north from State Route 216 and provides access to agricultural land uses. In the vicinity of the project it exists as a two-lane roadway with graded shoulders.
- *Naranjo Boulevard (SR 216)* is an east-west arterial that provides access to agricultural, commercial, and residential land uses in Woodlake. In the vicinity of the project it exists as a two-lane roadway with paved shoulders.
- *Road 196* is a north-south roadway that extends from Millwood Drive to Avenue 336. It provides access to agricultural land uses, and in the vicinity of the project, it exists as a two-lane roadway with graded shoulders.
- *Road 204/Blair Road* is a north-south two-lane roadway that extends from Naranjo Boulevard to Avenue 348. It provides access to residential and agricultural land uses.
- *Ropes Avenue/Avenue 342* is an east-west roadway that extends from Blair Road to Valencia Boulevard. West of Oaks Street, it provides access to agricultural land use, and east of Oaks Street it provides access to residential land uses. It exists as a two-lane roadway with curb and gutter adjacent to development. Based on information provided by the City of Woodlake

[54] Appendix D - Traffic Study, Industrial Development: Southeast Corner of Ropes Avenue & Blair Road, City of Woodlake. Page 5. Prepared by Ruettgers & Schuler Civil Engineers. August 2022.

Transportation Department, Ropes Avenue is a dedicated roadway for traffic accessing directly to the industrial park from the south.

- *Valencia Boulevard* is a major north-south arterial that extends through the metropolitan region of the City of Woodlake. It exists as a two-lane roadway with curb and gutter and provides access to commercial, residential, and agricultural land uses.

The scope of the study was developed in association with the City of Woodlake Roads Department and Caltrans. Five unsignalized intersections are included in this study as follows:

- Millwood Drive (SR 216) & Naranjo Boulevard
- Road 196 & Naranjo Boulevard
- Road 204/Blair Road & Naranjo Boulevard
- Road 204 & Ropes Avenue/Avenue 342
- Valencia Boulevard & Ropes Avenue/Avenue 342

Regulatory Setting

<u>Federal Regulations</u>

Several federal regulations govern transportation issues. They include:

- Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.

- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

<u>State of California Regulations</u>

California Department of Transportation

The California State Department of Transportation (Caltrans) has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on California highways. Kings County is under the jurisdiction of Caltrans District 6. The following Caltrans regulations apply to the potential transportation impacts of the Project:

- California Vehicle Code, Division 15, Chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- California Street and Highway Code, Sections 660-711, 670-695. Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Assembly Bill 32 (Global Warming Act of 2006) and Senate Bill 375

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (Act), requires California to reduce its greenhouse gas (GHG) emissions to levels presented in the year 1990 by 2020. In response, the California Air Resources Board (CARB) is responsible for creating guidelines for this Act. In 2008, CARB adopted its proposed Scoping Plan, which included the approval of Senate Bill (SB) 375 as a means of achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks helps the State comply with AB 32.

Established through CARB, SB 375 lists four major components and requirements: (1) it requires regional GHG emissions targets; (2) it requires creating a Sustainable Communities Strategy (SCS) that provides a plan for meeting the regional targets; (3) it requires that regional housing elements and transportation plans be synchronized on 8-year schedules; and (4) it requires transportation and air pollutant emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission (CTC).

Senate Bill 743

Senate Bill (SB) 743 was approved by then Governor Brown on September 27, 2013. SB 743 created a path to revise the definition of transportation impacts according to California Environmental Quality Act (CEQA). The revised CEQA Guidelines requiring a vehicle miles traveled (VMT) analysis became effective December 28, 2018; however, agencies had until July 1, 2020 to finalize their local guidelines on VMT analysis. The intent of SB 743 is to align CEQA transportation study methodology with and promote the statewide goals and policies of reducing VMT and greenhouse gases (GHG). Three objectives of SB 743 related to development are to reduce GHG, diversify land uses, and focus on creating a multimodal environment.

State of California Transportation Department Transportation Concept Reports

Each District of the State of California Transportation Department (Caltrans) prepares a Transportation Concept Report (TCR) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept".

In addition, the proposed Project is being evaluated pursuant to CEQA.

<u>Local Regulations</u>

City of Woodlake and Tulare County

The City of Woodlake and the Tulare County Regional Transportation Plan designate level of service "D" as the minimum acceptable intersection peak hour level of service standard.

City Woodlake General Plan Policies

- C-G-6: Maintain acceptable levels of service and ensure that future development and the circulation system are in balance.
- C-G-7: Ensure that new development pays its fair share of the costs of transportation facilities.
- C-I-12: Continue to require that new development pay a fair share of the costs of street and other traffic and local transportation improvements based on traffic generated and impacts on traffic service levels.

Thresholds of Significance

In accordance with the CEQA Guidelines, a project impact would be considered significant if the project would:

- **Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? ; or**
- **Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b); or**
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ; or
- Result in inadequate emergency access?

Note the bolded significant thresholds are discussed below. All other thresholds have been analyzed in the Initial Study (see Appendix A) and have been determined to have no significant impact, thus the analysis of those impact areas is not repeated here.

Impact Analysis

Impact TRA-1: *Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

Less Than Significant with Mitigation.

Trip Generation[55]

The trip generation and design hour volumes shown in Table 3-19 were calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition. The ADT, AM and PM peak hour rates, and peak hour directional splits for ITE Land Use Codes 110 (General Light Industrial) and 150 (Warehousing) were used to estimate the project traffic for peak hour of adjacent street traffic.

Table 3-21

Project Trip Generation[56]

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips

[55] Traffic Study for the Industrial Development at the Southeast Corner of Ropes Avenue & Blair Road. August 2022. Ruettgers & Schuler. Appendix D. Page 6.
[56] Ibid.

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
110	General Light Industrial	432 1000 sq ft GFA	4.87	1675	0.74	88% 281	12% 38	0.65	14% 39	86% 241
150	Warehousing	1068 1000 sq ft GFA	1.71	1826	0.17	77% 140	23% 42	0.18	28% 54	72% 138
Total						**421**	**80**		**93**	**380**
			3,501		**501**			**473**		

Trip Distribution and Assignment[57]

The project trip distribution in Table 3-22 represents the most logically traveled routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers within the region and the type of land use involved. The City anticipates a significant amount of project traffic to travel along State Route 65 between Woodlake and other towns such as Exeter, Lindsey, Porterville, Visalia, and Tulare. These assumptions were used to distribute project traffic as shown in Figure 4 of Appendix D.

Table 3-22

Project Trip Distribution[58]

Direction	Percent
North	10
East	20
South	40
West	30

Existing and Future Traffic[59]

Existing peak hour turn movement volumes were field measured in May 2022 at the study intersections and are shown in Figure 5 of Appendix D. Existing plus project peak hour volumes

[57] Ibid.
[58] Ibid.
[59] Ibid, pages 7-12.

are shown in Figure 6 of Appendix D. Annual growth rates of 0.49% to 0.83% were applied to existing traffic volumes to estimate future traffic volumes for the year 2042. These growth rates were estimated based on a review of TCAG traffic model data. Future peak hour volumes are shown in Figures 7 and 8 of Appendix D.

Intersection Analysis[60]

A capacity analysis of the study intersections was conducted using Synchro software from Trafficware. This software utilizes the capacity analysis methodology in the Transportation Research Board's 2010 Highway Capacity Manual. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2022)
- Existing+Project (2022)
- Future (2042)
- Future+Project (2042)

Criteria for intersection level of service (LOS) are shown in the tables below.

Table 3-23

Level of Service Criteria Unsignalized Intersection

Level of Service	Average Control Delay (sec/veh)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no delay
B	> 10 and ≤ 15	Short delays
C	> 15 and ≤ 25	Average delays
D	> 25 and ≤ 35	Long delays
E	> 35 and ≤ 50	Very long delays
F	> 50	Extreme delays

[60] Ibid, 13-14.

Table 3-24

Level of Service Criteria Signalized Intersections

Level of Service	Average Control Delay (sec/veh)	Volume-to-Capacity Ratio
A	≤ 10	< 0.60
B	> 10 and ≤ 20	0.61 - 0.70
C	> 20 and ≤ 35	0.71 - 0.80
D	> 35 and ≤ 55	0.81 - 0.90
E	> 55 and ≤ 80	0.91 - 1.00
F	> 80	> 1.00

According to the City of Woodlake Roads Department, the peak hour level of service shall be no lower than LOS "D" for urban areas and LOS "C" for rural areas. Levels of service for the study intersections are presented in Tables 3-25 and 3-26. The intersection peak hour level of service goal for the study intersections is LOS C or better.

Table 3-25

AM Intersection Level of Service[61]

#	Intersection	Control Type	2022	2022+ Project	2042	2042+ Project	2042+ Project w/Mitigation[1]
1	Millwood Dr & Naranjo Blvd	AWSC	B	B	B	B	-
2	Rd 196 & Naranjo Blvd	AWSC	B	B	B	C	-
3	Blair Rd & Naranjo Blvd	NB SB	B C	C C	C C	D (26.4) C	C
4	Blair Rd & Ropes Ave	WB	A	A	A	C	-
5	Valencia Blvd & Ropes Ave	EB	B	B	B	B	-

[61] Ibid, 14.

Table 3-26

PM Intersection Level of Service[62]

#	Intersection	Control Type	2022	2022+ Project	2042	2042+ Project	2042+ Project w/Mitigation[1]
1	Millwood Dr & Naranjo Blvd	AWSC	A	B	B	B	-
2	Rd 196 & Naranjo Blvd	AWSC	B	B	B	C	-
3	Blair Rd & Naranjo Blvd	NB SB	C C	D (30.1) C	C C	E (48.3) C	C
4	Blair Rd & Ropes Ave	WB	A	B	A	B	-
5	Valencia Blvd & Ropes Ave	EB	B	C	B	C	-

<u>Traffic Signal Warrant Analysis</u>

Peak hour signal warrants were evaluated for each of the unsignalized intersections within the study area based on the California Manual on Uniform Traffic Control Devices (MUTCD). Peak hour signal warrants assess delay to traffic on the minor street approaches when entering or crossing a major street. Signal warrant analysis results for AM and PM peak hours are shown in Tables 3-27 and 3-28.

Table 3-27

AM Traffic Signal Warrant Analysis[63]

		2022			2022+Project			2042			2042+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	Millwood Dr at Naranjo Blvd	336	165	NO	382	264	NO	379	204	NO	425	303	YES
2	Rd 196 at Naranjo Blvd	552	113	NO	699	118	NO	638	125	NO	785	130	YES
3	Blair Rd at Naranjo Blvd	610	39	NO	765	69	NO	717	47	NO	872	77	NO
4	Blair Rd at Ropes Ave	82	61	NO	276	169	NO	96	71	NO	290	179	NO
5	Valencia Blvd at Ropes Ave	407	11	NO	620	51	NO	484	12	NO	697	52	NO

62 Ibid, 15.
63 Ibid, 15.

Table 3-28

PM Traffic Signal Warrant Analysis[64]

		2022			2022+Project			2042			2042+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	Millwood Dr at Naranjo Blvd	259	237	NO	372	259	NO	293	225	NO	406	315	YES
2	Rd 196 at Naranjo Blvd	494	194	NO	639	195	YES	567	214	YES	712	215	YES
3	Blair Rd at Naranjo Blvd	590	47	NO	624	190	YES	693	55	NO	727	198	YES
4	Blair Rd at Ropes Ave	77	30	NO	265	135	NO	91	36	NO	279	141	NO
5	Valencia Blvd at Ropes Ave	418	16	NO	465	207	NO	496	17	NO	543	208	YES

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered in order to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service or operate below an acceptable level of service and not meet signal warrant criteria.

Roadway Analysis[65]

A capacity analysis of the study roadways was conducted using Table 4 in the State of Florida Department of Transportation *Quality/Level of Service Handbook* dated June 2020 (see Appendix). The City of Woodlake Circulation Element states that the peak hour level of service for roadways shall be no lower than LOS "D" for urban areas. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2022)
- Existing (2022) + Project
- Future (2042)
- Future (2042) + Project

---

[64] Ibid.
[65] Ibid, 18.

Table 3-29

AM Roadway Level of Service[66]

Street	2022 Two-Way LOS		2022+Project Two-Way LOS		2042 Two-Way LOS		2042+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Naranjo Blvd: Millwood Dr - Rd 196	455	C	600	C	700	C	845	C
Naranjo Blvd: Rd 196 - Blair Rd	602	C	759	C	929	C	1086	C
Ropes Ave: Blair Rd - Valencia Blvd	72	C	220	C	206	C	565	C
Blair Rd: Naranjo Blvd - Ropes Ave	81	C	264	C	349	C	532	C

Table 3-30

PM Roadway Level of Service[67]

Street	2022 Two-Way LOS		2022+Project Two-Way LOS		2042 Two-Way LOS		2042+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Naranjo Blvd: Millwood Dr - Rd 196	441	C	576	C	725	C	860	C
Naranjo Blvd: Rd 196 - Blair Rd	604	C	754	C	969	C	1116	C
Ropes Ave: Blair Rd - Valencia Blvd	46	C	342	C	362	C	658	C
Blair Rd: Naranjo Blvd - Ropes Ave	80	C	257	C	517	C	694	C

Intersection and Roadway Mitigation[68]

Intersection improvements needed by the year 2042 to maintain or improve the operational level of service of the street system in the Project vicinity are presented in Table 31. Shown also is the Project's percent share of the cost for these improvements.

[66] Ibid.
[67] Ibid.
[68] Ibid.

Table 3-31

Future Intersection Improvements and Local Mitigation[69]

#	Intersection	Total Improvements Required by 2042	Project % Share for Local Mitigation
3	Blair Rd & Naranjo Blvd (SR 216)	Add Signal	61.25%

In summary, all intersections operate with an acceptable level of service during peak hours in the existing year prior to the addition of project traffic. With the addition of project traffic in 2022, the intersection of Blair Road & Naranjo Boulevard (SR 216) is anticipated to operate below an acceptable level of service. In the future year scenario, all remaining intersections are anticipated to operate with an acceptable level of service, prior to and with the addition of project traffic.

All roadways within the project scope currently operate at acceptable levels of service and are expected to continue to do so with the addition of project traffic through the future year.

Based on the City of Woodlake's standards for determining whether project traffic has a significant impact on intersections and roadways, the mitigation measures identified in Table 3-31 are anticipated to be needed in order to reduce the impacts for the listed facilities to ***less than significant*** levels in the year 2042.

Mitigation Measures[70]

TRA-1:

Intersection improvements needed by the year 2042 to maintain or improve the operational level of service of the street system in the vicinity of the project is shown in Table 3-31.

Impact TRA-2: *Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

---

[69] Ibid.
[70] Ibid, 19.

Less Than Significant with Mitigation. An evaluation of vehicle miles traveled (VMT) for project traffic was conducted in accordance with California Environmental Quality Act (CEQA) requirements. The City of Woodlake has adopted the "County of Tulare SB 743 Guidelines", dated June 8, 2020, which contain recommendations regarding VMT assessment, significance thresholds and mitigation measures.

Baseline VMT was determined utilizing data from the California Statewide Travel Demand Model (CSTDM). The proposed industrial project is located in Traffic Analysis Zone (TAZ) 2714, which has an average VMT/employee of 20.35 miles. The proposed industrial project is considered a typical project within the TAZ and therefore the project would be expected to have the same VMT per employee. There are no special considerations with the project to assume the project would produce a VMT/employee lower than the average for the TAZ. The threshold of significance for the industrial project VMT/employee is if the project VMT is below the average in the TAZ where the project is located. Since VMT/employee is assumed to be equal to the average for the aforementioned zone, it is anticipated that the proposed project will have a significant transportation impact prior to mitigation.

The Tulare County guidelines include detailed instructions for mitigation if a project has significant impacts. The guidelines state "The preferred method of VMT mitigation in Tulare County is for project applicants to provide transportation improvements that facilitate travel by walking, bicycling, or transit." In accordance with these guidelines, a survey was conducted within a half mile of the project to determine any pedestrian, bicycle or transit facilities deficiencies exist. After review, there were existing curb returns which do not meet current ADA requirements for ramps as well as sidewalk improvements. The identified improvements, as shown in Figure 5, include the following:

- Four (4) ADA compliant curb ramps at Acacia Street & W Ropes Avenue
- Four (4) ADA compliant curb ramps at S Palm Street & W Ropes Avenue
- Two (2) ADA compliant curb ramps at S Pepper Street & Ropes Avenue
- Four (4) ADA compliant curb ramps at S Acacia Street & W Bravo Avenue
- 295' of sidewalk on the south side of W Ropes Avenue between Mulberry Street & Acacia St
- 305' of sidewalk on the north side of W Ropes Avenue between S Pepper Street & S Palm Street
- 285' of sidewalk on the south side of W Ropes Avenue between S Acacia Street & S Palm Street

The guidelines include a minimum cost for mitigation of $20 per daily trip generated by the project. As shown in Table 3-19, the Project is anticipated to generate 3,501 daily trips, which

Figure 5 – Proposed VMT Mitigation

Equates to a target value of improvements of $70,020. The total estimated Project cost is approximately $75,453. Therefore, with the construction of the above identified improvements, the Project will meet the minimum cost requirement for mitigation.

Pursuant to the guidelines, if a project provides mitigation which meets the minimum threshold listed above, the project can presume a 1% reduction in VMT. The assumed VMT/employee reduction is 1% of 20.35 or 0.2035. The resulting VMT/employee after mitigation is 20.15 which is below the average VMT/employee in the TAZ which the project is located. After mitigation, the project will have a ***less than significant*** transportation impact.

Mitigation Measures:

TRA-2:

The Project developer shall pay a total of $70,020 in improvement fees, prior to issuance of building permits, to the City of Woodlake to improve the ramps and sidewalks at the following locations:

- Four (4) ADA compliant curb ramps at Acacia Street & W Ropes Avenue
- Four (4) ADA compliant curb ramps at S Palm Street & W Ropes Avenue
- Two (2) ADA compliant curb ramps at S Pepper Street & Ropes Avenue
- Four (4) ADA compliant curb ramps at S Acacia Street & W Bravo Avenue
- 295’ of sidewalk on the south side of W Ropes Avenue between Mulberry Street & Acacia St
- 305’ of sidewalk on the north side of W Ropes Avenue between S Pepper Street & S Palm Street
- 285’ of sidewalk on the south side of W Ropes Avenue between S Acacia Street & S Palm Street

Cumulative Impacts

Cumulative transportation impacts were evaluated under the Cumulative Year 2042 Plus Project Scenario in Impact TRA-1. Implementation of Mitigation Measures TRA-1 and TRA-2 will reduce all impacts to less than significant. As such, cumulative impacts are also considered *less than significant with mitigation incorporation.*

Chapter 4

PROJECT ALTERNATIVES

PROJECT ALTERNATIVES

4.1 Introduction

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed project that could feasibly attain most of the objectives of the proposed project. The Guidelines further require that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project or reducing them to a less-than significant level, even if the alternative would not fully attain the project objectives or would be more costly. According to CEQA Guidelines, the range of alternatives required in an EIR is governed by the "rule of reason" that requires an EIR to evaluate only those alternatives necessary to permit a reasoned choice. An EIR need not consider alternatives that have effects that cannot be reasonably ascertained and/or are remote and speculative.

The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

CEQA Guidelines §15126.6(e) identifies the requirements for the "No Project" alternative. The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).

Alternative locations can also be evaluated if there are feasible locations available. Each alternative is evaluated against the Project objectives and criteria established by the Lead Agency.

The proposed Project has the potential to have significant adverse effects on Agricultural Resources – Loss of Farmland (project and cumulative level). Therefore, per the State CEQA Guidelines, this section discusses alternatives that are capable of avoiding or substantially lessening effects on this resource. The significant and unavoidable impacts of the proposed project are discussed below.

4.2 Project Objectives and Significant Impacts

The following are the primary goals of the Woodlake Holdings Industrial Park Project (Project):

- To create an economically sustainable industrial complex that will provide business and job opportunities within the City of Woodlake.
- To diversify the City of Woodlake's economic and general commercial base
- To ensure the provision of services and facilities needed to accommodate planned population densities in and around the City of Woodlake.

4.3 Alternatives Considered in this EIR

- No Project
- Alternate Location
- Reduced (50%) Project

4.4 Analysis Format

In accordance with CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the project. Furthermore, each alternative is evaluated to determine whether the project objectives identified in Chapter 2 - Project Description, of this Draft EIR would be mostly attained by the alternative. The Project's impacts that form the basis of comparison in the alternatives analysis are those impacts which represent a conservative assessment of project impacts. The evaluation of each of the alternatives follows the process described below:

a) The net environmental impacts of the alternative after implementation of reasonable mitigation measures are determined for each environmental issue area analyzed in this EIR.

b) Post-mitigation significant and less than significant environmental impacts of the alternative and the project are compared for each environmental issue area as follows:
    - Less: Where the impact of the alternative after feasible mitigation would be clearly less adverse than the impact of the project, the comparative impact is said to be "less."
    - Greater: Where the impact of the alternative after feasible mitigation would be clearly more adverse than the impact of the project, the comparative impact is said to be "greater."
    - Similar: Where the impacts of the alternative after feasible mitigation and the project would be roughly equivalent, the comparative impact is said to be "similar."

c) The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose for the project, as well as the project's basic objectives would be substantially attained by the alternative.

4.5 Impact Analysis

No Project Alternative

CEQA Section 15126.6(e) requires the discussion of the No Project Alternative "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The No Project scenario in this case consists of retaining the property in its original configuration, with no construction or operation of the proposed Woodlake Holdings Industrial Park. Under this alternative, the southern portion of the site remains in agricultural production.

Description

This alternative would avoid both the adverse and beneficial effects of the Project. This alternative would avoid ground disturbance and construction-related impacts associated with construction of the proposed Project. No new development would occur on the site. The No Project Alternative would avoid the generation of any environmental impacts beyond existing conditions.

Environmental Considerations

Continuation of the site in agricultural production would result in all environmental impacts being less than the proposed Project. There would be no changes to any of the existing conditions and there would be no impact to each of the 20 CEQA Checklist evaluation topics. The No-Project Alternative by definition would not meet the objectives of the proposed Project that were outlined in Section 4.2, above. Impacts from the No Project Alternative, as compared to the Project, are summarized as follows:

- **Aesthetics** – With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Agriculture and Forestry Resources** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project. This Alternative would also eliminate the significant and unavoidable impacts (project and cumulative) associated with this topic from the proposed Project.
- **Air Quality** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Biological Resources** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Cultural Resources** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Energy** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Geology/Soils** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Greenhouse Gas Emissions** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Hazards & Hazardous Materials** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.

- **Hydrology & Water Quality** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Land Use / Planning** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Mineral Resources** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Noise** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Population & Housing** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Public Services** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Recreation** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Transportation** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Tribal Cultural Resources** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Utilities & Service Systems** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Wildfire** - With no development, the southern portion of the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.

Refer to Table 4-1 for a comparison of each environmental topic for the No Project Alternative versus the proposed Project.

Alternate Locations Alternative

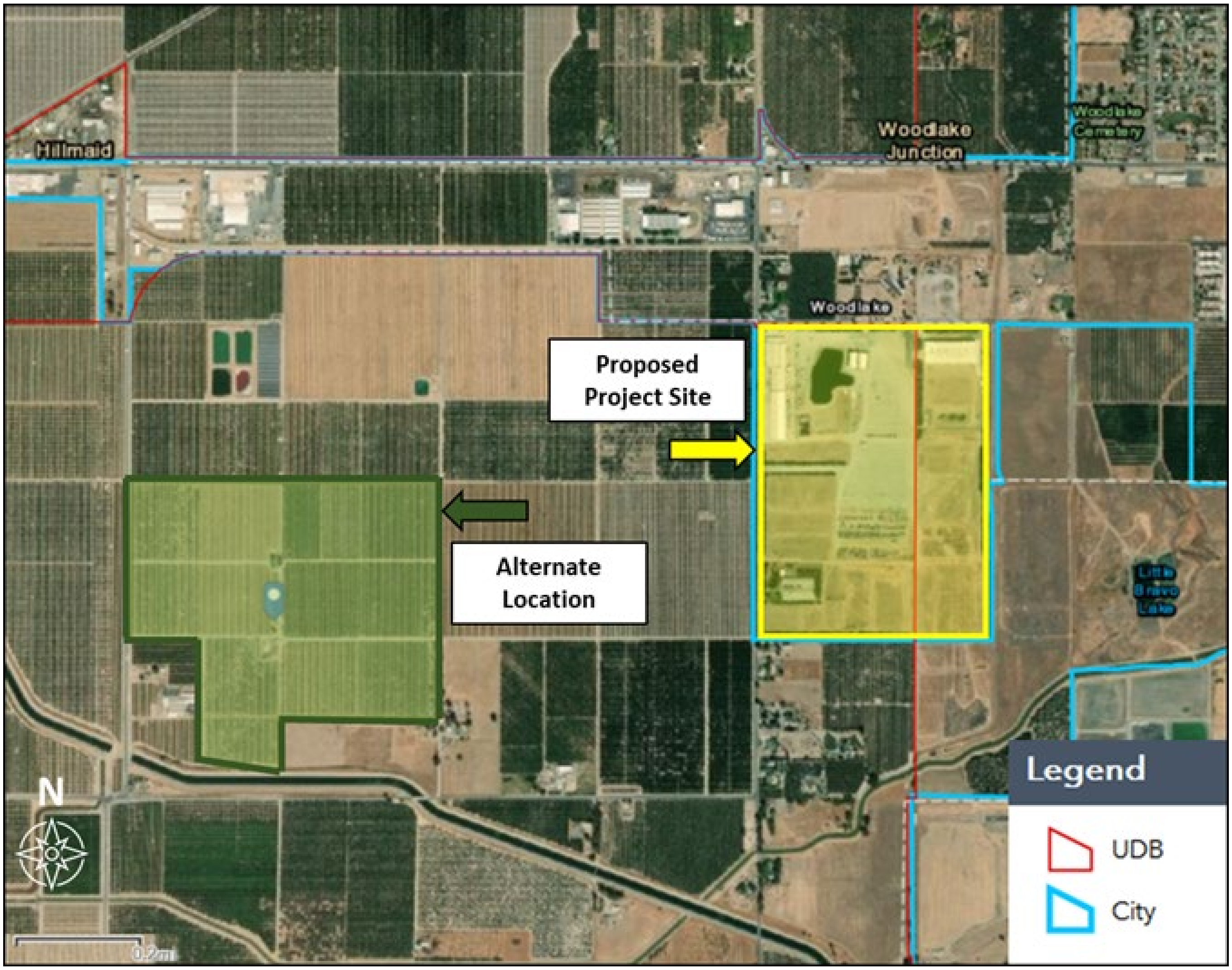
The environmental considerations associated with an alternative site would be highly dependent on several variables, including physical site conditions, surrounding land use, site access, and suitability of the local roadway network. Physical site conditions include land, air, water, minerals, flora, fauna, noise, or objectives of historic or aesthetic significance, and would affect the nature and degree of direct impacts, needed environmental control systems, mitigation, and permitting requirements. Surrounding land use and the presence of sensitive receptors would influence neighborhood compatibility issues such as air pollutant emissions and health risk, odor, noise, and traffic. Site access and ability of the local roadway network to accommodate increased traffic without excessive and costly off site mitigation would be an important project feasibility issue.

The constraint on alternative site selection is the lessening or elimination of significant project impacts. The economic viability of the proposed Project is dependent on ability to effectively develop an industrial project in the Woodlake area. To maintain most of the project objectives, any potentially feasible alternative site needs to be of adequate size and in a location that is accessible and serviceable (utilities) by the City of Woodlake.

Description

There are no industrial zoned sites within the City of Woodlake that provide adequately sized lands suitable for the proposed Project. The criteria for selection included whether or not the alternate site would substantially reduce environmental impacts, availability of land, adequately sized parcels, efficiency of access, and acceptable land use designations/zoning. There are areas of agricultural land of similar size located outside the City limits, in Tulare County, to the west west of the proposed Project. This area could conceivably support the proposed Project and is depicted in the Figure 6. The area is outside the City limits and is zoned and designated for agricultural uses, but is not within a Williamson Act Contract.

Figure 6 – Alternate Location



Perhaps the greatest obstacle in selecting an alternative site for the proposed Project is that the Project Applicant does not already own land at these locations and/or does not have control of land at these locations However, for purposes of environmental evaluation, a description of potential environmental impacts is provided below.

Environmental Considerations

Development of an alternate site could theoretically meet most of the Project objectives presented earlier in this chapter. However, construction and operation of an alternate site would not be as cost effective or operationally efficient and thus is not consistent with the Project objectives. In addition, construction and operation at an alternate site would result in environmental impacts that are likely equal to or in some cases greater than the proposed project. The majority, if not all of project impacts are likely to occur at an alternate site.

The alternative site would require environmental review once the Applicant has prepared sufficient project description information. The time requirements for these activities would reduce the ability of the Applicant to accommodate projected residential demand in a timely manner compared to the proposed Project. This alternative would be the most complex, costly, and time-consuming alternative to implement. Various engineering and technical studies would then be completed to define the project and its components. Environmental review and obtaining entitlements would follow prior to construction activities. The site identified herein appears to have conditions that are not as favorable as the proposed Project site, such as having an agricultural land use designation and zone, and as mentioned earlier, lack of control over the land.

Impacts from the Alternate Locations Alternative, as compared to the Project, are summarized as follows:

- **Aesthetics** – With development of a similar project on an alternate site, aesthetic impacts would occur through the conversion of farmland to urban uses, introduction of light/glare, and construction of industrial development on vacant land. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Agriculture and Forestry Resources** - With development of a similar project on an alternate site, agricultural impacts would occur through the conversion of farmland to urban uses. Site development at this location; however, would convert 113-acres of land rather than the 61-acres of land proposed to be converted with Project implementation. Therefore, impacts are greater than the proposed Project. This Alternative would not eliminate the significant and unavoidable impacts (project and cumulative) associated with this topic from the proposed Project.
- **Air Quality** - With development of a similar project on an alternate site, air quality impacts would occur from construction activities (construction vehicles and equipment, dust and other emissions) and from operational activities (vehicle trip emissions and other

emissions from the development). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.

- **Biological Resources** - With development of a similar project on an alternate site, biological impacts could occur from development of a previously agricultural site to urban uses. Therefore, impacts are similar to the proposed Project.
- **Cultural Resources** - With development of a similar project on an alternate site, cultural resource impacts could occur from development of a previously agricultural site to urban uses. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Energy** - With development of a similar project on an alternate site, energy impacts would occur from construction activities (electricity, fuel) and operational activities (electricity, natural gas, fuel). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Geology/Soils** - With development of a similar project on an alternate site, impacts to geology and soils would occur from construction activities (grading and land disturbing activities) and operational activities (the Alternative project would be subject to geotechnical evaluation). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Greenhouse Gas Emissions** - With development of a similar project on an alternate site, greenhouse gas emission impacts would occur from construction activities (construction equipment emissions and vehicle emissions) and operational activities (vehicle emissions). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Hazards & Hazardous Materials** - With development of a similar project on an alternate site, hazardous impacts would occur from construction activities and operational activities would have similar impacts as the proposed Project. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Hydrology & Water Quality** - With development of a similar project on an alternate site, hydrology and water quality impacts would occur from construction activities (water for dust control, requirement for preparation of a SWPPP, drainage control) and operational activities (water demand associated with the development, drainage control). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Land Use / Planning** - With development of a similar project on an alternate site, land use and planning impacts would occur from development of existing agricultural lands to

urban uses. The Alternative would not divide an established community. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.

- **Mineral Resources** - With development of a similar project on an alternate site, mineral resource impacts could occur from construction activities (grading and ground-disturbing activities) and operational activities (conversion of land to urban uses). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Noise** - With development of a similar project on an alternate site, noise impacts would occur from construction activities (construction equipment and vehicles) and operational activities (vehicles, air conditioners, etc.). The Alternative locations are similarly proximate to existing urban uses (as compared to the proposed Project). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Public Services** - With development of a similar project on an alternate site, public service impacts would occur from development of these sites (need for police, fire, schools and other public facilities). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Transportation** - With development of a similar project on an alternate site, transportation impacts would occur from construction and operation (vehicles associated with the industrial development). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Tribal Cultural Resources** - With development of a similar project on an alternate site, tribal cultural resource impacts could occur from development of these sites (conversion of agricultural lands to urban uses). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Utilities & Service Systems** - With development of a similar project on an alternate site, utility and service system impacts would occur from construction activities (water for dust control, solid waste disposal) and operational activities (water demand associated with the development, wastewater disposal, solid waste disposal). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Wildfire** - With development of a similar project on an alternate site, wildfire impacts could occur from development of these sites (conversion of agricultural lands to urban uses). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.

Refer to Table 4-1 for a comparison of each environmental topic for the Alternate Locations Alternative versus the proposed Project.

Reduced Project Alternative

A reduction of 50% in the Project's size and scope is a reasonable amount to illustrate what impact such an alternative would have on the significant effects of the proposed Project.

Description

This alternative would keep the same acreage, but would reduce the developed square footage from 1,500,000 square feet to 750,000 square feet. All other project components, including overall acreage would remain (ponding basins, etc.). This would result in larger spacing between buildings as compared to the proposed Project.

Environmental Considerations

Most of the environmental issues associated with this alternative would be similar to those of the proposed Project. However, this alternative does likely reduce impacts to the following areas:

- **Air Quality** - With development of the Project site with 50% of the building footprint (as compared to the proposed Project), air quality impacts would occur from construction activities (construction vehicles and equipment, dust and other emissions) and from operational activities (vehicle trip emissions and other emissions from the development). According to the Project's Air Quality / Greenhouse Gas / Energy Study prepared for the Project, the proposed Project will have annual air pollutant emission rates that are less than the applicable San Joaquin Valley Air Pollution Control District thresholds of significance. Even though the proposed Project is below existing thresholds of significance, this alternative would have lower annual emission rates than the proposed project for the following criteria pollutants: CO, NOx, VOC, SOx, PM10 and PM2.5. Air pollutant emission rates associated with this alternative are thus lower than the proposed project due to the reduced building footprint (and associated reduction in vehicle trips).
- **Energy** - With development of the Project site with 50% of the residential units (as compared to the proposed Project), energy impacts would occur from construction activities (electricity, fuel) and operational activities (electricity, natural gas, fuel). However, since this Alternative would have 50% less building footprint as compared to the proposed Project, energy impacts would be less than the proposed Project.

- **Greenhouse Gas Emissions** - With development of the Project site with 50% of the building footprint (as compared to the proposed Project), greenhouse gas emission impacts would occur from construction activities (construction equipment emissions and vehicle emissions) and operational activities (vehicle emissions). However, since this Alternative would have 50% less building footprint as compared to the proposed Project, greenhouse gas emissions would be less than the proposed Project.
- **Hydrology & Water Quality** - With development of the Project site with 50% of the building footprint (as compared to the proposed Project), hydrology and water quality impacts would occur from construction activities (water for dust control, requirement for preparation of a SWPPP, drainage control) and operational activities (water demand associated with the development, drainage control). However, since this Alternative would have 50% less building footprint as compared to the proposed Project, hydrology and water quality impacts would be less than the proposed Project.
- **Noise** - With development of the Project site with 50% of the building footprint (as compared to the proposed Project), noise impacts would occur from construction activities (construction equipment and vehicles) and operational activities (vehicles, air conditioners, televisions, radios, lawn mowers, etc.). However, since this Alternative would have 50% less building footprint as compared to the proposed Project, noise impacts would be less than the proposed Project.
- **Public Services** - With development of the Project site with 50% of the building footprint (as compared to the proposed Project), public service impacts would occur from development of these sites (need for police, fire, schools and other public facilities). However, since this Alternative would have 50% less building footprint as compared to the proposed Project, public service impacts would be less than the proposed Project.
- **Transportation** - With development of the Project site with 50% of the building footprint (as compared to the proposed Project), transportation impacts would occur from construction and operation (vehicles associated with the industrial development). However, since this Alternative would have 50% less building footprint as compared to the proposed Project, transportation impacts would be less than the proposed Project.
- **Utilities & Service Systems** - With development of the Project site with 50% of the building footprint (as compared to the proposed Project), utility and service system impacts would occur from construction activities (water for dust control, solid waste disposal) and operational activities (water demand associated with the development, wastewater disposal, solid waste disposal). However, since this Alternative would have 50% less building footprint as compared to the proposed Project, utility and service system impacts would be less than the proposed Project.

Refer to Table 4-1 for a comparison of each environmental topic for the Reduced (50%) Project Alternative versus the proposed Project.

4.6 Summary of Potential Impacts of Alternatives

Table 4-1 provides a summary and side-by-side comparison of the proposed project with the impacts of each of the alternatives analyzed.

Table 4-1
Alternatives Potential Impact Analysis

Environmental Issues	Proposed Project	No Project	Alternate Sites	Reduced (50%) Project
Aesthetics	Less than Signifcant	Less	Similar	Similar
Agriculture / Forest Resources	Significant and unavoidable (project and cumulative)	Less	Greater	Similar
Air Quality	Less than Signifcant	Less	Similar	Less
Biological Resources	Less than Signifcant	Less	Similar	Similar
Cultural Resources	Less than Signifcant	Less	Similar	Similar
Geology and Soils	Less than Signifcant	Less	Similar	Similar
Greenhouse Gas Emissions	Less than Signifcant	Less	Similar	Less
Hazards and Hazardous Materials	Less than Signifcant	Less	Similar	Similar
Hydrology and Water Quality	Less than Signifcant	Less	Similar	Less
Land Use / Planning	Less than Signifcant	Less	Similar	Similar
Noise	Less than Signifcant	Less	Similar	Less

Environmental Issues	Proposed Project	No Project	Alternate Sites	Reduced (50%) Project
Population / Housing	Less than Signifcant	Less	Similar	Similar
Public Services	Less than Signifcant	Less	Similar	Similar
Recreation	Less than Signifcant	Less	Similar	Similar
Transportation and Traffic	Less than Signifcant	Less	Similar	Less
Tribal Cultural Resources	Less than Signifcant	Less	Similar	Similar
Utilities and Service Systems	Less than Signifcant	Less	Similar	Less
Cumulative Impacts	Significant and unavoidable for Agriculture	Less	Similar	Less
Impact Reduction		Yes	No	Yes

Environmentally Superior Alternative

As presented in the comparative analysis above, and as shown in Table 4-1, there are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. The No Project Alternative would be environmentally superior to the Project on the basis of its minimization or avoidance of physical environmental impacts. However, CEQA Guidelines Section 15126.6(e)(2) states:

> *The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.*

Because the No Project Alternative cannot be the Environmentally Superior Alternative under CEQA. the Reduced (50%) Project Alternative would be the Environmentally Superior alternative because it would result in less adverse physical impacts to the environment with regard to air, water, noise, public services, population/housing, utilities and traffic. However, the Reduced (50%) Project Alternative does not eliminate the proposed Project's significant and unavoidable impacts associated with Agriculture - Loss of Farmland (project and cumulative). Furthermore, the Reduced (50%) Project Altenative does not meet all of the Project objectives, particularly with providing an economically sustainable industrial complex.

Summary and Determination

Only the No Project and Reduced Project Alternatives could potentially result in fewer impacts than the proposed Project's impacts. These Alternatives however, would not meet the objectives of the proposed Project. After this full, substantial, and deliberate analysis, the proposed Project remains the preferred alternative.

Chapter 5

CEQA CONSIDERATIONS

Chapter 5 - CEQA CONSIDERATIONS

5.1 Growth-Inducing Impacts

CEQA Guidelines Section 15126 (d) requires an EIR to address any growth-inducing aspect of a project. This discussion includes consideration of ways in which the proposed Project could directly or indirectly foster economic or population growth with the expansion of an existing industrial park development project in the surrounding area. Projects which could remove obstacles to population growth (such as a major public service expansion) are also considered in this discussion.

The proposed Project is the establishment of an industrial complex project. It is consistent with the City of Woodlake's General Plan and Zone District with the approval of a General Plan Amendment to change the land use from Urban Reserve to Light Industrial and Conditional Use Permit to accommodate the cannabis cultivation, manufacturing, retail, testing and distribution.

The proposed Project would create a relatively minor amount of new employment opportunities during both construction and operational phases; however, those positions would likely be readily filled by the existing employment base, given the 8.0% unemployment rate in the Visalia-Porterville Metropolitan statistical area[1]. This compares with an unemployment rate of 3.9% for California[2] and 3.7% for the nation[3] during the same time period. There are no other aspects of the Project (such as creation of oversized utility lines, etc.) that would induce further growth in the area. As such, the proposed Project would not result in significant growth-inducing impacts.

Conclusion

The project would have ***less than significant*** growth-inducing impacts.

---

[1] State of California, Employment Development Department, Labor Market Information Division. September 16, 2022. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/visa$pds.pdf. Accessed September 2022.
[2] State of California, Employment Development Department news article. Published August 19, 2022. https://edd.ca.gov/en/about_edd/news_releases_and_announcements/unemployment-july-2022/. Accessed September 2022.
[3] U.S. Department of Labor, Bureau of Labor Statistics. News Release. September 2, 2022. https://www.bls.gov/news.release/pdf/empsit.pdf. Accessed September 2022.

5.2 Irreversible Environmental Changes

Section 15126(f) requires that an EIR include a discussion of significant irreversible environmental changes that would result from project implementation. CEQA Guidelines Section 15126.2(c) defines irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents.

Irreversible changes associated with the project include the use of nonrenewable resources during construction, including concrete, plastic, and petroleum products. During the operational phase of the proposed Project, energy would be used for lighting, heating, cooling, and other industrial requirements. The use of these resources would not be substantial and would not constitute a significant effect, as described in Impact Energy-1 in Section 3.3 of this EIR.

Conclusion

The project would have ***less than significant*** irreversible environmental changes.

Chapter 6

PREPARERS

Chapter 6 – PREPARERS

6.1 List of Preparers

City of Woodlake

- Ramon Lara, City Administrator
- Rebecca Griswold, Community Services Director

Crawford & Bowen Planning, Inc. (EIR Consultants)

- Travis Crawford, AICP, Principal Environmental Planner
- Emily Bowen, LEED AP, Principal Environmental Planner
- Deepesh Tourani, Environmental Planner

VRPA (Air Quality, Greenhouse Gas, and Energy Impact Assessment)
JJM Air Quality Consultants (Health Risk Assessment)
Ruettgers & Schuler Civil Engineers (Traffic Impact Study)
Colibri Ecological Consulting (Biological Impact Study)

6.2 Persons and Agencies Consulted

- California Air Resources Board
- California Department of Cannabis Control
- California Department of Conservation
- California Department of Fish and Wildlife, Cannabis Program
- California Department of Forestry and Fire Protection
- California Department of Parks and Recreation
- California Department of Pesticide Regulation
- California Department of Resources Recycling and Recovery
- California Department of Transportation, District 6
- California Department of Water Resources
- California Highway Patrol
- California Natural Resources Agency
- California Regional Water Quality Control Board, Central Valley Fresno Region 5
- Central Valley Flood Protection Board
- Department of Food and Agriculture
- Department of Toxic Substances Control

- Office of Historic Preservation
- California Native American Heritage Commission
- California Department of Fish and Wildlife, Central Region 4

Appendix A

NOP

Recirculated Notice of Preparation of a Draft Environmental Impact Report

Notice to Reviewers: *This Recirculated Notice of Preparation (NOP) has been prepared to include additional Project components and information that was not included in the original NOP that was published for the proposed Project on May 04, 2022. Following publication of the original NOP, changes were made to the proposed Project that consist of an increase in project acreage and a change in Land Use Designation. Please refer to the updated Project Description herein. This Recirculated NOP will supersede the original NOP, therefore the City is requesting that individuals and agencies provide comment letters and/or input on the Recirculated NOP.*

Notice is Hereby Given: The City of Woodlake (City) is the Lead Agency on the below-described project and has prepared an Initial Study and Notice of Preparation (IS/NOP) of an Environmental Impact Report (EIR), pursuant to the California Environmental Quality Act (CEQA). The complete project description, location and the potential environmental effects are contained in the Initial Study. Those environmental issues that have been determined to have no impact, or to be less than significant are detailed and evaluated in the Initial Study. The Initial Study also lists potentially significant environmental issues that will require detailed analysis and technical studies that will need to be prepared for the forthcoming EIR to determine the level of significance of the environmental effect. The IS/NOP is intended to disclose environmental information and to solicit the views of the public, interested parties, and/or agencies as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Specifically, we are requesting that commenters provide comments on the Initial Study, identify additional environmental topics (and/or special studies) that they believe need to be explored in the forthcoming EIR, and to identify other relevant environmental issues related to the Initial Study and scope and content of the forthcoming EIR.

Project Title: Woodlake Holdings Industrial Park

Project Location: The proposed Project is located on the east side of Blair Road, south of Ropes Avenue on multiple APNs, including: 060-170-105, -106, 060-160-044 and -059.

Project Description: A full project description and relevant maps are included in the Initial Study. To summarize, the Project Applicant intends to expand an existing industrial area by developing a 1.5 million square foot industrial center on a 113-acre site that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, distribution and retail, which is allowable with a Conditional Use Permit. The site will operate from 7am to 6pm Monday through Friday. The facility's electrical needs will continue to be serviced by existing Southern California Edison connections that have been assessed as sufficient for full operation of allowable industrial uses, including indoor/mixed light cannabis cultivation. Once a business is established, water needs for the grow houses will be serviced by existing deep-water wells while water needs for the distribution facilities and sanitary facilities will be provided by the City. Stormwater will be kept on-site and wastewater will be connected to the City's existing system. A Conditional Use Permit, lot line adjustment, Tentative Parcel Map and General Plan Amendment to change the Land Use designation from Urban Reserve to Industrial will be required to accommodate the proposed Project.

Document Availability and Public Review Timeline: Due to the time limits mandated by State law, your response to the IS/NOP must be sent at the earliest possible date *but not later than 30 days* after receipt of this notice. The review period for the IS/NOP will be from October 12, 2022 to November 14, 2022. Copies of the IS/NOP can be reviewed at the City of Woodlake, 350 North Valencia Blvd., Woodlake, CA 93286 or on the City's website at https://cityofwoodlake.com/departments/planning/

Please send your comments to Rebecca Griswold, Community Services Director at the address shown above or by email: rgriswold@ci.woodlake.ca.us and please provide the name and return mailing address for a contact person in your agency (if applicable).

Initial Study

Woodlake Holdings Industrial Park

Prepared for:

City of Woodlake

350 N. Valencia Ave
Woodlake, CA 93286
(559) 564-8055
Contact: Rebecca Griswold

Prepared by:

Crawford & Bowen Planning, Inc.
113 N. Church Street, Suite 302
Visalia, CA 93291
(559) 840-4414
Contact: Emily Bowen, LEED AP

October 2022

TABLE OF CONTENTS

PROJECT INFORMATION

This document is the Initial Study for the potential environmental effects of the City of Woodlake's (City) Woodlake Holdings Industrial Park Project (Project). The City of Woodlake will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines. Copies of all materials referenced in this report are available for review in the project file during regular business hours at 350 N. Valencia Avenue, Woodlake, CA 93286.

Project title

Woodlake Holdings Industrial Park

Lead agency name and address

City of Woodlake
350 N. Valencia Avenue
Woodlake, CA 93286

Contact person and phone number

Rebecca Griswold, Community Services Director
City of Woodlake
(559) 564-8055

Project location

The City of Woodlake is located in Tulare County in the southern part of the San Joaquin Valley. The proposed Project is located on the east side of Blair Road, south of Ropes Avenue on multiple APNs, including: 060-170-105, -106, 060-160-044 and -059. Woodlake is bisected by SR 216 and SR 245 and is situated five miles north of SR 198.

Figure 1 – Location

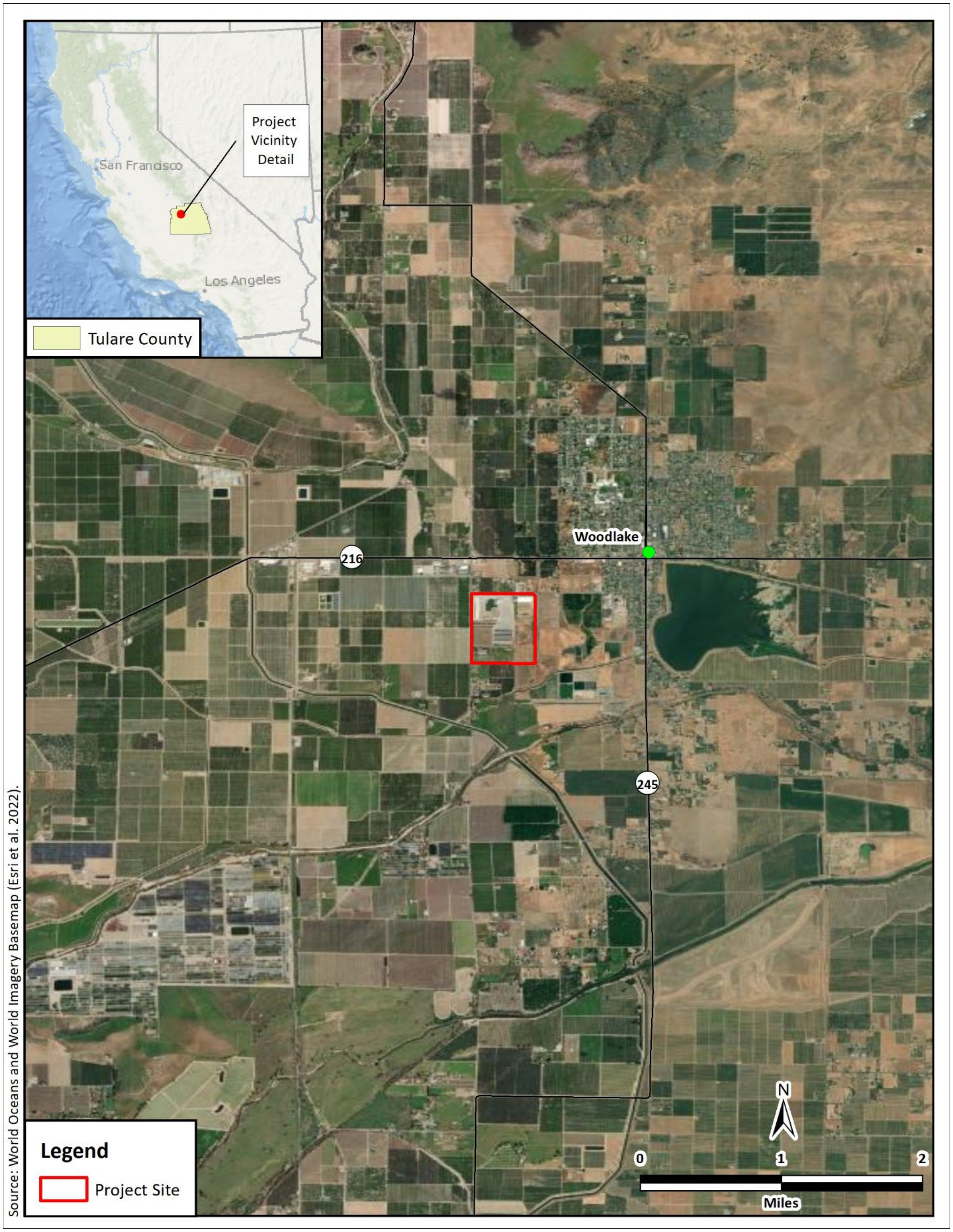
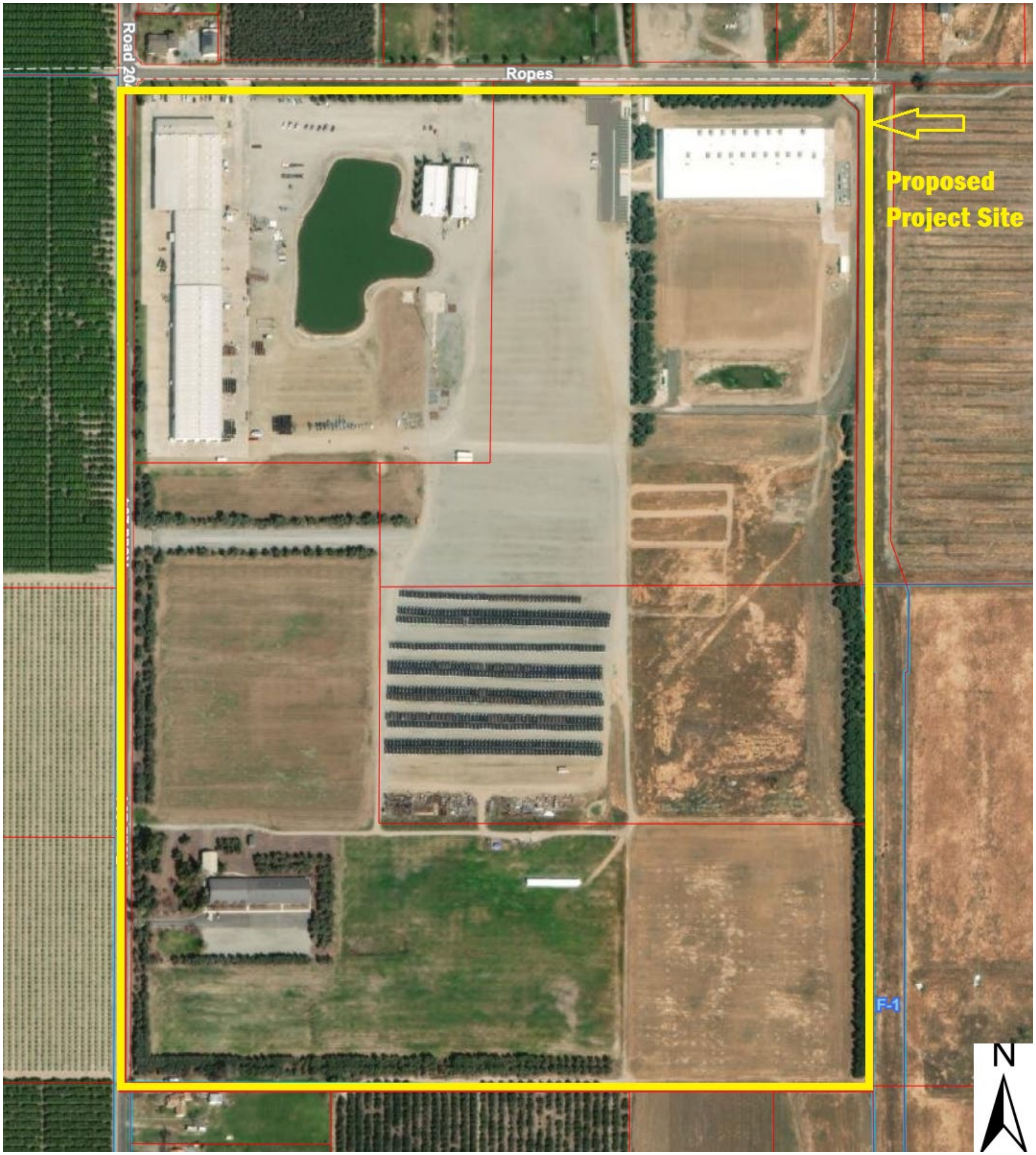


Figure 2 – Site Aerial



Project sponsor's name/address

Woodlake Holdings, LLC.
1099 W. Ropes Ave
Woodlake CA 93286

General plan designation

Industrial and Urban Reserve

Zoning

Light Industrial (ML)

Project Description

The Project Applicant intends to expand an existing industrial area by developing a 113-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, distribution and retail, which is allowable with a Conditional Use Permit.

Project Components

- Constructing and operating an industrial park with seventeen buildings ranging in size of 75,000 sf to 87,000 sf for a total of up to 1,500,000 sf of industrial space.
- Constructing internal access roads, 700 parking spaces and associated landscaping, as detailed on Figure 4 – Site Plan.
- Connecting the Project to the existing City water and wastewater systems. Any grow operations will utilize the existing well connection for water.
- Installation of perimeter security, including lighting and an alarm system, in accordance with Chapter 5.48 of the Woodlake Municipal Code.
- Constructing three new ponding basins of 7.93 Ac ft, 8.42 Ac ft, and 16.42 Ac ft.

Construction will begin in 2022 and will continue to buildout as the market demands.

Project Operations

The site will operate from 7am to 6pm Monday through Friday. The facility's electrical needs will continue to be serviced by existing Southern California Edison connections that have been assessed as sufficient for full operation of allowable industrial uses, including indoor/mixed light cannabis cultivation.

Once a business is established, water needs for the grow houses will be serviced by existing deep-water wells while water needs for the distribution facilities and sanitary facilities will be provided by the City. Stormwater will be kept on-site, and wastewater will be connected to the City's existing system.

To accommodate this Project, the following entitlements are required:

- Conditional Use Permit to operate under a Cannabis Business License (Cultivation, Manufacturing, Retail and Distribution) for cannabis businesses
- General Plan Amendment to change the land use designation of APNs 060-160-044 and -059 from Urban Reserve to Industrial
- Lot line adjustment as per the City's requirements
- Tentative Parcel Map to divide the existing parcel into 21 separate parcels (see Figure 3)

Surrounding Land Uses/Existing Conditions

The proposed Project site consists of existing buildings and vacant land and is part of an existing industrial area. The site is surrounded by a chain link perimeter fence and is further surrounded by active agricultural production and rural residences (see Figure 2). Trees are planted along its northern and western boundaries, and a driveway running east-west across the northern portion of the parcel.

Lands surrounding the proposed Project are described as follows:

- North: Industrial, Rural Residential, Roadway.
- South: Agriculture, Rural Residential.
- East: Vacant, Agriculture.
- West: Agriculture, Roadway.

Figure 3 –Tentative Parcel Map

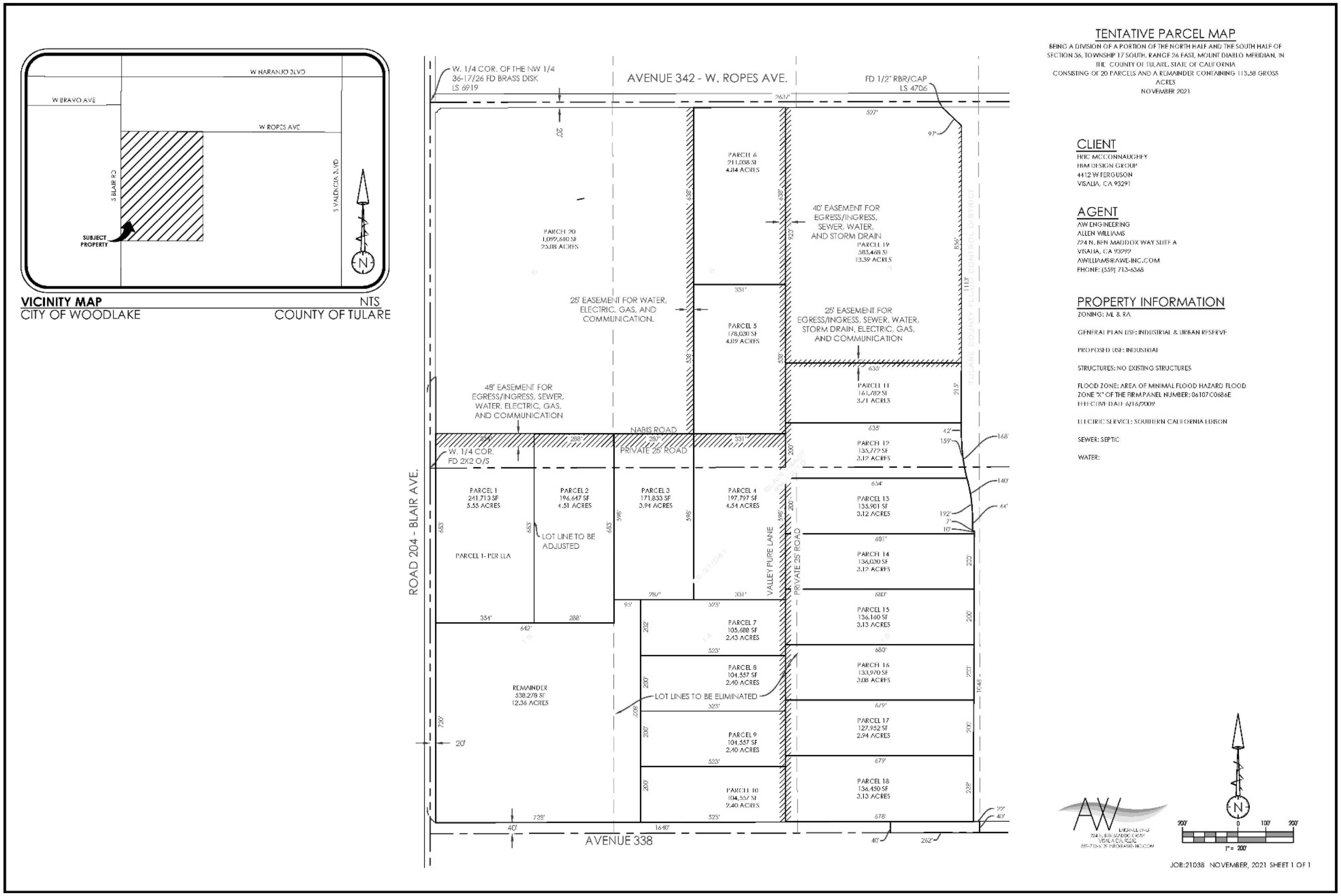
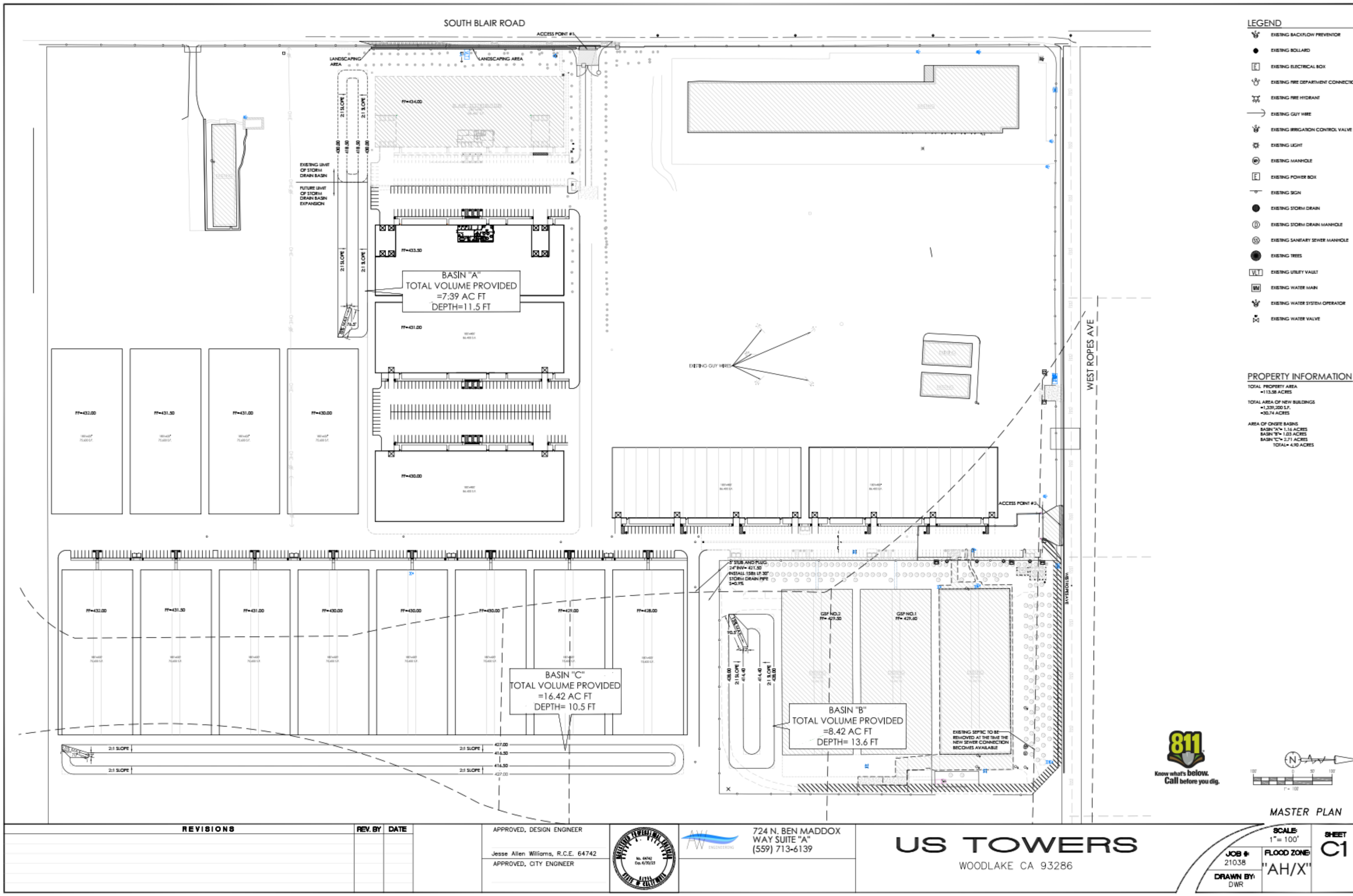


Figure 4 –Site Plan



Other Public Agencies Involved

- State of California Native American Heritage Commission
- San Joaquin Valley Air Pollution Control District
- Central Valley Regional Water Quality Control Board
- Bureau of Cannabis Control
- California Department of Health

Tribal Consultation

The City of Woodlake has not received any project-specific requests from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the City of Woodlake.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

DETERMINATION

On the basis of this initial evaluation:

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

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

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

☒ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

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

Rebecca E Griswold

10/7/2022

Rebecca Griswold | Date

Community Services Director

City of Woodlake

ENVIRONMENTAL CHECKLIST

I. AESTHETICS

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and 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

The City of Woodlake is located on the San Joaquin Valley floor at the western foothills of the Sierra Nevada Mountain range. On clear days, the peaks are visible from the majority of the City. The site is located in a primarily industrial and agricultural area with large industrial facilities and orchards dominating the landscape. The proposed Project site is bounded to the north by W Ropes Ave, rural residences, and industrial activity, to the east by vacant and agricultural land, to the west by S. Blair Road and to the south by vacant land with shrubs. There are no adopted scenic resources or scenic in the area. State Routes (SR) in the proposed Project vicinity include 216, 245 and 198.

RESPONSES

a. Have a substantial adverse effect on a scenic vista?
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and regulations governing scenic quality?

Less than Significant Impact. The City of Woodlake General Plan does not identify any scenic vistas within the proposed Project area; however, the peaks of the Sierra Nevada mountain range are clearly visible on many days of the year. A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area.

The proposed Project is consistent with the existing character and uses of the surrounding area, as other built-up land, including industrial/commercial businesses, are in the neighboring vicinities. As such, Project operations will not degrade the existing visual character of the site. Construction activities may be visible from the adjacent roadside; however, the construction activities will be temporary in nature and will not affect a scenic vista.

There are no state designated scenic highways within the immediate proximity to the Project site. California Department of Transportation Scenic Highway Mapping System identifies SR 198 east of SR 99 as an Eligible State Scenic Highway.[1] This is the closest highway, located approximately six miles south of the Project site; however, the Project site is both physically and visually separated from SR 198 by intervening land uses. In addition, no scenic highways or roadways are listed within the Project area in the City of Woodlake's General Plan or Tulare County's General Plan. Based on the National Register of Historic Places (NRHP) and the City's General Plan, no historic buildings exist on the Project site. The proposed Project would not cause damage to rock outcroppings or historic buildings within a State scenic highway corridor. Any impacts would be considered ***less than significant***.

Mitigation Measures: None are required.

---

[1] California Department of Transportation. California State Scenic Highways, State Scenic Highway Map. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed January 2022.

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

Less Than Significant Impact. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare and waste energy, and if designed incorrectly, could be considered unattractive. Light that falls beyond the intended area is referred to as "light trespass". Types of light trespass include spillover light and glare. Minimizing all these forms of obtrusive light is an important environmental consideration. A less obtrusive and well-designed energy efficient fixture would face downward, emit the correct intensity of light for the use, and incorporate energy timers.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Glare can be reduced by design features that block direct line of sight to the light source and that direct light downward, with little or no light emitted at high (near horizontal) angles, since this light would travel long distances. Cutoff-type light fixtures minimize glare because they emit relatively low-intensity light at these angles.

Current sources of light in the Project area are from the surrounding industrial and agricultural uses and vehicles traveling along nearby roadways. The Project would include nighttime lighting for building and security, as required by Chapter 5.48 of the Woodlake Municipal Code. Accordance with the Municipal Code will also ensure that outdoor lighting does not produce obtrusive glare onto the public right-of-way or adjoining properties. Lighting fixtures for security would be designed with "cutoff" type fixtures or shielded light fixtures, or a combination of fixture types to cast light downward, thereby providing lighting at the ground level for safety while reducing glare to adjacent properties. Accordingly, the Project would not create substantial new sources of light or glare. Potential impacts are ***less than significant***.

Mitigation Measures: None are required.

II. AGRICULTURE AND FOREST RESOURCES

Would the project:

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

RESPONSES

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. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Potentially Significant Impact. The proposed Project site covers 113 acres is considered Farmland of Local Importance, Farmland of Statewide Importance, Prime Farmland, Semi-agricultural and Agricultural Commercial Land, and Urban and Built-up Land according to the California Important Farmland Finder. Of the 113-acre site, the northern 52 acres of the site is designated as Industrial by the City of Woodlake. As such, potential conversion of farmlands on this site have been found to be significant and unavoidable in the Woodlake General Plan, 2008-2028 EIR (Sch#2008101159) and a Statement of Overriding Consideration has been adopted by the City. The southern 61 acres of the site are designated as Urban Reserve and as such, the Project would result in the conversion of Urban Reserve, or agricultural lands. Therefore, this impact is ***potentially significant*** and this topic will be addressed in the forthcoming EIR.

The EIR will describe the agricultural resources in the proposed Project vicinity and a Land Evaluation and Site Assessment (LESA) will be prepared in compliance with methodology set forth by the California Department of Conservation, which will be the basis of the analysis discussed in the EIR.

c. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

d. 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)?

e. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project site is not under the Williamson Act contract and the Project is not zoned for forestland and does not propose any zone changes related to forest or timberland. There is ***no impact***.

Mitigation Measures: None are required.

III. AIR QUALITY

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

ENVIRONMENTAL SETTING

The climate of the City of Woodlake and the San Joaquin Valley is characterized by long, hot summers and stagnant, foggy winters. Precipitation is low and temperature inversions are common. These characteristics are conducive to the formation and retention of air pollutants and are in part influenced by the surrounding mountains which intercept precipitation and act as a barrier to the passage of cold air and air pollutants.

The proposed Project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all state and federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either "attainment", "non-attainment", or "extreme non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal extreme non-attainment area for O_3, a State and Federal non-attainment area for $PM_{2.5}$, a State non-attainment area for PM_{10}, and Federal and State attainment area for CO, SO_2, NO_2, and Pb.[2]

Standards and attainment status for listed pollutants in the Air District can be found in Table 1. Note that both state and federal standards are presented.

Table 1 - Standards and Attainment Status for Listed Pollutants in the Air District

	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.07 ppm (8-hr avg) 0.09 ppm (1-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg)	0.30 ppm (annual avg) 0.18 ppm (1-hr avg)
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1hr avg)
Lead	1.5 µg/m3 (calendar quarter) 0.15 µg/m3 (rolling 3-month avg)	1.5 µg/m3 (30-day avg)
Particulate Matter (PM10)	150 µg/m3 (24-hr avg)	20 µg/m3 (annual avg) 50 µg/m3 (24-hr avg)
Particulate Matter (PM2.5)	15 µg/m3 (annual avg)	35 µg/m3 (24-hr avg) 12 µg/m3 (annual avg)

µg/m3 = micrograms per cubic meter

Additional State regulations include:

CARB Portable Equipment Registration Program – This program was designed to allow owners and operators of portable engines and other common construction or farming equipment to register their equipment under a statewide program so they may operate it statewide without the need to obtain a permit from the local air district.

U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program – The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off- road mobile sources include most construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile

---

[2] San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. http://www.valleyair.org/aqinfo/attainment.htm. Accessed April 2021.

sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NOX) and toxic particulate matter from diesel engines. CARB is currently developing a control measure to reduce diesel PM and NOX emissions from existing off-road diesel equipment throughout the state.

California Global Warming Solutions Act – Established in 2006, Assembly Bill 32 (AB 32) requires that California's GHG emissions be reduced to 1990 levels by the year 2020. This will be implemented through a statewide cap on GHG emissions, which will be phased in beginning in 2012. AB 32 requires CARB to develop regulations and a mandatory reporting system to monitor global warming emissions levels.

RESPONSES

a. <u>Conflict with or obstruct implementation of the applicable air quality plan?</u>

b. <u>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?</u>

c. <u>Expose sensitive receptors to substantial pollutant concentrations?</u>

d. <u>Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?</u>

Potentially Significant Impact. The San Joaquin Valley Air Basin (SJVAB) is designated nonattainment of state and federal health-based air quality standards for ozone and $PM_{2.5}$. The SJVAB is designated nonattainment of state PM_{10}. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- Extreme Ozone Attainment Demonstration Plan (EOADP) for attainment of the 1-hour ozone standard (2004);
- 2007 Ozone Plan for attainment of the 8-hour ozone standard;
- 2007 PM_{10} Maintenance Plan and Request for Redesignation; and
- 2008 $PM_{2.5}$ Plan.

Because of the region's non-attainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (ROG or NOx), PM_{10}, or $PM_{2.5}$ were to exceed the SJVAPCD's significance thresholds, then the project uses would be considered to conflict with the attainment plans. In addition, if the project uses were to result in a change in land use and corresponding increases in vehicle miles traveled, they may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

Predicted construction and operational emissions may exceed the SJVAPCD's significance thresholds for ROG, NOx, PM_{10}, and $PM_{2.5}$, could potentially create a cumulatively considerable net increase of these pollutants, could potentially expose sensitive receptors to substantial pollutant concentrations and could result in other emissions. Therefore, this impact is ***potentially significant.***

This topic will be addressed in the Project's forthcoming EIR.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of 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 proposed Project site is located in a portion of the central San Joaquin Valley that has, for decades, experienced intensive agricultural and urban disturbances. Current agricultural endeavors in the region include dairies, groves, and row crops.

Like most of California, the Central San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures usually exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely raise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Nearly all precipitation falls in the form of rain and stormwater readily infiltrates the soils of the surrounding the sites.

Native plant and animal species once abundant in the region have become locally extirpated or have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region. According to the Woodlake General Plan, most of the open space in the Woodlake area is dominated by agriculture. Citrus, olives, and grazing land are the dominant uses, which may attract the San Joaquin kit fox and burrowing owls.

The Project site currently consists of industrial buildings with graveled parking areas and fallowed agricultural land. The Project site's surrounding lands consist of industrial facilities, active agriculture, roadways and rural residences. A Biological Resource Evaluation (BRE) was prepared for the proposed Project in January 2022 by Colibri Ecological Consulting, LLC (see Appendix A). As part of the BRE, the California Natural Diversity Data Base (CNDDB), the California Native Plant Society's Inventory of Rare and Endangered Plants, and the USFWS special status species lists were queried for records of special-status plant and animal species in the Project area. In addition, a field reconnaissance survey of the Project site was conducted in January 2022. The BRE is included in its entirety in Appendix A.

Antelope Creek, an evidently usually dry channelized waterway, bordered the Project site to the east; its banks supported several ground squirrel burrows. The Project site supported four retention ponds, three of which held water at the time of the BRE survey.

RESPONSES

a. <u>Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</u>

Less than Significant Impact with Mitigation Incorporation. The USFWS species list for the Project included 13 species listed as threatened, endangered, or candidate under the FESA. Of those 13 species, 12 species could not occur on or near the Project site due to either the lack of habitat, the project site being outside the current range of the species, or the presence of development that would otherwise preclude occurrence. One species, the San Joaquin kit fox (*Vulpes macrotis mutica* – FE, ST), could occur on or near the Project site. As identified in the species list in Appendix A, the Project site does not occur in USFWS-designated or proposed critical habitat for any species (Appendix A).

From the CNDDB record search for special-status species, 16 are known from within five miles of the Project site (Appendix A). Of those species, San Joaquin kit fox (mentioned above) and western mastiff bat (*Eumops perotis californicus* – SSSC) could occur on or near the Project site. In addition, burrowing owl (*Athene cunicularia* – SSSC) and pallid bat (*Antrozous pallidus* – SSSC) were identified in the nine-quad search and could occur on or near the Project site.

Migratory birds could nest on or near the Project site. Bird species that may nest on or near the Project site include, but are not limited to, the house finch (*Haemorhous mexicanus*) and northern mockingbird (*Mimus polyglottos*).

Implementing Mitigation Measures BIO-1 through BIO-4 would reduce any contribution to cumulative impacts on biological resources to a ***less than significant*** level.

Mitigation Measures:

BIO-1

<u>Protect San Joaquin kit fox</u>

To protect San Joaquin kit fox, a qualified biologist shall conduct a pre-construction survey within 30 days prior to the start of ground-disturbing activities to identify potential dens (burrows larger than 4 inches in diameter) in suitable land cover types on and within 250 feet of the Project site. If potential dens for San Joaquin kit fox are present, their disturbance and destruction shall be avoided. Exclusion zones shall be implemented based on the type of den and current use: Potential Den—50 feet; Known Den—100 feet; Natal or Pupping Den—to be determined on a case-by-case basis in coordination with USFWS and CDFW. All pipes greater than 4 inches in diameter stored on the construction site shall be capped, and exit ramps shall be installed in trenches and other excavations to avoid direct mortality. When possible, construction shall be conducted outside of the breeding season from October 1 to November 30. If den avoidance is not possible, procedures in *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior or During Ground Disturbance* (USFWS 2011) shall be followed.

BIO-2

Protect Burrowing Owl

1. Conduct focused burrowing owl surveys to assess the presence/absence of burrowing owl in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1997). These involve conducting four pre-construction survey visits.
2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, guano, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or passive relocation shall be implemented in consultation with the CDFW.

BIO-3

Protect Roosting Pallid Bat and Western Mastiff Bats

A pre-construction clearance survey shall be conducted by a qualified biologist to ensure that no roosting pallid bats will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential roosting habitat in and immediately adjacent to the impact areas. If an active roost is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the roost. If work cannot proceed without disturbing the roosting bats, work may need to be halted or redirected to other areas until the roost is no longer in use.

BIO-4

Protect Nesting Birds

1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August.
2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

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 U.S. Fish and Wildlife Service?

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The channelized Antelope Creek is within 50 feet of the Project site. As a stream in California, it is under the regulatory jurisdiction of the CDFW; as a potential surface water in California, it may be under the regulatory jurisdiction of the SWRCB; and as a potential tributary of the St Johns River, it may be under the regulatory jurisdiction of the USACE; however, due to distance from the Project site, no impacts to Antelope Creek are anticipated.

In addition, four retention ponds were on the Project site (Appendix A). Although these represent surface waters in California, they do not qualify as waters of the state under the regulatory jurisdiction of the SWRCB because they were constructed and are maintained. No impacts to protected wetlands will occur due to Project implementation.

Mitigation Measures: None are required.

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. There are no natural waterways or natural vegetation on the subject site. There would be ***no impact*** to native species movement.

Mitigation Measures: None are required.

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

No Impact. The City of Woodlake's General Plan includes policies for the protection of biological resources, including minimizing the impact of new development on biotic resources. The proposed Project would not conflict with any of the adopted policies. There is ***no impact.***

Mitigation Measures: None are required.

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

No Impact. The proposed Project site is not within an area set aside for the conservation of habitat or sensitive plant or animal species pursuant to a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As such, there is ***no impact***.

Mitigation Measures: None are required.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

The prehistoric and historic site records and literature search was completed by the California Historical Resources Information System, Southern San Joaquin Valley Information Center (CHRIS/SSJVIC), California State University Bakersfield (File RS# 21-098, March 29, 2021). Specialized listings for cultural resources consulted by the SSJVIC include the Historic Properties Directory for Tulare County with the most recent updates of the National Register of Historic Places, California Historical Landmarks, and California Points of Historical Interest as well as other evaluations of properties reviewed by the State of California Office of Historic Preservation. Other sources consulted by the SSJVIC include California Inventory of Historic Resources, California Points of Historical Interest, and California Register. In addition, The California History Plan and Five Views: An Ethnic Sites Survey for California, Historic Properties Directory and available local and regional surveys/inventories/historic maps were consulted.

The records search found that two previous cultural resource studies have been conducted within the project area, and ten cultural resource studies have been conducted within a one-half mile radius. There are five recorded resources within the one-half mile radius, P-54-003992, 004003, 004034, 004614, and 004875. These resources consist of historic era storage tanks, Bravo Lake, another historic era railroad, an historic era canal, and an historic era ditch.

Resource P-54-004614, the Friant-Kern Canal, has been given a National Register Status Code of 2S2, indicating this property has been determined eligible for listing in the National Register of Historic Places by a consensus through the Section 106 process. The resource is listed in the California Register of Historical Resources. There are no other 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. See Appendix B.

No additional archaeological or historic resources were identified within or near the project site.

RESPONSES

a. <u>Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?</u>

b. <u>Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</u>

c. <u>Disturb any human remains, including those interred outside of formal cemeteries?</u>

Less Than Significant Impact With Mitigation. The Project area is highly disturbed, consisting developed industrial/warehouse uses and vacant land, lined on the western and northern boundaries with trees. There are no known or visible cultural, historic or archaeological resources, paleontological resources, or human remains that exist on the surface of the project area.

Although no cultural or archaeological resources, paleontological resources or human remains have been identified in the project area, the possibility exists that such resources or remains may be discovered during Project site preparation, excavation and/or grading activities. Mitigation Measures CUL – 1 and CUL – 2 will be implemented to ensure that Project will result in ***less than significant impacts with mitigation***.

Mitigation Measures:

CUL – 1 Should evidence of prehistoric archeological resources be discovered during construction, the contractor shall halt all work within 25 feet of the find and the resource shall be evaluated by a qualified archaeologist. If evidence of any archaeological, cultural, and/or historical deposits is found, hand excavation and/or mechanical excavation shall proceed to evaluate the deposits for determination of significance as defined by the CEQA guidelines. The archaeologist shall submit reports, to the satisfaction of the City of Woodlake, describing the testing program and subsequent results. These reports shall identify any program mitigation that the project proponent shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources).

CUL – 2 In order to ensure that the proposed project does not impact buried human remains during project construction, the project proponent shall be responsible for on-going monitoring of project construction. Prior to the issuance of any grading permit, the project proponent shall provide the City of Woodlake with documentation identifying construction personnel that will be responsible for on-site monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be halted until the Tulare County Coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e) if any of the circumstances established by that provision become applicable.

VI. ENERGY

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

ENVIRONMENTAL SETTING

California's total energy consumption is second-highest in the nation, but in 2018 the state's per capita energy consumption ranked the fourth-lowest, due in part to its mild climate and its energy efficiency programs. [3] In 2018, California was the top-ranking producer of electricity from solar, geothermal and biomass energy, and second in the nation in conventional hydroelectric power generation.

Energy usage is typically quantified using the British thermal unit (BTU). As a point of reference, the approximately amounts of energy contained in common energy sources are as follows:

Energy Source	**BTUs[4]**
Gasoline	120,286 per gallon
Natural Gas	1,037 per cubic foot
Electricity	3,412 per kilowatt-hour

[3] U.S. Energy Information Administration. Independent Statistics and Analysis. California Profile Overview. https://www.eia.gov/state/?sid=CA#tabs-1. Accessed January 2022.
[4] U.S. Energy Information Administration. Energy Units and Calculators Explained.https://www.eia.gov/energyexplained/units-and-calculators/british-thermal-units.php. Accessed January 2022.

California electrical consumption in 2020 was 853.6 trillion BTU[5], as provided in Table 3, while total electrical consumption by Tulare County in 2020 was 4642.81 GWh (or 15.842 trillion BTU).[6]

California Electricity Consumption Estimates 2020[7]

End User	BTU of energy consumed (in trillions)	Percentage of total consumption
Residential	323.9	37.94
Commercial	365.1	42.77
Industrial	162.5	19.04
Transportation	2.1	0.25
Total	**853.6**	--

The California Department of Transportation (Caltrans) reports that approximately 36.42 million vehicles were registered in the state in 2019, while in 2018 a total estimated 347.2 billion vehicles miles were traveled (VMT).[8]

RESPONSES

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?

Potentially Significant Impact. The proposed Project consists of the development of a 1,500,000 sf industrial park. The Project would introduce energy usage on a site that is currently demanding minimal energy. Therefore, this impact is ***potentially significant.***

This topic will be addressed in the Project's forthcoming EIR.

[5] U.S. Energy Information Administration. Independent Statistics and Analysis. California Profile Overview. https://www.eia.gov/state/?sid=CA#tabs-1. Accessed January 2022.
[6] California Energy Commission. Electricity Consumption by County. http://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed January 2022.
[7] U.S. Energy Information Administration. Electricity Consumption Estimates.
https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_use_es.pdf. Accessed January 2022
[8] Caltrans. 2020. California Transportation Fact Booklet. https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/caltrans-fact-booklets/2020-cfb-v2-a11y.pdf. Accessed January 2022.

VII. GEOLOGY AND SOILS **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
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 most recently adopted Uniform Building Code	☐	☐	☒	☐

	creating substantial direct or indirect risks to life or property?				
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The City of Woodlake is situated along the western slope of a northwest-trending belt of rocks comprising the Sierra Nevada and within the southern portion of the Cascade Range. The Sierra Nevada geomorphic province is primarily composed of cretaceous granitic plutons and remnants of Paleozoic and Mesozoic metavolcanic and metasedimentary rocks, and Cenozoic volcan and sedimentary rocks.

There are no known active earthquake faults in the City of Woodlake. According to the Woodlake General Plan, the nearest active faults are the San Andreas, 65 miles west; the Owens Valley, 75 miles east; and the White Wolf; 75 miles south.

The Woodlake General Plan also states that much of the Project area has soils with high clay content that can expand and contract as water conditions change.

RESPONSES

a-i. <u>Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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.</u>

a-ii. <u>Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?</u>

a-iii. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a-iv. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Less Than Significant Impact. The proposed Project site is not located in an earthquake fault zone as delineated by the 1972 Alquist-Priolo Earthquake Fault Zoning Map Act.[9] The nearest known potentially active fault is the Clovis Fault, located over thirty miles northwest of the site. No active faults have been mapped within the Project boundaries, so there is no potential for fault rupture. It is anticipated that the proposed Project site would be subject to some ground acceleration and ground shaking associated with seismic activity during its design life. The Project site would be engineered and constructed in strict accordance with the earthquake resistant design requirements contained in the latest edition of the California Building Code (CBC) for seismic zone III, as well as Title 24 of the California Administrative Code, and therefore would avoid potential seismically induced hazards on planned structures. The impact of seismic hazards on the project would be ***less than significant.***

Mitigation Measures: None are required.

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

Less than Significant Impact. The proposed Project will construct and operate an industrial park which includes cannabis retail and distribution facilities with the associated improvements. The Project site has a generally flat topography, is in an established urban area and does not include any Project features that would result in soil erosion or loss of topsoil. Therefore, the impact is ***less than significant***.

Mitigation Measures: None are required.

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?

[9] California Department of Conservation. EQ Zapp: California Earthquake Hazards Zone Application. https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed January 2022.

Less than Significant Impact. As described in Responses (a.iii) and (a.iv) above, the proposed Project would not require a substantial grade change or change in topography. Any impacts would be ***less than significant.***

Mitigation Measures: None are required.

d. Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?

Less than Significant Impact. See Responses (c) and (a-ii). The impact is ***less than significant***.

Mitigation Measures: None are required.

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

No Impact. The proposed Project will tie into the existing City water, wastewater, and stormdrain systems and will not require installation of a septic tank or alternate wastewater disposal system. There is ***no impact.***

Mitigation Measures: None are required.

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

Less Than Significant Impact. As identified in the previous cultural studies perform for the project site, there are no known paleontological resources on or near the site (see Section V. for more details). Mitigation measures have been added that will protect unknown (buried) resources during construction, including paleontological resources. There are no unique geological features on site or in the area. Therefore, there is a ***less than significant impact.***

Mitigation Measures: None are required.

VIII. GREENHOUSE GAS EMISSIONS

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

ENVIRONMENTAL SETTING

Various gases in the earth's atmosphere play an important role in moderating the earth's surface temperature. Solar radiation enters earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs are transparent to solar radiation but are effective in absorbing infrared radiation. Consequently, radiation that would otherwise escape back into space is retained, resulting in a warming of the earth's atmosphere. This phenomenon is known as the greenhouse effect. Scientific research to date indicates that some of the observed climate change is a result of increased GHG emissions associated with human activity.

Among the GHGs contributing to the greenhouse effect are water vapor, carbon dioxide (CO_2), methane (CH_4), ozone, Nitrous Oxide (NO_x), and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors.

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Global climate change is, indeed, a global issue. GHGs are global pollutants, unlike criteria pollutants and TACs (which are pollutants of regional and/or local concern). Global climate change, if it occurs, could potentially affect water resources in California. Rising temperatures could be anticipated to result in sea-level rise (as polar ice caps melt) and possibly change the timing and amount of precipitation, which could alter water quality. According to some, climate change could result in more extreme weather patterns; both heavier precipitation that could lead to flooding, as well as more extended drought periods. There is uncertainty regarding the timing, magnitude, and nature of the potential changes to water resources as a result of climate change; however, several trends are evident.

Snowpack and snowmelt may also be affected by climate change. Much of California's precipitation falls as snow in the Sierra Nevada and southern Cascades, and snowpack represents approximately 35 percent of the state's useable annual water supply. The snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended. As air temperatures increase due to climate change, the water stored in California's snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt.

RESPONSES

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?

Potentially Significant Impact. Greenhouse gas emissions would generate from long-term area and mobile sources as well as indirectly from energy consumption. Mobile sources would include residential vehicle trips and area source emissions would result from consumption of natural gas and electricity. Potential impacts to greenhouse gas emissions are ***potentially significant*** and as such, will be analyzed in the forthcoming EIR.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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 to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f. Impair implementation of or physically interfere with an adopted emergency	☐	☐	☐	☒

IX. HAZARDS AND HAZARDOUS MATERIALS **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
response plan or emergency evacuation plan?				
g. Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The area immediately surrounding the proposed Project consists of industrial and agricultural uses. The proposed Project site consists of an existing industrial area and vacant land. Trees are planted along its northern and western boundaries and a chain link fence runs along the perimeter of the entire site.

RESPONSES

a. <u>Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</u>

b. <u>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?</u>

Less than Significant Impact. This impact is associated with hazards caused by the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Proposed Project construction activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. In addition, the Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) permit program through the submission and implementation of a Stormwater Pollution Prevention Plan during construction activities to prevent contaminated runoff from leaving the project site. Therefore, no significant impacts would occur during construction activities.

The operational phase of the proposed Project would occur after construction is completed and employees move in to occupy the expanded space on a day-to-day basis. The proposed Project includes land uses that are considered compatible with the surrounding uses with a Conditional Use Permit. None of these land uses routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common commercial grade hazardous materials such as household and commercial cleaners, paint, etc. The proposed Project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials, nor would a significant hazard to the public or to the environment through the reasonably foreseeable upset and accidental conditions involving the likely release of hazardous materials into the environment occur. Therefore, the proposed Project will not create a significant hazard to the public or the environment and any impacts would be ***less than significant***.

Mitigation Measures: None are required.

c. <u>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</u>

No Impact. No schools are located within 0.25 mile of the Project site. This condition precludes the possibility of activities associated with the proposed Project exposing schools within a 0.25-mile radius of the project site to hazardous materials. ***No impact*** would occur.

Mitigation Measures: None are required.

d. <u>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?</u>

No Impact. The proposed Project site is not located on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 (Geotracker and DTSC Envirostor databases – accessed in January 2022).[10] There are no hazardous materials sites that impact the Project. As such, ***no impacts*** would occur that would create a significant hazard to the public or the environment.

Mitigation Measures: None are required.

---

[10] California Department of Toxic Substances Control. Envirostor Database.
http://www.envirostor.dtsc.ca.gov/public/map/?myaddress=woodlake+ca. Accessed January 2022.

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. There are no private airstrips in the Project vicinity. The Woodlake Municipal Airport is located approximately 0.7 miles southeast of the site. The proposed site is located inside the Airport Land Use Plan's Safety Zone 6 (Traffic Pattern Zone).[11] However, the proposed Project does not include residential development, which would require adherence to restrictive development policies provided by the ALUC. The Tulare County Airport Land Use Compatibility Matrix identifies "warehouse, wholesale and distributing" as well as "industrial manufacturing" and "indoor processes" as compatible land uses within Safety Zone 6. Furthermore, the proposed land use would not substantially contribute to the severity of an aircraft accident nor result in a substantial safety hazard for people residing or working in the Project area. Thus, any impacts are ***less than significant***.

Mitigation Measures: None are required.

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

No Impact. The Project will not interfere with any adopted emergency response or evacuation plan. There is ***no impact.***

Mitigation Measures: None are required.

g. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. There are no wildlands on or near the Project site. There is ***no impact***.

Mitigation Measures: None are required.

---

[11] Tulare County Comprehensive Airport Land Use Plan. December 2012. https://tularecounty.ca.gov/rma/rma-documents/planning-documents/tulare-county-comprehensive-airport-land-use-plan/. Accessed January 2022.

X. HYDROLOGY AND WATER QUALITY

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

X. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The City of Woodlake obtains its water supply from a vast aquifer underlying the San Joaquin Valley. The City provides water service to all developed areas within the City and the unincorporated county service area called Wells Tract, which contains approximately 50 residential dwellings.

Water is supplied to the City by five wells that are located in the southern portion of the City; adjacent to the St. Johns River. The yield of city wells ranges from 350 to 1,500 gallons per minute.

RESPONSES

a. <u>Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?</u>

Less Than Significant Impact. The Project has the potential to impact water quality standards and/or waste discharge requirements during construction (temporary impacts) and operation. Impacts are discussed below.

Construction

Grading, excavation and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

Three general sources of potential short-term construction-related stormwater pollution associated with the proposed project are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment. Generally, routine safety precautions for handling and storing construction materials may effectively mitigate the potential pollution of stormwater by these materials. These same types of common sense, “good housekeeping” procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. In addition, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These Best Management Practices (BMPs) would be required in the Stormwater Pollution Prevention Plan (SWPPP) to be prepared prior to commencement of Project construction. When properly designed and implemented, these “good-housekeeping” practices are expected to reduce short-term construction-related impacts to less than significant.

In accordance with the National Pollution Discharge Elimination System (NPDES) Stormwater Program, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the Regional Water Quality Control Board (RWQCB) has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement.

Operation

The proposed Project includes the construction and operation of a 113-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, retail and distribution, which is allowable with a Conditional Use Permit. The Project will tie into the existing City water and wastewater systems, and will direct stormwater to three on-site basins that will be constructed as part of the Project. Any grow operations will utilize the existing well connection for water. The State Water Resources Control Board has established General Order WQ 2019-0001-DWQ for cannabis cultivation. Any proposed cannabis tenants will be in compliance with the rules and requirements set forth in the General Order.

Therefore, any impacts are ***less than significant.***

Mitigation Measures: None are required.

b. <u>Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?</u>

Less than Significant Impact. According to the Woodlake General Plan 2008-2028, the aquifer underlying the City is a good supply of water, although the relative shallowness of the water table can make the supply susceptible to surface contaminants. The water table is recharged primarily by water moving downhill from the watersheds of Sierra Nevada streams. The St. Johns River, which forms the southern boundary of the City of Woodlake, charges the aquifer from which Woodlake pumps its domestic water.

Project demands for groundwater resources in connection with the proposed Project would not substantially deplete groundwater supplies and/or otherwise interfere with groundwater recharge efforts being implemented by the City of Woodlake. The proposed Project is not anticipated to result in additional demands for groundwater resources beyond those considered in the adopted City of Woodlake General Plan as the proposed Project is an allowable use within the land designation, with an approved Conditional Use Permit. Any impacts would be ***less than significant***.

Mitigation Measures: None are required.

c. <u>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:</u>

<u>i. result in substantial erosion or siltation on- or offsite;</u>

<u>ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;</u>

<u>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</u>

<u>iv. impede or redirect flood flows?</u>

The proposed Project includes changes to the existing stormwater drainage pattern of the area through the installation of new buildings, parking areas, landscaping, and sidewalks. Stormwater will be directed to three on-site basins that will be constructed as part of the project. All stormwater will remain on-site. The proposed Project will be required to comply with existing regulatory requirements to prepare a SWPPP which will limit on or offsite erosion or siltation. The Project would not otherwise degrade water quality. The project will have a ***less than significant impact.***

Mitigation Measures: None are required.

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

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

Less than Significant Impact. The Project is located outside the Flood Inundation Area, defined by the City of Woodlake Special Flood Hazard Area Map. These maps are provided by the Tulare County Multi-Jurisdictional Local Hazard Mitigation Plan[12] (MJLHMP) a compiled by Tulare County, FEMA, USGS, USDA and US Census.

The City of Woodlake is located inside the Terminus Dam inundation area. If the Terminus Dam failed while at full capacity, its floodwaters would arrive in Woodlake within approximately six hours. The Project is located inside the Dam Inundation Area, defined by the City of Woodlake Dam Inundation Area Map. Dam failure has been adequately planned for through the Tulare County MJLHMP, which the proposed Project is required to be in compliance with. The project will not conflict with any water quality control plans or sustainable groundwater management plan. Therefore, any impacts are ***less than significant***.

Mitigation Measures: None are required.

[12] Tulare County Multi-Jurisdictional Local Hazard Mitigation Plan. March, 2018. http://www.dinuba.org/images/2018/Tulare_County_MJLHMP-COMP-2018.pdf. Accessed February 2022.

XI. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☒
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 in the southwestern portion of the City of Woodlake. The Project vicinity is heavily disturbed with industrial, rural residential and agricultural uses. Portions of the site are currently developed and operating with industrial/warehouse uses, see Figure 2 – Aerial Map. The site is zoned Light Industrial and the General Plan Land Use Designation is Industrial and Urban Reserve.

RESPONSES

a. <u>Physically divide an established community?</u>

b. <u>Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</u>

No Impact. The proposed Project is located in the eastern portion of Woodlake, in an area of industrial, agricultural and rural residential land uses. The proposed Project site is currently a mix of an existing industrial facility and agricultural trees.

As noted earlier, the proposed Project includes construction and operation of a 113-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, retail and distribution, which is allowable with a Conditional Use Permit. As part of the Project, a General Plan land use change will eliminate the Urban Reserve and the designation will be amended to Industrial. The industrial park includes construction and operation of seventeen buildings ranging in size of 75,000 sf to 87,000 sf for a total of up to 1,500,000 sf of industrial space. The Project also includes construction of ponding basins, internal access roads, 700 parking spaces and associated landscaping, sidewalk, and fencing. The proposed Project is an allowable use within the existing zone district, with the approval of a Conditional Use Permit for the Cannabis Cultivation, Manufacturing, Retail and Distribution License. The proposed Project will be in accordance with Chapter 5.48 of the Woodlake Municipal Code which allows cannabis businesses and establishes permitting procedures and regulations.

With Project approval, the proposed Project will be consistent with the Woodlake General Plan objectives and policies and will not significantly conflict with applicable land use plans, policies or regulations of the City of Woodlake. There is ***no impact.***

Mitigation Measures: None are required.

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 land use plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

There are no known mineral resources within the planning area and no known mining of mineral resources occurs in the City of Woodlake. The closest significant mineral resources consist of sand and gravel deposits along the St. Johns River southeast of Woodlake, near the Sierra Nevada foothills.[13]

RESPONSES

a. <u>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?</u>

b. <u>Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</u>

No Impact. There are no known mineral resources in the proposed Project area and the site is not included in a State classified mineral resource zones. Therefore, there is ***no impact***.

Mitigation Measures: None are required.

[13] City of Woodlake General Plan. Open Space, Parks, Recreation and Conservation Element. Page 7.

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

ENVIRONMENTAL SETTING

The Project site is located within the City of Woodlake in an industrial, rural residential and agricultural area, see Figure 2 – Site Aerial. Portions of the site are currently developed with industrial/warehouse uses.

RESPONSES

a. <u>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?</u>

b. <u>Generation of excessive groundborne vibration or groundborne noise levels?</u>

Less than Significant Impact.

Short-term (Construction) Noise Impacts

Proposed Project construction related activities will involve temporary noise sources and are anticipated occur starting in 2022 and will continue to buildout as the market demands. Typical construction related equipment include graders, trenchers, small tractors and excavators. During the proposed Project construction, noise from construction related activities will contribute to the noise environment in the immediate vicinity. Activities involved in construction will generate maximum noise levels, as indicated in Table 5, ranging from 79 to 91 dBA at a distance of 50 feet, without feasible noise control (e.g., mufflers) and ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise controls.

Table 5
Typical Construction Noise Levels

Type of Equipment	dBA at 50 ft	
	Without Feasible Noise Control	With Feasible Noise Control
Dozer or Tractor	80	75
Excavator	88	80
Scraper	88	80
Front End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time in urban environments. Most residents of urban areas recognize this reality and expect to hear construction activities on occasion.

In addition, construction activities would not occur between the hours of 10:00 PM and 7:00 AM, in accordance with Woodlake Municipal Code Section 8.24.020, which limits work "between the hours of ten p.m. of one day and seven a.m. of the following day…" Further restrictions on construction noise may be placed on the project as determined through the Conditional Use permit process.

Long-term (Operational) Noise Impacts

The primary source of on-going noise from the proposed Project will be from vehicles traveling to and from the site. Project implementation will generate noise associated with hitching and unhitching trailers and an increase in traffic on some roadways in the Project area. However, the new trips associated with the project is not likely to increase the ambient noise levels by a significant amount, as the site is surrounded by active agriculture. In accordance with the Woodlake Municipal Code, commercial cannabis operations shall be subject to the City's noise and nuisance ordinances. Additionally, deliveries to the commercial cannabis business may only take place during regular business hours. As such, any impacts would be ***less than significant***.

Mitigation Measures: None are required.

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

No Impact. As noted earlier, the Woodlake Municipal Airport is located approximately 0.7 miles southeast of the Project site. The proposed site is located inside the Airport Land Use Plan's Safety Zone 6 (Traffic Pattern Zone)[14], and well outside the CNEL contours. The proposed Project also does not include residential development, which would require adherence to restrictive development policies provided by the ALUC. The Tulare County Airport Land Use Compatibility Matrix identifies "warehouse, wholesale and distributing" as well as "industrial manufacturing" and "indoor processes" as compatible land uses within Safety Zone 6. Therefore, there is ***no impact***.

Mitigation Measures: None are required.

[14] Tulare County Comprehensive Airport Land Use Plan. December 2012. https://tularecounty.ca.gov/rma/rma-documents/planning-documents/tulare-county-comprehensive-airport-land-use-plan/. Accessed January 2022.

XIV. POPULATION AND HOUSING

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The State Department of Finance, which provides population projections for cities and counties in California, estimated Woodlake's population to be 8,054 on January 1, 2021[15], up from the 2011 census figure of 7,316.

The proposed Project is located in an area dominated by agricultural, rural residential and industrial uses. The nearest residences are approximately 0.3 miles to the north and south.

RESPONSES

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

b. <u>Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?</u>

---

[15] City of Woodlake General Plan Draft Environmental Impact Report. Page 21.

No Impact. There are no new homes associated with the proposed Project and there are no residential structures currently on-site. The proposed Project would be an industrial operation that would provide new jobs in the Woodlake area, which could be readily filled by the existing employment base, given the City's existing unemployment rates. The proposed Project will not affect any regional population, housing, or employment projections anticipated by City policy documents. There is ***no impact***.

Mitigation Measures: None are required.

XV. PUBLIC SERVICES

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

ENVIRONMENTAL SETTING

The proposed Project site is located in an area that is already served by public service systems. The City of Woodlake Fire Department provides the City and the surrounding area with fire protection services. The Fire Department is just over one mile northeast of the proposed Project site. The Woodlake Police Department is located approximately 1.3 miles northeast of the proposed Project site. The Woodlake Unified School District and Tulare County Office of Education serves the Project area and the City provides several types of parks and other public facilities.

RESPONSES

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 service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Less than Significant Impact. The proposed Project site will continue to be served by the City of Woodlake Fire Department, which is just over one mile northeast of the proposed Project site. The City of Woodlake Fire Department has reviewed the proposed Project and determined that no additional fire personnel or equipment is anticipated. The impact is ***less than significant***.

Police Protection?

Less than Significant Impact. The proposed Project will continue to be served by the City of Woodlake police department. No additional police personnel or equipment is anticipated. The impact is ***less than significant.***

Schools?

No Impact. The direct increase in demand for schools is normally associated with new residential projects that bring new families with school-aged children to a region. The proposed Project does not contain any residential uses. The proposed Project, therefore, would not result in an influx of new students in the Project area and is not expected to result in an increased demand upon District resources and would not require the construction of new facilities. There is ***no impact***.

Parks?

No Impact. The Project would not result in an increase in demand for parks and recreation facilities because it would not result in an increase in population. Accordingly, the proposed Project would have ***no impacts*** on parks.

Other public facilities?

No Impact. The proposed Project is within the land use and growth projections identified in the City's General Plan and other infrastructure studies. The Project, therefore, would not result in increased demand for, or impacts on, other public facilities such as library services. Accordingly, ***no impact*** would occur.

Mitigation Measures: None are required.

XVI. RECREATION

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
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

The City of Woodlake currently has two developed park sites and one privately owned park site, located in Olivewood Estates. Willow Court Park, containing 3.91 acres, contains a baseball filed, playground equipment and a low elevation area designated for storm water detention. Miller-Brown Park, containing 6.74 acres, houses playground equipment, picnic arbors, a skate park feature, and a basketball court. A small watercourse traverses the area. In addition to the city's parks, the athletic fields on the campuses of Woodlake's two school districts provide recreational opportunities after school hours.

RESPONSES

a. <u>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?</u>

b. <u>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?</u>

No Impact. The proposed Project does not include the construction of residential uses and would not directly or indirectly induce population growth. Therefore, the proposed Project would not cause physical deterioration of existing recreational facilities from increased usage or result in the need for new or expanded recreational facilities. The Project would have ***no impact*** to existing parks.

Mitigation Measures: None are required.

XVII. TRANSPORTATION/ TRAFFIC

Would the project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☒	☐	☐	☐
b.	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d.	Result in inadequate emergency access?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project is located at the South East Corner of Ave 342 & Road 204. Woodlake is bisected by SR 216 and SR 245 and the City is situated five miles north of SR 198. The proposed Project includes constructing and operating an 113-acre industrial center, with seventeen buildings ranging in size of 75,000 sf to 87,000 sf for a total of up to 1,500,000 sf of industrial space, that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, retail and distribution.

RESPONSES

a. <u>Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?</u>

b. <u>Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?</u>

Potentially Significant Impact. Project related traffic generation could potentially have significant impacts to local and regional transportation systems. Additionally, VMT generation could potentially conflict with CEQA Guidelines section 15064.3 and as such, these impact areas will be analyzed in the forthcoming EIR.

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

d. <u>Result in inadequate emergency access?</u>

Less than Significant Impact. No roadway design features associated with this proposed Project would result in an increase in hazards due to a design feature or be an incompatible use. There are two points of ingress/egress to the proposed Project site and each of these points will be sized appropriately for emergency vehicles. As such, the proposed Project has been appropriately designed for emergency access. Any impacts would be considered ***less than significant.***

Mitigation Measures: None are required.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a 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 the Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

REGULATORY SETTING

Tribal Consultation Requirements: SB 18 (Burton, 2004) [16]

On September 29, 2004, Governor Schwarzenegger signed Senate Bill 18, Tribal Consultation Guidelines, into law. This bill amended Section 815.3 of the Civil Code, to amend Sections 65040.2, 65092, 65351, 65352, and 65560 of, and to add Sections 65352.3, 65352.4, and 65562.2 to, the Government Code, relating to traditional tribal cultural Places. SB 18, enacted March 1, 2005, creates a mechanism for California Native American Tribes to identify culturally significant sites that are located within public or private lands within the city or county's jurisdiction. SB 18 requires cities and counties to contact, and offer to consult with, California Native American Tribes before adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting Native American Cultural Places (PRC 5097.9 and 5097.993). The Native American Heritage Commission (NAHC) provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe.

Tribal Consultation Requirements: AB 52 (Gatto, 2014)[17]

This bill was approved by Governor Brown on September 25, 2014 and became effective July 1, 2015. This bill amended Section 5097.94 of, and to add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the Public Resources Code, relating to Native Americans. The bill specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. This bill requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated (can be a tribe anywhere within the State of California) with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

---

[16] Senate Bill No. 18, Chapter 905. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200320040SB18. Accessed September 2022.

[17] Assembly Bill No. 52, Chapter 532. http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52, Accessed September 2022.

RESPONSES

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.

Less than Significant Impact. A Tribal Cultural Resource (TCR) is defined under Public Resources Code section 21074 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that are either included and that is listed or eligible for inclusion in the California Register of Historic Resources or in a local register of historical resources, or if the City of Woodlake, acting as the Lead Agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR. As discussed above, under Section V, Cultural Resources, criteria (b) and (d), no known archeological resources, ethnographic sites or Native American remains are located on the proposed Project site. As discussed under criterion (b) implementation of Mitigation Measure CULT-1 would reduce impacts to unknown archaeological deposits, including TCRs, to a less than significant level. As discussed under criterion (d), compliance with California Health and Safety Code Section 7050.5 would reduce the likelihood of disturbing or discovering human remains, including those of Native Americans.

The Native American Heritage Commission (NAHC) has performed a Sacred Lands File search for sites located on or near the Project site, with negative results. The NAHC also provided a consultation list of tribal governments with traditional lands or cultural places located within the project area. An opportunity has been provided to Native American tribes listed by the Native American Heritage Commission during the CEQA process as required by AB 52. No responses were received by the City in response to the consultation request within the mandatory response timeframes; therefore, this Initial Study has been completed consistent and compliant with AB 52. Any impacts to TCR would be considered ***less than significant***.

Mitigation Measures: None are required.

XIX. UTILITIES AND SERVICE SYSTEMS

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

ENVIRONMENTAL SETTING

The Visalia Landfill plant is approximately 15 miles west of the proposed Project site, while the Woodlake Wastewater Treatment Plant is located just under a mile southeast of the site.

RESPONSES

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

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

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

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

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

Less than Significant Impact. The proposed Project includes the construction and operation of an industrial park with seventeen buildings ranging in size of 75,000 sf to 87,000 sf for a total of up to 1,500,000 sf of industrial space. The Project also includes construction of internal access roads, 700 parking spaces and associated landscaping. The Project will tie into the existing City water and wastewater systems and will keep stormwater on-site via three stormwater basins constructed as part of the Project. Any grow operations will utilize the existing well connection for water. The proposed Project would be served by Mid-Valley Disposal for solid waste disposal. The City's water system and solid waste disposal programs have capacity for, or are planned to maintain capacity for, community growth in accordance with the adopted General Plan. Any impacts would be ***less than significant***.

Mitigation Measures: None are required.

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 Incorporation	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

Human activities such as smoking, debris burning, and equipment operation are the major causes of wildland fires. Within Tulare County, over 1,029,130 acres (33% of the total area) are classified as "Very High" fire threat and approximately 454,680 acres (15% of the total area) are classified as "High" fire threat. The portion of the county that transitions from the valley floor into the foothills and mountains is characterized by high to very high threat of wildland fires.[18] While the City of Woodlake is nestled at the

[18] Tulare County General Plan Background Report. February 2010. Page 8-21.

base of the foothills, the majority of the City is developed into urban uses or in active agriculture, severely reducing the risk of wildland fire. According to the Tulare County Background Report Figure 8-2, the majority of the City has no threat of wildfire. The proposed Project site is relatively flat in an area actively utilized with primarily industrial and agricultural uses.

RESPONSES

a. <u>Substantially impair an adopted emergency response plan or emergency evacuation plan?</u>

b. <u>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?</u>

c. <u>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?</u>

d. <u>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?</u>

Less Than Significant Impact. The proposed Project is located in an area developed with industrial and agricultural uses, which precludes the risk of wildfire. The area is flat in nature which would limit the risk of downslope flooding and landslides, and limit any wildfire spread.

To receive building permits, the proposed Project would be required to be in compliance with the adopted emergency response plan. As such, any wildfire risk to the project structures or people would be ***less than significant.***

Mitigation Measures: None are required.

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 to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

RESPONSES

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?

Potentially Significant Impact. The analyses of environmental issues contained in this Initial Study indicate that the proposed Project may have substantial impact on the environment or on any resources identified in the Initial Study. Mitigation measures have been incorporated in the project design, however some impacts remain *potentially significant*. Therefore, an EIR will be prepared to further analyze potentially significant impact areas.

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)?

Potentially Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. The proposed Project may contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc). Mitigation measures have been incorporated in the project design, however some impacts remain ***potentially significant***. Therefore, an EIR will be prepared to further analyze potentially significant impact areas.

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

Potentially Significant Impact. The analyses of environmental issues contained in this Initial Study indicate that the project may have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the project design, however some impacts remain ***potentially significant***. Therefore, an EIR will be prepared for those impact areas.

LIST OF PREPARERS

Crawford & Bowen Planning, Inc.

- Emily Bowen, LEED AP, Principal Environmental Planner
- Travis Crawford, AICP, Principal Environmental Planner
- Deepesh Tourani, Environmental Planner

Colibri Ecological Consulting, LLC.

- Jeff Davis, Principal Biologist

Persons and Agencies Consulted

City of Woodlake

- Rebecca Griswold, Community Services Director
- Ramon Lara, City Administrator

California Historic Resources Information System

- Celeste Thomson, Coordinator

Native American Heritage Commission

- Andrew Green, Staff Services Analyst

Appendix A

Biological Resource Evaluation

BIOLOGICAL RESOURCE EVALUATION

January 2022

WOODLAKE INDUSTRIAL PARK DEVELOPMENT PROJECT
TULARE COUNTY, CALIFORNIA

PREPARED FOR:
Crawford & Bowen Planning, Inc.
113 N. Church Street, Suite 302
Visalia, CA 93291

PREPARED BY:
Colibri Ecological Consulting, LLC
9493 N Fort Washington Road, Suite 108
Fresno, CA 93730
www.colibri-ecology.com

Contents

Figures

Tables

Appendices

Executive Summary

The project applicant proposes to construct 17 buildings totaling 1,329,000 square feet and 700 parking stalls in the City of Woodlake, Tulare County, California. The proposed industrial park development project (Project) will involve construction on an approximately 116-acre parcel that currently supports industrial buildings with graveled parking areas and fallowed agricultural land.

To evaluate whether the Project may affect biological resources under California Environmental Quality Act (CEQA) purview, we (1) obtained lists of special-status species from the United States Fish and Wildlife Service, the California Department of Fish and Wildlife, and the California Native Plant Society; (2) reviewed other relevant background information such as aerial images and topographic maps; and (3) conducted a field reconnaissance survey at the Project site.

This biological resource evaluation summarizes (1) existing biological conditions on the Project site, (2) the potential for special-status species and regulated habitats to occur on or near the Project site, (3) the potential impacts of the proposed Project on biological resources and regulated habitats, and (4) measures to reduce those potential impacts to less-than-significant levels under CEQA.

We concluded the Project could affect four special-status wildlife species: the federally listed as endangered and state listed as threatened San Joaquin kit fox (*Vulpes macrotis mutica*), the state species of special concern burrowing owl (*Athene cunicularia*), the state species of special concern pallid bat (*Antrozous pallidus*), and the state species of special concern Western mastiff bat (*Eumops perotis californicus*). Nesting migratory birds could also be impacted. Impacts to all species can be reduced to less-than-significant levels with mitigation.

Abbreviations

Abbreviation	Definition
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
FCE	Federal Candidate for Endangered listing under the FESA
FE	Federally listed as Endangered
FESA	Federal Endangered Species Act
FP	State Fully Protected
FT	Federally listed as Threatened
MBTA	Migratory Bird Treaty Act
NRCS	Natural Resources Conservation Science
SE	State listed as Endangered
SSSC	State Species of Special Concern
ST	State listed as Threatened
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 Introduction

1.1 Background

The project applicant proposes to construct an industrial park development project (the Project) on an approximately 116-acre property within the City of Woodlake, Tulare County, California. The property currently supports industrial buildings, graveled parking areas, retention ponds, and fallowed agricultural land.

The purpose of this biological resource evaluation is to assess whether the Project will affect protected biological resources pursuant to California Environmental Quality Act (CEQA) guidelines. Such resources include species of plants or animals listed or proposed for listing under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA) as well as those covered under the Migratory Bird Treaty Act (MBTA), the California Native Plant Protection Act, and various other sections of California Fish and Game Code (CFGC). This biological resource evaluation also addresses Project-related impacts to regulated habitats, which are those under the jurisdiction of the United States Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), or California Department of Fish and Wildlife (CDFW).

1.2 Project Description

The Project will involve constructing 17 buildings totaling 1,329,000 square feet and 700 parking stalls and expanding a water retention pond.

1.3 Project Location

The approximately 116-acre Project site is in the City of Woodlake, Tulare County, California (Figure 1). The Project site is on the southeast corner of South Blair Road and Avenue 342, west of Antelope Creek (Figure 2).

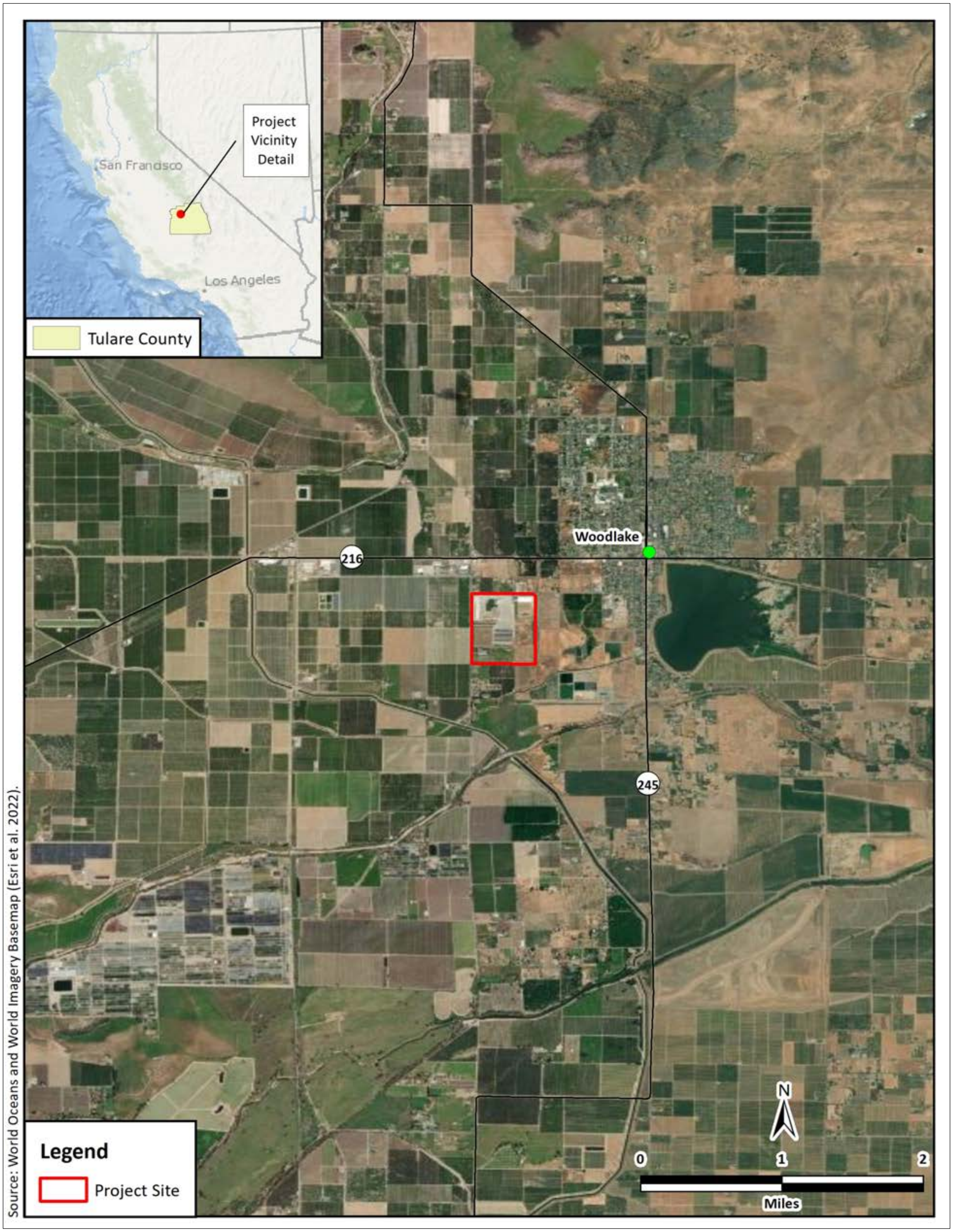


Figure 1. Project site vicinity map.

Figure 2. Project site map.

1.4 Purpose and Need of Proposed Project

The purpose of the Project is to provide commercial development opportunities to meet growing community and commercial needs in Woodlake and Tulare County.

1.5 Regulatory Framework

The relevant state and federal regulatory requirements and policies that guide the impact analysis of the Project are summarized below.

1.5.1 State Requirements

California Department of Fish and Wildlife Jurisdiction. The CDFW has regulatory jurisdiction over lakes and streams in California. Activities that divert or obstruct the natural flow of a stream; substantially change its bed, channel, or bank; or use any materials (including vegetation) from the streambed, may require that the project applicant enter into a Lake and Streambed Alteration Agreement with the CDFW in accordance with California Fish and Game Code (CFGC) Section 1602.

California Endangered Species Act. The California Endangered Species Act (CESA) of 1970 (Fish and Game Code § 2050 et seq., and California Code of Regulations (CCR) Title 14, Subsection 670.2, 670.51) prohibits the take of species listed under CESA (14 CCR Subsection 670.2, 670.5). Take is defined as hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill. Under CESA, state agencies are required to consult with the CDFW when preparing CEQA documents. Consultation ensures that proposed projects or actions do not have a negative effect on state listed species. During consultation, CDFW determines whether take would occur and identifies "reasonable and prudent alternatives" for the project and conservation of special-status species. CDFW can authorize take of state listed species under Sections 2080.1 and 2081(b) of the CFGC in those cases where it is demonstrated that the impacts are minimized and mitigated. Take authorized under section 2081(b) must be minimized and fully mitigated. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Under CESA, CDFW is responsible for maintaining a list of threatened and endangered species designated under state law (Fish and Game Code § 2070). CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to the requirements of CESA, a state or local agency reviewing a proposed project within its jurisdiction must determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation. Impacts to species of concern or fully protected species would be considered significant under certain circumstances.

California Environmental Quality Act. The California Environmental Quality Act (CEQA) of 1970 (Subsections 21000–21178) requires that CDFW be consulted during the CEQA review process regarding impacts of proposed projects on special-status species. Special-status species are defined under CEQA Guidelines subsection 15380(b) and (d) as those listed under FESA and CESA and species that are not currently protected by statute or regulation but would be considered rare, threatened, or endangered under these criteria or by the scientific community. Therefore, species considered rare or endangered are addressed in this biological resource evaluation regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity (CNPS 2022). Plants with Rare Plant Ranks 1A, 1B, 2A, or 2B are considered special-status species under CEQA.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the CFGC dealing with rare and endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the United States Fish and Wildlife Service (USFW) or CDFW (i.e., candidate species) would occur. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agency has an opportunity to designate the species as protected, if warranted.

California Native Plant Protection Act. The California Native Plant Protection Act of 1977 (CFGC §§ 1900–1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require the project proponent to notify CDFW at least 10 days in advance of any change in land use, which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting birds. CFGC Sections 3503, 3503.5, and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs. CFGC Section 3511 lists birds that are "Fully Protected" as those that may not be taken or possessed except under specific permit.

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (California Water Code § 13000 et. sec.) was established in 1969 and entrusts the SWRCB and nine Regional Water Quality Control Boards (collectively Water Boards) with the responsibility to preserve and enhance all beneficial uses of California's diverse waters. The Act grants the Water Boards authority to establish water quality objectives and regulate point- and nonpoint-source pollution discharge to the state's surface and ground waters. Under the auspices of the United States Environmental Protection Agency, the Water Boards are responsible for certifying, under Section 401 of the federal Clean Water Act, that activities affecting waters of the United States comply California water quality standards. The Porter-Cologne Water Quality Control Act addresses all "waters of the State," which are more broadly defined than waters of the Unites States. Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state. They include artificial as well as natural water bodies and federally jurisdictional and federally non-jurisdictional waters. The Water Boards may issue a Waste Discharge Requirement permit for projects that will affect only federally non-jurisdictional waters of the State.

1.5.2 Federal Requirements

Federal Endangered Species Act. The USFWS and the National Oceanographic and Atmospheric Association and National Marine Fisheries Service enforce the provisions stipulated in the FESA of 1973 (FESA, 16 United States Code [USC] § 1531 et seq.). Threatened and endangered species on the federal list (50 Code of Federal Regulations [CFR] 17.11 and 17.12) are protected from take unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct. Pursuant to the requirements of the FESA, an agency reviewing a proposed action within its jurisdiction must determine whether any federally listed species may be present in the proposed action area and determine whether the proposed action may affect such species. Under the FESA, habitat loss is considered an effect to a species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species that is listed or proposed for listing under the FESA (16 USC § 1536[3], [4]). Therefore, proposed action-related effects to these species or their habitats would be considered significant and would require mitigation.

Migratory Bird Treaty Act. The federal MBTA (16 USC § 703, Supp. I, 1989) prohibits killing, possessing, trading, or other forms of take of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. "Take" is defined as the pursuing, hunting, shooting, capturing, collecting, or killing of birds, their nests, eggs, or young (16 USC § 703 and § 715n). This act encompasses whole birds, parts of birds, and bird nests and eggs. The MBTA specifically protects migratory bird nests from possession, sale, purchase, barter transport, import, and export, and take. For nests, the definition of take per 50 CFR 10.12 is to collect. The MBTA does not include a definition of an "active nest." However, the "Migratory Bird Permit Memorandum" issued by the USFWS in 2003 and updated in 2018 clarifies the MBTA in that regard and states that the removal of nests, without eggs or birds, is legal under the MBTA, provided no possession (which is interpreted as holding the nest with the intent of retaining it) occurs during the destruction (USFWS 2018).

United States Army Corps of Engineers Jurisdiction. Areas meeting the regulatory definition of "waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as waters of the United States, tributaries of waters otherwise defined as waters of the United States, the territorial seas, and wetlands adjacent to waters of the United States (33 CFR part 328.3). Ditches and drainage canals where water flows intermittently or ephemerally are not regulated as waters of the United States. Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual* and related Regional Supplement (USACE 1987 and 2008). Construction activities, including direct removal, filling, hydrologic disruption, or other means in jurisdictional waters are regulated by the USACE. The placement of dredged or fill material into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. The SWRCB is the state agency (together with the Regional Water Quality Control Boards) charged with implementing water quality certification in California.

2.0 Methods

2.1 Desktop Review

As a framework for the evaluation and reconnaissance survey, we obtained an official USFWS species list for the Project (USFWS 2022a, Appendix A). In addition, we searched the California Natural Diversity Database (CNDDB, CDFW 2022, Appendix B) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2022, Appendix C) for records of special-status plant and animal species from the vicinity of the Project site. Regional lists of special-status species were compiled using USFWS, CNDDB, and CNPS database searches confined to the Woodlake 7.5-minute United States Geological Survey (USGS) topographic quadrangle, which encompasses the Project site, and the eight surrounding quadrangles (Auckland, Shadequarter Mountain, Kaweah, Chickencoop Canyon, Rocky Hill, Exeter, Ivanhoe, and Stokes Mountain). A local list of special-status species was compiled using CNDDB records from within 5 miles of the Project site. Species that lack a special-status designation by state or federal regulatory agencies or public interest groups were omitted from the final list. Species for which the Project site does not provide habitat were eliminated from further consideration. We also reviewed aerial imagery from Google Earth (Google 2022) and other sources, USGS topographic maps, the Web Soil Survey (NRCS 2022), the National Wetlands Inventory (USFWS 2022b), and relevant literature.

2.2 Reconnaissance Survey

Associate Scientist Kristine Harman conducted a field reconnaissance survey of the Project site on 13 January 2022. The Project site and a 50-foot buffer surrounding the Project site (Figure 3) were walked and thoroughly inspected to evaluate and document the potential for the area to support state- or federally protected resources. All plants except those under cultivation or planted in residential areas and all vertebrate wildlife species observed within the survey area were identified and documented. The survey area was evaluated for the presence of regulated habitats, including lakes, streams, and other waters using methods described in the *Wetlands Delineation Manual* and regional supplement (USACE 1987, 2008) and as defined by the CDFW (https://www.wildlife.ca.gov/conservation/lsa) or under the Porter-Cologne Water Quality Control Act.

2.3 Significance Criteria

CEQA defines “significant effect on the environment” as “a substantial, or potentially substantial, adverse change in the environment” (California Public Resource Code § 21068). Under CEQA Guidelines Section 15065, a Project’s effects on biological resources are deemed significant where the Project would do the following:

a) Substantially reduce the habitat of a fish or wildlife species,

b) Cause a fish or wildlife population to drop below self-sustaining levels,
c) Threaten to eliminate a plant or animal community, or
d) Substantially reduce the number or restrict the range of a rare or endangered plant or animal.

In addition to the Section 15065 criteria, Appendix G within the CEQA Guidelines includes six additional impacts to consider when analyzing the effects of a project. Under Appendix G, a project's effects on biological resources are deemed significant where the project would do any of the following:

e) 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 CDFW or USFWS;

f) 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 CDFW or USFWS;

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

h) 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;

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

j) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These criteria were used to determine whether the potential effects of the Project on biological resources qualify as significant.

Figure 3. Reconnaissance survey area map.

3.0 Results

3.1 Desktop Review

The USFWS species list for the Project included 13 species listed as threatened, endangered, or candidate under the FESA (USFWS 2022a, Table 1, Appendix A). Of those 13 species, 12 species could not occur on or near the Project site due to either (1) the lack of habitat, (2) the Project site being outside the current range of the species, or (3) the presence of development that would otherwise preclude occurrence (Table 1). The remaining species, San Joaquin kit fox (*Vulpes macrotis mutica* – FE, ST), could occur on or near the Project site. As identified in the species list, the Project site does not occur in USFWS-designated or proposed critical habitat for any species (USFWS 2022a, Appendix A).

Searching the CNDDB for records of special-status species from the Woodlake 7.5-minute USGS topographic quad and the eight surrounding quads produced 208 records of 46 species (Table 1, Appendix B). Of those 46 species, eight are not given further consideration because they are not recognized as special-status species by state or federal regulatory agencies or public interest groups or are considered extirpated in California (Appendix B). Of the remaining 38 species, 16 are known from within 5 miles of the Project site (Table 1, Figure 4). Of those species, San Joaquin kit fox (mentioned above) and western mastiff bat (*Eumops perotis californicus* – SSSC) could occur on or near the Project site (Table 1). In addition, burrowing owl (*Athene cunicularia* – SSSC) and pallid bat (*Antrozous pallidus* – SSSC) were identified in the nine-quad search and could occur on or near the Project site (Table 1).

Searching the CNPS inventory of rare and endangered plants of California yielded 20 species (CNPS 2022, Appendix C), one of which has a rank of 2B, and 19 of which have a rank of 1B (Table 1). None of those species are expected to occur on or near the Project site due to lack of habitat (Table 1).

The Project site is underlain by San Joaquin loam, San Emigdio loam, and Yettem sandy loam with 0 to 9% slopes (NCRS 2022). The Project site is at an elevation of 424–447 feet above mean sea level (Google 2022).

Table 1. Special-status species, their listing status, habitats, and potential to occur on or near the Project site.

Species	Status[1]	Habitat	Potential to Occur[2]
Federally and State-Listed Endangered or Threatened Species			
Greene's tuctoria[3] (*Tuctoria greenei*)	FE, 1B.1	Vernal pools in open grasslands below 3445 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Hoover's spurge (*Euphorbia spurge*)	FT, 1B.2	Vernal pools and depressions.	**None.** Habitat lacking; the Project site lacked vernal pools.
Kaweah brodiaea (*Brodiaea insignis*)	SE, 1B.2	Valley and foothill grassland, meadows, and cismontane woodlands with granitic or clay soils.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial land cover.
San Joaquin adobe sunburst[3] (*Pseudobahia peirsonii*)	FT, SE, 1B.1	Grassland and bare dark clay.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial land cover and lacked clay soils.
San Joaquin valley orcutt grass[3] (*Orcuttia inaequalis*)	FT, SE, 1B.1	Vernal pools at or below 2700 feet elevation.	**None.** Habitat lacking; the Project site lacked vernal pools.
Striped adobe-lily (*Fritillaria striata*)	ST, 1B.1	Adobe clay soils at or below 3280 ft elevation.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial land cover and lacked clay soils.
Monarch California overwintering population (*Danaus plexippus*)	FCE	Groves of trees within 1.5 miles of the ocean that produce suitable micro-climates for overwintering such as high humidity, dappled sunlight, access to water and nectar, and protection from wind.	**None.** Habitat lacking; the Project site is not within 1.5 miles of the ocean.

Valley elderberry longhorn beetle[3] (*Desmocerus californicus dimorphus*)	FT	Elderberry (*Sambucus* sp.) plants with stems > 1-inch diameter at ground level.	**None.** Habitat lacking; the Project site lacked elderberry plants and is outside the currently recognized range of this species.
Conservancy fairy shrimp (*Branchinecta conservatio*)	FE	Vernal pools and depressions.	**None.** Habitat lacking; the Project site lacked vernal pools.
Vernal pool fairy shrimp[3] (*Branchinecta lynchi*)	FT	Vernal pools and ponds.	**None**. Habitat lacking; the Project site lacked vernal pools.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Vernal pools, clay flats, alkaline pools, and ephemeral stock tanks.	**None.** Habitat lacking; the Project site is outside the current known range of this species.
Delta smelt (*Hypomesus transpacificus*)	FT, SE	Shallow, fresh or slightly brackish backwater sloughs and edgewaters.	**None.** Habitat lacking; Project site lacked connectivity to the aquatic habitat this species requires.
Blunt-nosed leopard lizard (*Gambelia sila*)	FE, SE	Upland scrub and sparsely vegetated grassland with small mammal burrows below 2400 feet elevation.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial land cover.
California red-legged frog (*Rana draytonii*)	FT, SSSC	Creeks, ponds, and marshes for breeding; burrows for upland refuge.	**None.** Habitat lacking; the Project site is outside the current known range of this species.
California tiger salamander[3] (*Ambystoma californiense*)	FT, ST	Vernal pools or seasonal ponds for breeding; small mammal burrows for upland refugia in natural grassland or oak woodland.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial landcover and is outside the current known local range of this species.

Foothill yellow-legged frog[3] (*Rana boylii*)	SE, SSSC	Perennial streams and rivers with rocky substrates, and with open, sunny banks may be in forests, chaparral, or woodlands.	**None.** Habitat lacking; Antelope Creek on the Project site was dry and lacked rocky substrates; the Project site is outside the current known local range of this species.
Giant garter snake (*Thamnophis gigas*)	FT, ST	Marshes, sloughs, ponds, or other permanent sources of water with emergent vegetation, and grassy banks or open areas during active season; uplands with underground refuges or crevices during inactive season.	**None.** Habitat lacking; the Project site is outside the current known range of this species.
Bald eagle (*Haliaeetus leucocephalus*)	SE, FP	Large old-growth trees or snags in remote, mixed stands near water.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial land cover.
California condor (*Gymnogyps californianus*)	FE, SE	Mountain and foothill rangeland with cliffs for nesting and grassland and open woodland for foraging.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial land cover.
Tricolored blackbird[3] (*Agelaius tricolor*)	ST, SSSC	Large freshwater marshes, in dense stands of cattails or bulrushes.	**None.** Habitat lacking; Antelope Creek bordering the Project site lacked dense stands of cattails or bulrushes.
Willow flycatcher (*Empidonax traillii*)	SE	Moist meadows with perennial streams and lowland riparian woodlands dominated by willows and cottonwoods for breeding, willows or	**None.** Habitat lacking; Antelope Creek bordering the Project site lacked willows or cottonwood.

		other shrubs near standing or running water; shrubby clearings, pastures, and woodland edges often near water.	
Fisher (*Pekania pennanti*)	FE, ST, SSSC	Large areas of mature, dense forest with snags and greater than 50% canopy closure.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial land cover.
San Joaquin kit fox[3] (*Vulpes macrotis mutica*)	FE, ST	Grassland, upland scrub, and fallowed agricultural lands adjacent to grassland or upland scrub.	**Low.** The Project site included fallowed agricultural land and is adjacent to disturbed grassland to the east.
State Species of Special Concern			
Northern leopard frog (*Lithobates pipiens*)	SSSC	Wet meadows, canals, bogs, marshes, and reservoirs in grassland, forest, and woodland.	**None.** Outside current known local range.
Northern California legless lizard (*Anniella pulchra*)	SSSC	Moist warm loose soil with plant cover in beach dunes, chaparral, pine-oak woodlands, sandy areas and stream terraces.	**None.** Habitat lacking; the Project site consisted of agricultural and industrial land cover.
Northwestern pond turtle (*Actinemys marmorata*)	SSSC	Ponds, rivers, marshes, streams, and irrigation ditches, usually with aquatic vegetation and woody debris for basking and adjacent natural upland areas for egg laying.	**None.** Habitat lacking; Antelope Creek bordering the Project site was dry and lacked aquatic vegetation and woody debris.
Western spadefoot[3] (*Spea hammondii*)	SSSC	Rain pools for breeding and small mammal burrows or other suitable refugia	**None.** Habitat lacking; the Project site consisted of agricultural and

		for nonbreeding upland cover.	industrial land cover; no records from within 5 miles.
Burrowing owl (*Athene cunicularia*)	SSSC	Grassland and upland scrub with friable soil; some agricultural or other developed and disturbed areas with ground squirrel burrows.	**Low.** Ground squirrel burrows were present along Antelope Creek east of the Project site.
American badger (*Taxidea taxus*)	SSSC	Open areas including meadows, grasslands, and chaparral with less than 50% plant cover.	**None**. Habitat lacking; the Project site consisted of agricultural and industrial land cover.
Pallid bat (*Antrozous pallidus*)	SSSC	Arid or semi-arid locations in rocky areas and sparsely vegetated grassland near water. Rock crevices, caves, mine shafts, bridges, building, and tree hollows for roosting.	**Low.** The industrial buildings on the Project site could provide roosting habitat.
Western mastiff bat[3] (*Eumops perotis californicus*)	SSSC	Roosts in crevices in face cliffs, high buildings, trees, and tunnels in open semi-arid habitats.	**Low.** Industrial buildings on the Project site could provide roosting habitat.
California Rare Plants			
Alkali-sink goldfields (*Lasthenia chrysantha*)	1B.1	Vernal pools and wet saline flats below 320 feet elevation.	**None**. Habitat lacking; the Project site is above the known elevational range of this species.
American manna grass (*Glyceria grandis*)	2B.3	Bogs and fens, meadows and seeps, marshes and swamps, and margins of lakes and streams below 6890 feet elevation.	**None**. Habitat lacking; Antelope Creek bordering the Project site was dry and based on historical aerial imagery (Google 2022) is usually dry.

Calico monkeyflower[3] (*Diplacus pictus*)	1B.2	Bare, sunny, shrubby areas around granite outcrops in the southern Sierra Nevada at 442–4100 feet elevation.	**None**. Habitat lacking; the Project site is below the known elevational range.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	1B.1	Saltmarsh, playas, and vernal pools below 4000 feet elevation.	**None**. Habitat lacking; the Project site lacked vernal pools.
Earlimart orache (*Atriplex cordulata* var. *erecticaulis*)	1B.2	Saline or alkaline soils in Central Valley and foothill grassland below 230 feet elevation.	**None**. Habitat lacking; the Project site is above the known elevational range of this species.
Kaweah monkeyflower (*Erythranthe norrisii*)	1B.3	Marble crevices in the Kaweah River and Kings River drainages at 1969–4265 feet elevation.	**None**. Habitat lacking; the Project site is below the known elevational range of this species.
Lesser saltscale (*Atriplex minuscula*)	1B.1	Sandy alkaline soils in chenopod scrub, playa, and grassland in the San Joaquin Valley below 328 feet elevation.	**None**. Habitat lacking; the Project site is above the known elevational range of this species.
Madera leptosiphon (*Leptosiphon serrulatus*)	1B.2	Openings in chaparral, cismontane woodland, and low elevation conifer forest at 980–4300 feet elevation.	**None**. Habitat lacking; the Project site is below the known elevational range of this species.
Mouse buckwheat (*Eriogonum nudum* var. *murinum*)	1B.2	Sandy soils in the Kaweah River drainage at 1312–2300 feet elevation.	**None**. Habitat lacking; the Project site is below the known elevational range of this species.
Recurved larkspur[3] (*Delphinium recurvatum*)	1B.2	Poorly drained, fine, alkaline soils in chenopod scrub, cismontane woodland, and valley and foothill grassland	**None**. Habitat lacking; the Project site consisted of agricultural and industrial land cover. The occurrence from

		at 10–2800 feet elevation.	within 5 miles is presumed extirpated.
Sanford's arrowhead[3] (*Sagittaria sanfordii*)	1B.2	Freshwater marshes and swamps, including some canals, below 650 feet elevation.	**None**. Habitat lacking; the Project site consisted of agricultural and industrial land cover; Antelope Creek bordering the Project site was dry and based on historical aerial imagery (Google 2022) is usually dry.
Spiny-sepaled button-celery[3] (*Eryngium spinosepalum*)	1B.2	Vernal pools and swales in valley and foothill grassland at 330–4200 feet elevation.	**None**. Habitat lacking; the Project site lacked vernal pools and swales.
Vernal pool smallscale (*Atriplex persistens*)	1B.2	Alkaline vernal pools in the Central Valley below 377 feet elevation.	**None**. Habitat lacking; the Project site is above the known elevational range of this species.
Winter's sunflower[3] (*Helianthus winteri*)	1B.2	Steep, south-facing grassy slopes, rock outcrops, and road cuts at 590–1509 feet elevation.	**None.** Habitat lacking; the Project site is below the known elevational range of this species.

CDFW (2022), CNPS (2022), USFWS (2022).

Status[1]	Potential to Occur[2]	
FE = Federally listed Endangered	None:	Species or sign not observed; conditions unsuitable for occurrence.
FT = Federally listed Threatened	Low:	Neither species nor sign observed; conditions marginal for occurrence.
FP = State Fully Protected	Moderate:	Neither species nor sign observed; conditions suitable for occurrence.
FCE = Federal Candidate for Endangered listing under the FESA	High:	Neither species nor sign observed; conditions highly suitable for occurrence.
SE = State listed Endangered	Present:	Species or sign observed; conditions suitable for occurrence.
ST = State listed Threatened		
SSSC = State Species of Special Concern		

CNPS California Rare Plant Rank[1]:	Threat Ranks[1]:
1B – plants rare, threatened, or endangered in California and elsewhere.	0.1 – seriously threatened in California (> 80% of occurrences).
2B – plants rare, threatened, or endangered in California but more common elsewhere.	0.2 – moderately threatened in California (20-80% of occurrences).
3 – plants about which more information is needed.	0.3 – not very threatened in California (<20% of occurrences).
4 – plants have limited distribution in California.	

[3]Record from within 5 miles of the Project site.

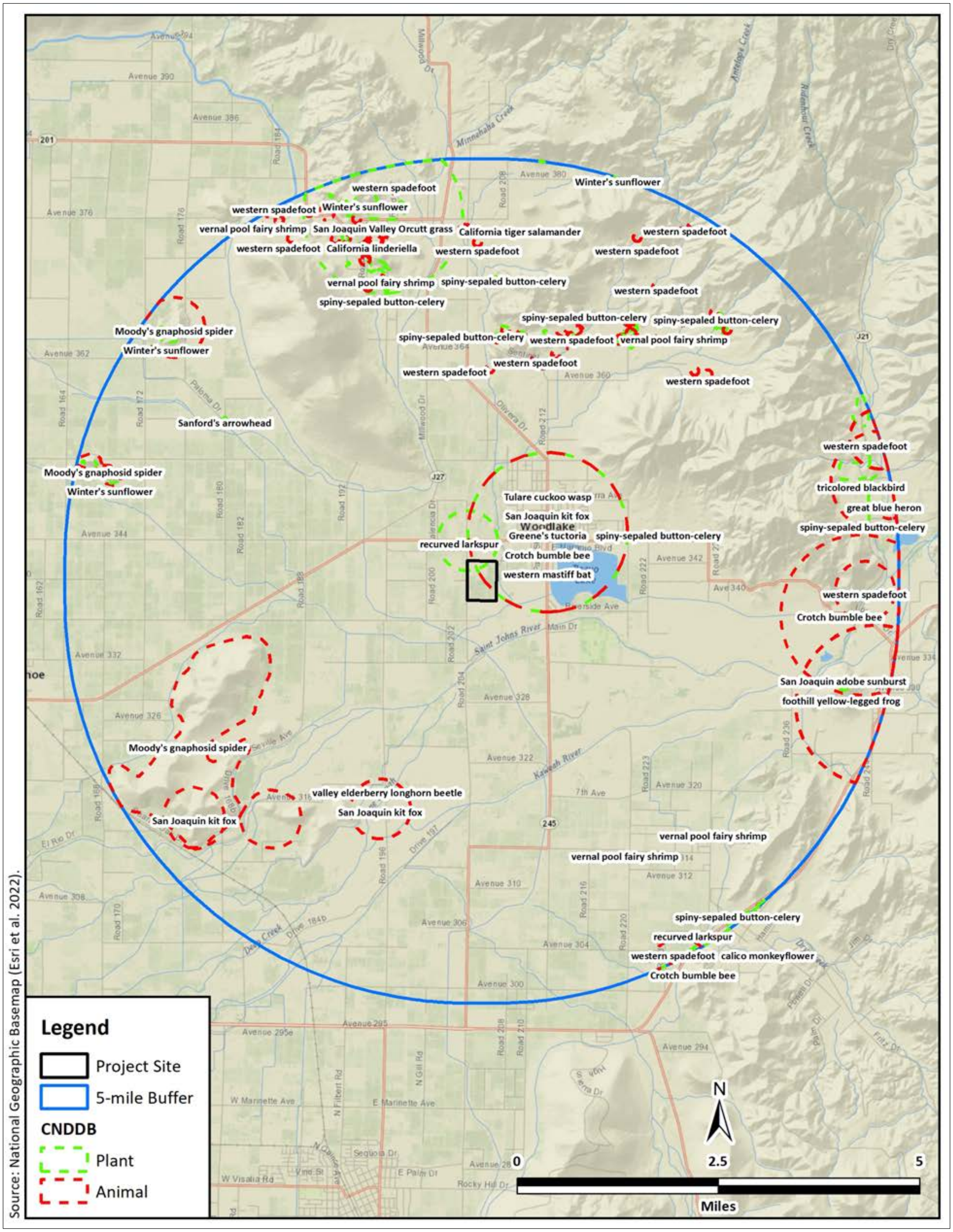


Figure 4. CNDDB occurrence map.

3.2 Reconnaissance Survey

3.2.1 Land Use and Habitats

The northern portion of the Project site supported industrial buildings with graveled parking areas and staged construction equipment (Figure 5). The eastern and southern portion of the Project site consisted of fallowed agriculture fields dominated by grasses and forbs and bordered by planted olive trees (*Olea europaea*; Figure 6). The western portion of the Project site was mostly barren and under construction (Figure 7). Antelope Creek, an evidently usually dry (Google 2022) channelized waterway, bordered the Project site to the east; its banks supported several ground squirrel burrows (Figure 8). The Project site supported four retention ponds, three of which held water at the time of the survey (Figures 2, 3, and 9).

Figure 5. Photograph of the Project site, looking northwest, showing industrial buildings and stagged construction equipment on a graveled parking area.

Figure 6. Photograph of Project site, looking east, showing fallowed agriculture fields dominated by annual grasses and forbs bordered by olive trees.

Figure 7. Photograph of the Project site, looking west, showing a mostly barren field with active construction.

Figure 8. Photograph of Antelope Creek east of the Project site, showing ground squirrel burrows on its banks.

Figure 9. Photograph of the Project site, showing one of four retention ponds.

3.2.2 Plant and Animal Species Observed

A total of 25 plant species (five native and 20 nonnative) and 10 bird species were observed during the survey (Table 2).

Table 2. Plant and animal species observed during the reconnaissance survey.

Common Name	Scientific Name	Status
Plants		
Family Amaranthaceae		
Pigweed amaranth	*Amaranthus albus*	Nonnative
Family Asteraceae		
Common sunflower	*Helianthus annuus*	Native
Prickly lettuce	*Lactuca serriola*	Nonnative
Milk thistle	*Silybum marianum*	Nonnative
Family Bignoniaceae		
Catalpa	*Catalpa sp.*	Nonnative
Family Brassicaceae		
Mustard	*Sisymbrium* sp.	Nonnative
Radish	*Raphanus* sp.	Nonnative
Family Chenopodiaceae		
Russian thistle	*Salsola tragus*	Nonnative
White goosefoot	*Chenopodium album*	Nonnative
Family Fabaceae		
White clover	*Trifolium repens*	Nonnative
Family Geraniaceae		
Longbeak stork's bill	*Erodium botrys*	Nonnative
Redstem stork's bill	*Erodium cicutarium*	Nonnative
Family Lamiaceae		
White horehound	*Marrubium vulgare*	Nonnative
Family Malvaceae		
Cheeseweed	*Malva parviflora*	Nonnative
Family Montiaceae		
Narrow leaved miner's lettuce	*Claytonia parviflora*	Native
Family Oleaceae		
Olive	*Olea europaea*	Nonnative

Family Plantaginaceae		
Narrow leaved plantain	*Plantago lanceolata*	Nonnative
Family Poaceae		
Ripgut brome	*Bromus diandrus*	Nonnative
Salt grass	*Distichlis spicata*	Native
Wild oat	*Avena fatua*	Nonnative
Family Polygonaceae		
Prostrate knotweed	*Polygonum aviculare*	Nonnative
Family Salicaceae		
Willow	*Salix* sp.	Native
Family Solanaceae		
Jimsonweed	*Datura wrightii*	Native
Silverleaf nightshade	*Solanum elaeagnifolium*	Nonnative
Family Zygophyllaceae		
Puncture vine	*Tribulus terrestris*	Nonnative
Birds		
Family Accipitridae		
Red-tailed hawk	*Buteo jamaicensis*	MBTA, CFGC
Family Anatidae		
Canada Goose	*Branta canadensis*	MBTA, CFGC
Mallard	*Anas platyrhynchos*	MBTA, CFGC
Family Charadriidae		
Killdeer	*Charadrius vociferus*	MBTA, CFGC
Family Corvidae		
American crow	*Corvus brachyrhynchos*	MBTA, CFGC
Family Fringillidae		
House finch	*Haemorhous mexicanus*	MBTA, CFGC
Family Mimidae		
Northern mockingbird	*Mimus polyglottos*	MBTA, CFGC
Family Passerellidae		
White-crowned sparrow	*Zonotrichia leucophrys*	MBTA, CFGC
Family Passeridae		
House sparrow	*Passer domesticus*	--
Family Trochilidae		
Anna's hummingbird	*Calypte anna*	MBTA, CFGC

MBTA = Protected under the Migratory Bird Treaty Act (16 USC § 703 et seq.); CFGC = Protected under the California Fish and Game Code (FGC §§ 3503 and 3513).

3.2.3 Nesting Birds

Migratory birds could nest on or near the Project site. Bird species that may nest on or near the Project site include, but are not limited to, the house finch (*Haemorhous mexicanus*) and northern mockingbird (*Mimus polyglottos*).

3.2.4 Regulated Habitats

The channelized Antelope Creek was within 50 feet of the Project site. As a stream in California, it is under the regulatory jurisdiction of the CDFW; as a potential surface water in California, it may be under the regulatory jurisdiction of the SWRCB; and as a potential tributary of the St Johns River, it may be under the regulatory jurisdiction of the USACE. In addition, four retention ponds were on the Project site (Figures 2 and 3). Although these represent surface waters in California, they do not qualify as waters of the state under the regulatory jurisdiction of the SWRCB because they were constructed and are maintained. No impacts to Antelope Creek are anticipated.

3.3 Special-Status Species

3.3.1 San Joaquin kit fox (*Vulpes macrotis mutica,* FE, ST)

San Joaquin kit fox is a federally listed as endangered and state listed as threatened member of the family Canidae (USFWS 1998; CDFW 2022). San Joaquin kit fox is primarily nocturnal and typically occupies valley grassland or mixed shrub/grassland habitats in low, rolling hills and valleys (Morrell 1972). The San Joaquin kit fox will use grazed grasslands as well as grasslands with scattered structures such as power poles and wind turbines. This species also lives adjacent to, and forages in, tilled and fallow fields and irrigated row crops. However, large tracts of higher quality grassland or rangeland nearby is required to support the species (Warrick et al. 2007). The diet of the San Joaquin kit fox varies geographically, seasonally, and annually, but throughout most of its range consists primarily of rodents, rabbits, ground-nesting birds, and insects (Scrivner et al. 1987; Spiegel et al. 1996). Giant kangaroo rat (*Dipodomys ingens*) is a favored prey item (Cypher et al. 2000).

The San Joaquin kit fox requires underground dens to regulate its temperature and for shelter, reproduction, and predator avoidance (Morrell 1972). It commonly modifies and uses dens constructed by other animals, such as ground squirrels and badgers, and will use human-made structures as well (USFWS 1998). Dens are usually made in loose-textured soils on slopes of less than 40 degrees, but the number of openings, entrance shape, and the slope of the ground on which they occur vary across the geographic range of the species (USFWS 1998). San Joaquin kit fox changes den locations often, typically using numerous dens each year. Koopman et al. (1998) estimated that a San Joaquin kit fox will use an average of about 12 dens over the course of a year and will often not use the same dens the following year. This species is subject to predation or competitive exclusion by other species such as coyote (*Canis latrans*), domestic dog (*Canis familiaris*), bobcat (*Felis rufus*), and nonnative red fox (*Vulpes vulpes*), as well as large raptors (Benedict and Forbes 1979; Cypher and Spencer 1998; Clark et al. 2005, 2007).

There are three 1950 CNDDB records from within 5 miles of the Project site. In addition, the Project site is within a non-specific 1990 CNDDB occurrence polygon (CNDDB 2022). Although the Project site supported only agricultural and industrial land cover, it was adjacent to grassland to the east. That grassland is isolated, however, and comprises only about 70 acres. Therefore, the potential for San Joaquin kit fox to occur on or near the Project site is low.

3.3.2 Burrowing owl (*Athene cunicularia*, SSSC)

Burrowing owl is a member of the family Strigidae recognized as a species of special concern by the CDFW (CDFW 2022). Burrowing owl depends on burrow systems excavated by other species such as California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*) (Poulin et al. 2020). Burrowing owl uses burrows for protection from predators, weather, as roosting sites, and dwellings to raise young (Poulin et al. 2020). It commonly perches outside burrows on mounds of soil or nearby fence posts. Prey types include insects, especially grasshoppers and crickets, small mammals, frogs, toads, and lizards (Poulin et al. 2020). The nesting season begins in March, and incubation lasts 28–30 days. The female incubates the eggs while the male forages and delivers food items to the burrow-nest; young then fledge between 44 and 53 days after hatching (Poulin et al. 2020). Adults can live up to 8 years in the wild.

Although there are no CNDDB occurrence records from within 5 miles of the Project site (CNDBB 2022), the banks of Antelope Creek east of the Project site contained ground squirrel burrows that could support this species (Figure 8). The fallowed fields on the Project site could also provide foraging habitat. However, the habitat is routinely disturbed, a row of olive trees separates the burrows from the potential foraging habitat, and the number of burrows is limited. Therefore, the potential for this species to occur on the project site is low.

3.3.3 Pallid bat (*Antrozous pallidus*, SSSC)

Pallid bat is a member of the family Vespertilionidae and is recognized as a Species of Special Concern by the CDFW (CDFW 2022). It is widespread in the western United States from southern British Columbia, Canada to northern Baja California, Mexico (Hermanson and O'Shea 1983). In California, pallid bat is locally common year-round at low elevations, where it occupies dry, open areas in grassland, shrubland, woodland, and forest (Zeiner et al. 1988–1990). Pallid bat is nocturnal and roosts during the day in caves, crevices in rocky outcrops, mines, and occasionally tree hollows and buildings; night roosts tend to be in more open areas including porches (Zeiner et al. 1988–1990). It forages almost exclusively on the ground, where it preys on insects, arachnids, beetles, moths, and scorpions; few prey items are taken aerially (Zeiner et al. 1988–1990). Pallid bat hibernates during winter, usually near a day roost that it occupies in summer (Hermanson and O'Shea 1983).

The Project site supports potential day roost habitat in the form of industrial buildings, and open areas at the Project site may provide foraging habitat. However, there are no CNDDB records from within 5 miles of the Project site (CNDDB 2022). Therefore, the species has a low potential to occur on the Project site.

3.3.4 Western mastiff bat (*Eumops perotis californicus*, SSSC)

The western mastiff bat is most common in the southern half of California, but its range extends almost to the Oregon border (Cockrum 1960). This species forages in large, open areas in habitats such as desert washes, floodplains, conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and agricultural lands (Cockrum 1960; Ross 1961). Roosts include the undersides of large slabs or boulders, cliff faces, and cracks in buildings (Howell 1920; Dalquest 1946; Barbour and Davis 1969). This species prefers a roost high above the ground that allows a vertical drop of at least 10 feet to initiate flight (Howell 1920).

The Project site is within a non-specific 1990 CNDDB occurrence polygon (CDFW 2022). Roosting habitat in the form of industrial buildings were present on the Project site, and the open areas at or near the Project site may provide foraging habitat. Therefore, the species could occur on or near the Project site.

4.0 Environmental Impacts

4.1 Significance Determinations

This Project, which will result in temporary and permanent impacts to agricultural land cover, will not: (1) substantially reduce the habitat of a fish or wildlife species (criterion a) as no such habitat is present on the Project site; (2) cause a fish or wildlife population to drop below self-sustaining levels (criterion b) as no such potentially vulnerable population is known from the area; (3) threaten to eliminate a plant or animal community (criterion c) as no such potentially vulnerable communities are known from the area; (4) substantially reduce the number or restrict the range of a rare or endangered plant or animal (criterion d) as no such potentially vulnerable species are known from the area; (5) 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 CDFW or USFWS (criterion f) as no riparian habitat or other sensitive natural community was present in the survey area; (6) have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (criterion g) as no impacts to wetlands are expected; (7) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (criterion i) as no trees or biologically sensitive areas will be impacted; or (8) conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan (criterion j) as no such plan has been adopted. Thus, these significance criteria are not analyzed further.

The remaining statutorily defined criteria provided the framework for Criterion BIO1 and Criterion BIO2 below. These criteria are used to assess the impacts to biological resources stemming from the Project and provide the basis for determinations of significance:

- <u>Criterion BIO1</u>: 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 CDFW or USFWS (significance criterion e).

- <u>Criterion BIO2</u>: 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 (significance criterion h)

4.1.1 Direct and Indirect Impacts

4.1.1.1 Potential Impact: Have a substantial Effect on any Special-Status Species (Criterion BIO1)

The Project could adversely affect four special-status animal species that could occur on or near the Project site. Construction activities such as excavating, trenching, or using other heavy equipment that disturbs or harms a special-status species could constitute a significant impact. We recommend that Mitigation Measures BIO1, BIO2, and BIO3 (below) be included in the conditions of approval to reduce the potential impacts to a less-than-significant level.

Mitigation Measure BIO1. Protect San Joaquin kit fox.

1. To protect San Joaquin kit fox, a qualified biologist shall conduct a pre-construction survey within 30 days prior to the start of ground-disturbing activities to identify potential dens (burrows larger than 4 inches in diameter) in suitable land cover types on and within 250 feet of the Project site. If potential dens for San Joaquin kit fox are present, their disturbance and destruction shall be avoided. Exclusion zones shall be implemented based on the type of den and current use: Potential Den—50 feet; Known Den—100 feet; Natal or Pupping Den—to be determined on a case-by-case basis in coordination with USFWS and CDFW. All pipes greater than 4 inches in diameter stored on the construction site shall be capped, and exit ramps shall be installed in trenches and other excavations to avoid direct mortality. When possible, construction shall be conducted outside of the breeding season from October 1 to November 30. If den avoidance is not possible, procedures in *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior or During Ground Disturbance* (USFWS 2011) shall be followed.

Mitigation Measure BIO2. Protect burrowing owl.

1. Conduct focused burrowing owl surveys to assess the presence/absence of burrowing owl in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1997). These involve conducting four pre-construction survey visits.
2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, guano, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or passive relocation shall be implemented in consultation with the CDFW.

Mitigation Measure BIO3. Protect roosting pallid bat and western mastiff bats.

1. A pre-construction clearance survey shall be conducted by a qualified biologist to ensure that no roosting pallid bats will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential roosting habitat in and immediately

adjacent to the impact areas. If an active roost is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the roost. If work cannot proceed without disturbing the roosting bats, work may need to be halted or redirected to other areas until the roost is no longer in use.

4.1.1.2 Potential Impact: Interfere Substantially with Native Wildlife Movements, Corridors, or Nursery Sites (Criterion BIO2)

The Project could impede the use of nursery sites for native birds protected under the MBTA and CFGC. Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant impact. We recommend that Mitigation Measure BIO4 (below) be included in the conditions of approval to reduce the potential effect to a less-than-significant level.

Mitigation Measure BIO4. Protect nesting birds.

1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August.

2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

4.1.2 Cumulative Effects

The Project will involve developing an approximately 116-acre parcel that currently supports industrial buildings with graveled parking areas and fallowed agricultural fields into an industrial park. The Project site could provide habitat for San Joaquin kit fox, burrowing owl, pallid bat, and western mastiff bat. Nesting habitat for migratory birds is also present on the Project site. However, implementing Mitigation Measures BIO1 through BIO4 would reduce any contribution to cumulative impacts on biological resources to a less-than-significant level.

4.1.3 Unavoidable Significant Adverse Effects

No unavoidable significant adverse effects on biological resources would occur from implementing the Project.

5.0 Literature Cited

Barbour, R. W., and W. H. Davis. 1969. Bats of America. University of Kentucky Press, Lexington. 286 pp.

Benedict, E. M., and R. B. Forbes. 1979. Kit fox skulls in a southeastern Oregon cave. The Murrelet 60:25–27.

California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database (CNDDB) RareFind 5. https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed 14 January 2022.

California Native Plant Society, Rare Plant Program (CNPS). 2022. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society, Sacramento, CA. http://www.rareplants.cnps.org. Accessed 14 January 2022.

Clark, H. O., Jr., R. R. Duke, M. C. Orland, R. T. Golightly, and S. I. Hagen. 2007. The San Joaquin kit fox in north-central California: A review. Transactions of the Western Section of the Wildlife Society 43:27–36.

Clark, H. O., Jr., G. D. Warrick, B. L. Cypher, P. A. Kelly, D. F. Williams, and D. E. Grubbs. 2005. Competitive interactions between endangered kit foxes and non-native red foxes. Western North American Naturalist 65:153–163.

Cockrum, E. L. 1960. Distribution, habitat and habits of the mastiff bat, *Eumops perotis*, in North America. Journal of the Arizona Academy of Sciences 1:79–84.

Cypher, B. L., and K. A. Spencer. 1998. Competitive interactions between coyotes and San Joaquin kit foxes. Journal of Mammalogy 79:204–214.

Cypher, B. L., G. D. Warrick, M. R. Otten, T. P. O'Farrell, W. H. Berry, C. E. Harris, T. T. Kato, P. M. McCue, J. H. Scrivner, and B. W. Zoellick. 2000. Population dynamics of San Joaquin kit foxes at the Naval Petroleum Reserves in California. Wildlife Monographs 145.

Dalquest, W. W. 1946. The daytime retreat of a California mastiff bat. Journal of Mammalogy 27:87–88.

Google. 2022. Google Earth Pro. Version 7.3.2.5776 (https://www.google.com/earth/download/gep/agree.html). Accessed January 2022.

Hermanson, J. W. and T. J. O'Shea. 1983. *Antrozous pallidus*. American Society of Mammalogists. Mammalian Species 213:1–8.

Howell, A. B. 1920. Contributions to the life history of the California mastiff bat. Journal of Mammalogy 1:111–117.

Koopman, M. E., J. H. Scrivner, and T. T. Kato. 1998. Patterns of den use by San Joaquin kit fox. Journal of Wildlife Management 62:373–379.

Morrell, S. H. 1972. Life history of the San Joaquin kit fox. California Fish and Game 58:162–174.

Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture. 2022. Web Soil Survey, National Cooperative Soil Survey: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed 14 January 2022.

Poulin, R. G., L. D. Todd, E. A. Haug, B. A. Millsap, and M. S. Martell. 2020. Burrowing Owl (*Athene cunicularia*), version 1.0. In Birds of the World (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.burowl.01.

Ross, A. 1961. Notes on food habits of bats. Journal of Mammalogy 42:66–71.

Scrivner, J. H., T. P. O'Farrell, and T. T. Kato. 1987. Diet of the San Joaquin kit fox, *Vulpes macrotis mutica*, on Naval Petroleum Reserve #1, Kern County, California, 1980–1984. U.S. Dept. of Energy Topical Report, EG&G/EM Santa Barbara Operations Report No. EGG 10282–2168. 26 pages.

Spiegel, L. K., B. L. Cypher, and T. C. Dao. 1996. Diet of the San Joaquin kit fox at three sites in western Kern County, California. Pages 39–51 *in*: Studies of the San Joaquin kit fox in undeveloped and oil-developed areas, California Energy Commission, Environmental Protection Office, Sacramento, California.

United States Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetlands Delineation Manual. Wetland Research Program Technical Report Y-87-1.

________. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). ERDC/EL TR-08-28. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046489.pdf. Accessed January 2022.

United States Fish and Wildlife Service (USFWS). 1998. Recovery plan for upland species of the San Joaquin Valley, California. Region 1, Portland, Oregon. 319 pp.

________. 2018. Migratory Bird Permit Memorandum: Destruction and Relocation of Migratory Bird Nest Contents. FWS/DMBM/AMB/068029, 4 pages.

________. 2022a. IPaC: Information for Planning and Conservation. https://ecos.fws.gov/ipac/. Accessed 14 January 2022.

________. 2022b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/. Accessed 14 January 2022.

Warrick, G. D., H. O. Clark, Jr., P. A. Kelly, D. F. Williams, and B. L. Cypher. 2007. Use of agricultural lands by kit foxes. Western North American Naturalist 67:270–277.

Zeiner, D.C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White, eds. 1988–1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California.

Appendix A. USFWS list of threatened and endangered species.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: January 14, 2022
Consultation Code: 08ESMF00-2022-SLI-0818
Event Code: 08ESMF00-2022-E-02519
Project Name: WOODLAKE INDUSTRIAL PARK

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2022-SLI-0818
Event Code: Some(08ESMF00-2022-E-02519)
Project Name: WOODLAKE INDUSTRIAL PARK
Project Type: DEVELOPMENT
Project Description: Colibri Ecological proposes to assist Crawford & Bowen Planning, Inc. by conducting a biological resource evaluation in support of an industrial park development project (the Project) in the City of Woodlake in Tulare County, California. The Project will involve the construction of 17 buildings totaling 1,329,000 square feet and 700 parking stalls. The Project site is approximately 60 acres and currently supports industrial buildings, fallowed agricultural fields, and barren and paved parking areas. The Project site is on the southeast corner of S Blaire Road and Avenue 342 (W Ropes Avenue).

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.40653545,-119.11299369096346,14z

Counties: Tulare County, California

Endangered Species Act Species

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Fisher *Pekania pennanti* Population: SSN DPS There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3651	Endangered
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard *Gambelia silus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered

Flowering Plants

NAME	STATUS
Greene's Tuctoria *Tuctoria greenei* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1573	Endangered
San Joaquin Adobe Sunburst *Pseudobahia peirsonii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2931	Threatened
San Joaquin Orcutt Grass *Orcuttia inaequalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5506	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix B. CNDDB occurrence records.

Query Criteria: Quad IS (Stokes Mtn. (3611952) OR Auckland (3611951) OR Shadequarter Mtn. (3611858) OR Ivanhoe (3611942) OR Woodlake (3611941) OR Kaweah (3611848) OR Exeter (3611932) OR Rocky Hill (3611931) OR Chickencoop Canyon (3611838))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

				Elev.		Element Occ. Ranks						Population Status		Presence		
Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Range (ft.)	Total EO's	A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Agelaius tricolor tricolored blackbird	G1G2 S1S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	505 540	955 S:2	0	0	0	0	0	2	1	1	2	0	0
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	G2G3 S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	345 743	1263 S:9	0	6	2	0	0	1	2	7	9	0	0
Anniella pulchra Northern California legless lizard	G3 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	377 1,000	378 S:2	1	0	0	0	0	1	1	1	2	0	0
Antrozous pallidus pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	368 368	420 S:1	1	0	0	0	0	0	0	1	1	0	0
Ardea herodias great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	500 500	156 S:1	0	0	0	0	0	1	1	0	1	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	343 343	2011 S:1	1	0	0	0	0	0	0	1	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Atriplex cordulata var. erecticaulis Earlimart orache	G3T1 S1	None None	Rare Plant Rank - 1B.2	335 335	23 S:1	1	0	0	0	0	0	0	1	1	0	0
Atriplex minuscula lesser saltscale	G2 S2	None None	Rare Plant Rank - 1B.1	335 335	52 S:1	0	1	0	0	0	0	0	1	1	0	0
Atriplex persistens vernal pool smallscale	G2 S2	None None	Rare Plant Rank - 1B.2	345 355	41 S:2	2	0	0	0	0	0	0	2	2	0	0
Batrachoseps regius Kings River slender salamander	G2 S2S3	None None	IUCN_VU-Vulnerable USFS_S-Sensitive	2,000 5,500	14 S:2	0	0	0	0	0	2	2	0	2	0	0
Bombus crotchii Crotch bumble bee	G3G4 S1S2	None None		450 1,000	437 S:5	0	0	0	0	0	5	5	0	5	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	335 950	795 S:19	2	3	0	0	0	14	6	13	19	0	0
Brodiaea insignis Kaweah brodiaea	G1 S1	None Endangered	Rare Plant Rank - 1B.2 USFS_S-Sensitive	560 3,300	27 S:11	2	4	2	0	0	3	10	1	11	0	0
Chrysis tularensis Tulare cuckoo wasp	G1G2 S1S2	None None		450 450	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Delphinium recurvatum recurved larkspur	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	340 440	119 S:4	0	0	0	0	1	3	2	2	3	0	1
Desmocerus californicus dimorphus valley elderberry longhorn beetle	G3T2 S3	Threatened None		405 960	271 S:2	0	0	1	0	0	1	2	0	2	0	0
Diplacus pictus calico monkeyflower	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	600 600	73 S:1	0	0	0	0	0	1	1	0	1	0	0
Empidonax traillii willow flycatcher	G5 S1S2	None Endangered	IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	570 570	90 S:1	0	0	0	0	0	1	1	0	1	0	0

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	70 1,000	1398 S:3	0	0	0	0	0	3	3	0	3	0	0
Eriogonum nudum var. murinum mouse buckwheat	G5T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	1,280 3,400	11 S:4	0	0	0	0	0	4	4	0	4	0	0
Eryngium spinosepalum spiny-sepaled button-celery	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	335 2,000	108 S:20	3	9	2	0	1	5	11	9	19	1	0
Erythranthe norrisii Kaweah monkeyflower	G2 S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	1,200 2,700	8 S:2	0	0	0	0	0	2	2	0	2	0	0
Eumops perotis californicus western mastiff bat	G4G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority	450 940	296 S:5	0	0	0	0	0	5	5	0	5	0	0
Euphorbia hooveri Hoover's spurge	G1 S1	Threatened None	Rare Plant Rank - 1B.2	335 345	29 S:2	0	0	2	0	0	0	0	2	2	0	0
Fritillaria striata striped adobe-lily	G1 S1	None Threatened	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture USFS_S-Sensitive		23 S:1	0	0	0	0	1	0	1	0	0	0	1
Glyceria grandis American manna grass	G5 S3	None None	Rare Plant Rank - 2B.3		10 S:1	0	0	0	0	0	1	1	0	1	0	0
Gymnogyps californianus California condor	G1 S1	Endangered Endangered	CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_CR-Critically Endangered NABCI_RWL-Red Watch List	1,000 1,000	13 S:1	0	0	0	0	0	1	1	0	1	0	0

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	912 912	329 S:1	0	1	0	0	0	0	0	1	1	0	0
Helianthus winteri Winter's sunflower	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	460 2,500	55 S:32	6	20	4	1	0	1	0	32	32	0	0
Lasthenia chrysantha alkali-sink goldfields	G2 S2	None None	Rare Plant Rank - 1B.1	380 380	55 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasthenia glabrata ssp. coulteri Coulter's goldfields	G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	350 350	111 S:1	0	0	0	0	0	1	0	1	1	0	0
Lepidurus packardi vernal pool tadpole shrimp	G4 S3S4	Endangered None	IUCN_EN-Endangered	340 345	329 S:2	0	1	0	0	0	1	1	1	2	0	0
Leptosiphon serrulatus Madera leptosiphon	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	1,000 3,500	27 S:2	0	0	0	0	0	2	2	0	2	0	0
Linderiella occidentalis California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	513 516	508 S:2	0	0	0	0	0	2	0	2	2	0	0
Lithobates pipiens northern leopard frog	G5 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern		19 S:1	0	0	0	0	0	1	1	0	1	0	0
Lytta moesta moestan blister beetle	G2 S2	None None		1,000 1,000	12 S:1	0	0	0	0	0	1	1	0	0	1	0
Lytta morrisoni Morrison's blister beetle	G1G2 S1S2	None None		960 960	10 S:1	0	0	0	0	0	1	1	0	0	1	0

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Orcuttia inaequalis San Joaquin Valley Orcutt grass	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1	515 515	47 S:1	0	0	0	0	1	0	1	0	0	0	1
Pseudobahia peirsonii San Joaquin adobe sunburst	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	600 1,420	51 S:3	0	0	0	1	0	2	3	0	3	0	0
Rana boylii foothill yellow-legged frog	G3 S3	None Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	520 2,211	2476 S:10	0	0	0	0	10	0	10	0	0	0	10
Sagittaria sanfordii Sanford's arrowhead	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	400 400	126 S:1	0	0	1	0	0	0	0	1	1	0	0
Spea hammondii western spadefoot	G2G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	0 743	1422 S:31	0	26	1	0	0	4	4	27	31	0	0
Talanites moodyae Moody's gnaphosid spider	G1G2 S1S2	None None		400 1,200	6 S:4	0	0	0	0	0	4	4	0	4	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	370 370	594 S:1	0	0	1	0	0	0	1	0	1	0	0
Tuctoria greenei Greene's tuctoria	G1 S1	Endangered Rare	Rare Plant Rank - 1B.1	450 450	50 S:1	0	0	0	0	1	0	1	0	0	0	1
Vulpes macrotis mutica San Joaquin kit fox	G4T2 S2	Endangered Threatened		345 720	1020 S:7	0	0	0	0	0	7	7	0	7	0	0

Appendix C. CNPS plant list.

Search Results

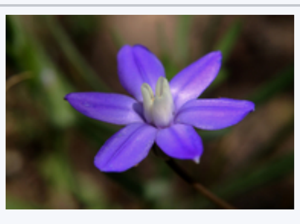
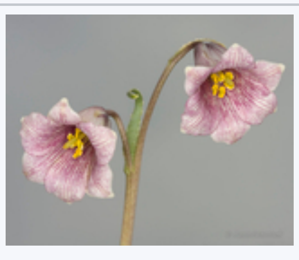
Back Export Results

20 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [1B:2B] , 9-Quad include [3611848:3611941:3611858:3611951:3611838:3611931:3611932:3611952:3611942]

Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation (m) | Highest Elevation (m) | Lowest Elevation (ft) | Highest Elevation (ft) | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Atriplex cordulata var. erecticaulis	Earlimart orache	Chenopodiaceae	annual herb	Aug-Sep(Nov)	None	None	G3T1	S1	1B.2	 © 2009 Robert E. Preston, Ph.D.
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	None	None	G2	S2	1B.1	 © 2000 Robert E. Preston, Ph.D.
Atriplex persistens	vernal pool smallscale	Chenopodiaceae	annual herb	Jun-Oct	None	None	G2	S2	1B.2	No Photo Available
Brodiaea insignis	Kaweah brodiaea	Themidaceae	perennial bulbiferous herb	Apr-Jun	None	CE	G1	S1	1B.2	 © 2007 Robert E. Preston, Ph.D.
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2?	1B.2	No Photo Available
Diplacus pictus	calico monkeyflower	Phrymaceae	annual herb	Mar-May	None	None	G2	S2	1B.2	 © 2020 Matt C. Berger
Eriogonum nudum var. murinum	mouse buckwheat	Polygonaceae	perennial herb	Jun-Nov	None	None	G5T2	S2	1B.2	No Photo Available
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	No Photo Available
Erythranthe norrisii	Kaweah monkeyflower	Phrymaceae	annual herb	Mar-May	None	None	G2	S2	1B.3	No Photo Available
Euphorbia hooveri	Hoover's spurge	Euphorbiaceae	annual herb	Jul-Sep(Oct)	FT	None	G1	S1	1B.2	No Photo Available
Fritillaria striata	striped adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	CT	G1	S1	1B.1	 © 2013 Aaron Schusteff
Glyceria grandis	American manna grass	Poaceae	perennial rhizomatous herb	Jun-Aug	None	None	G5	S3	2B.3	No Photo Available
Helianthus winteri	Winter's sunflower	Asteraceae	perennial shrub	Jan-Dec	None	None	G2?	S2?	1B.2	 © 2014 Chris Winchell
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	 © 2009 California State University, Stanislaus
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1	 © 2013 Keir Morse
Leptosiphon serrulatus	Madera leptosiphon	Polemoniaceae	annual herb	Apr-May	None	None	G3	S3	1B.2	 © 2008 Chris Winchell
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	annual herb	Apr-Sep	FT	CE	G1	S1	1B.1	No Photo Available
Pseudobahia peirsonii	San Joaquin adobe sunburst	Asteraceae	annual herb	Feb-Apr	FT	CE	G1	S1	1B.1	No Photo Available
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	No Photo Available
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	FE	CR	G1	S1	1B.1	No Photo Available

Showing 1 to 20 of 20 entries

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2022. Inventory of Rare and Endangered Plants of California (online edition, v9-01 1.0). Website https://www.rareplants.cnps.org [accessed 14 January 2022].

Appendix B

CHRIS Search Results

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: Emily Bowen
Crawford Bowen Planning, Inc.
113 N. Church Street, Suite 302
Visalia, CA 93291

Record Search 21-098

Date: March 29, 2021

Re: City of Woodlake Sewer Expansion Project

County: Tulare

Map(s): Ivanhoe & Woodlake 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 conducted within the project area, TU-00426 and TU-01445. There have been ten cultural resource studies conducted within a one-half mile radius, TU-00015, 00409, 00443, 01013, 01014, 01196, 01389, 01392, 01498, and 01813.

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

There is one recorded resource within the project area, P-54-004632, an historic era railroad. There are five recorded resources within the one-half mile radius, P-54-003992, 004003, 004034, 004614, and 004875. These resources consist of historic era storage tanks, Bravo Lake, another historic era railroad, an historic era canal, and an historic era ditch.

Resource P-54-004614, the Friant-Kern Canal, has been given a National Register Status Code of 2S2, indicating this property has been determined eligible for listing in the National Register of Historic Places by a consensus through the Section 106 process. The resource is listed in the California Register of Historical Resources. There are no other 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.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of improvement and expansion of the existing sewer system in the City of Woodlake. Further, we understand the project activities will take place in the existing right-of way of several roadways. As such, no further cultural resource investigation is recommended at this time. However, if cultural resources are unearthed during project activities, wall work must halt in the area of the find and a qualified, professional consultant should be called out to assess the findings and make the appropriate mitigation recommendations. 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 29, 2021

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Comment Letters Received during Public Review

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

October 12, 2022

Rebecca Griswold
City of Woodlake
350 North Valencia
Woodlake, CA 93257

Re: 2022040640, Woodlake Holdings Industrial Park Project, Tulare County

Dear Ms. Griswold:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cameron.Vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

cc: State Clearinghouse

NOVEMBER 4, 2022

VIA EMAIL: JWATERS@CI.WOODLAKE.CA.US
Jason Waters, Community Services Director
City of Woodlake
350 N. Valencia Avenue
Woodlake, CA 93286

Dear Mr. Waters:

INITIAL STUDY AND NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE WOODLAKE HOLDINGS INDUSTRIAL PARK PROJECT, SCH#2022040640

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Initial Study and Notice of Preparation of an Environmental Impact Report for the Woodlake Holdings Industrial Park Project (Project). The Division monitors farmland conversion on a statewide basis, provides technical assistance regarding the Williamson Act, and administers various agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's potential impacts on agricultural land and resources.

Project Description

The Project Applicant intends to expand an existing industrial area by developing a 47-acre industrial center that will house various industrial uses allowable by the zone district, including cannabis cultivation, manufacturing, distribution, and retail, which is allowable with a Conditional Use Permit.

The proposed Project site consists of existing buildings and vacant land and is part of an existing industrial area. The site is surrounded by a chain link perimeter fence and is further surrounded by active agricultural production and rural residences. Trees are planted along it northern and western boundaries, and a driveway running east-west across the northern portion of the parcel. The proposed Project is located on the east side of Blair Road, south of Ropes Avenue on multiple APNs, including: 060-170-105, -106, 060-160-044 and -059. Woodlake is bisected by SR 216 and SR 245 and is situated five miles north of SR 198.

Department Comments

The conversion of agricultural land represents a permanent reduction and significant impact to California's agricultural land resources. CEQA requires that all feasible and reasonable mitigation be reviewed and applied to projects. Under CEQA, a lead agency should not approve a project if there are feasible alternatives or feasible mitigation measures available that would lessen the significant effects of the project.

All mitigation measures that are potentially feasible should be included in the project's environmental review. A measure brought to the attention of the lead agency should not be left out unless it is infeasible based on its elements.

Consistent with CEQA Guidelines, the Department recommends the use of agricultural conservation easements, among other measures, as potential mitigation. (See Cal. Code Regs., tit. 14, § 15370 [mitigation includes "compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."])

Mitigation through agricultural easements can take at least two forms: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

A helpful source for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

[California Council of Land Trusts]

Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered. Indeed, the recent judicial opinion in King and Gardiner Farms, LLC v. County of Kern (2020) 45 Cal.App.5th 814 ("KG Farms") holds that agricultural conservation easements on a 1 to 1 ratio are not alone sufficient to adequately mitigate a project's conversion of agricultural land. KG Farms does not stand for the proposition that agricultural conservation easements are irrelevant as mitigation. Rather, the holding suggests that to the extent they are considered, they may need to be applied at a greater than 1 to 1 ratio, or combined with other forms of mitigation (such as restoration of some land not currently used as farmland).

Conclusion

The Department recommends further discussion of the following issues:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.

- Impacts on any current and future agricultural operations in the vicinity, e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measures for all impacted agricultural lands within the proposed project area.

Thank you for giving us the opportunity to comment on the Initial Study and Notice of Preparation of an Environmental Impact Report for the Woodlake Holdings Industrial Park Project. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Associate Environmental Planner via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber

Monique Wilber
Conservation Program Support Supervisor

Department of Cannabis Control
CALIFORNIA

Gavin Newsom
Governor

Nicole Elliott
Director

November 10, 2022

Rebecca Griswold
Community Services Director
City of Woodlake
350 North Valencia Avenue
Woodlake, CA 93286
rgriswold@ci.woodlake.ca.us

Re: Recirculated Initial Study (IS) and Notice of Preparation (NOP) for the Woodlake Holdings Industrial Park (SCH No. 2022040640)

Dear Ms. Griswold:

Thank you for providing the California Department of Cannabis Control (DCC) the opportunity to comment on the Recirculated Initial Study (IS) and Notice of Preparation (NOP) prepared by the City of Woodlake for the Woodlake Holdings Industrial Park project (Proposed Project).

DCC has jurisdiction over the issuance of commercial cannabis business licenses in California. DCC issues licenses to cannabis business facilities, where the local jurisdiction authorizes these activities. (Bus. & Prof. Code, § 26012(a).) All commercial cannabis businesses within California require a license from DCC. For more information pertaining to commercial cannabis business license requirements, including DCC regulations, please visit: https://cannabis.ca.gov/cannabis-laws/dcc-regulations/.

DCC expects to be a Responsible Agency for this project under the California Environmental Quality Act (CEQA) because one or more annual cannabis business licenses issued by DCC will be needed to operate cannabis businesses. In response to the NOP, DCC has several general comments and recommendations about the anticipated scope of the EIR and recommendations regarding issues the City should address and consider as part of its preparation of the EIR.

DCC offers the following comments concerning the IS and NOP.

General Comments (GCs)

GC 1: Prior DCC Comment Letter and Recirculated IS/NOP

The City of Woodlake issued an initial IS/NOP for the Proposed Project in May 2022. DCC submitted comments regarding the IS/NOP on June 1, 2022. In October 2022, the City issued a nearly identical IS/NOP as the version issued in May, with the only change being that the City intends to consider the Proposed Project's potentially significant impacts to Agricultural Resources. DCC appreciates that the City considered DCC's comments regarding the need for the project EIR to analyze potentially significant impacts to Agricultural Resources; however, the remainder of DCC's comments were not addressed in the recirculated document.

DCC requests that the EIR examine all resource topics where a potentially significant impact to the environment could result from the operation of the Proposed Project. As detailed in the Specific Comments section below, DCC recommends the EIR conduct additional analysis regarding whether the Proposed Project would have potentially significant impacts on air quality, biological resources, hazards and hazardous materials, hydrology and water quality, noise, and utilities and service systems.

GC 2: Project Description and Scope of the EIR

The Proposed Project EIR must describe and analyze all relevant components and parts of the project, including future use of the development that will foreseeably result from project approval. To cover all cannabis business activities that would take place at the industrial development facility, DCC requests the City provide specific details regarding future tenants' proposed cultivation and manufacturing activities as part of the EIR's project description. The IS's project description very generally discusses that the industrial complex would support the operation of cannabis cultivation businesses, but it does not provide any details about specific cannabis business operations and maintenance that would take place at the project site. To the extent these details are known at this time, or can be provided as an estimation, assumption, and/or worst-case-scenario, the project description should include operation details for cannabis business facilities, including:

- the proposed canopy size of the cultivation operations and the types of operations and cultivation methods that would occur on site;
- the type(s) of manufacturing activities that would occur on site (e.g., mechanical extractions, volatile solvent manufacturing);
- the types of manufacturing equipment that would be utilized on site;
- the expected number of employees, during both regular cultivation operations and harvest periods;
- the number of daily trips to and from the site for employee commuting, delivery of materials or supplies, and shipment of product;
- the source and amounts of water to be used for the facility, including irrigation for cultivation activities, as well as water for manufacturing, landscaping, and domestic uses;
- any water efficiency equipment that would be used;
- the types of lighting that would be used;
- the location and distance of any nearby sensitive receptors (e.g., residences, schools);
- the types of odor control methods to be employed;
- the types of hazardous materials that would be used on the cultivation site;
- environmental protection measures that would be incorporated into the proposed cultivation operation, and whether these measures would be considered Proposed Project mitigation measures or conditions of permit issuance;

- the utilities needed to serve the cultivation facility, including sewer service, and whether such utilities are currently available to serve the site with sufficient capacity for the project; and
- the source (equipment) and amounts of energy expected to be used in operating the cultivation facility, including any energy management and efficiency features incorporated into the Proposed Project.

The project description should clearly describe the details of both the construction of the facility and the cannabis business operations that would take place in the facility. The scope of the analysis described in the EIR should cover the entire project as fully described, including impacts that result from future tenants' operation of cannabis businesses at the Woodlake Holdings Industrial Park facility. As examples, cannabis business operations may have specific resource impacts related to energy or water use, greenhouse gas emissions from operations and vehicle traffic, odor impacts, and noise generation.

CEQA requires that Lead Agencies evaluate the environmental impacts of proposed projects and support factual conclusions with substantial evidence. DCC requests that any analyses of operations and maintenance activities clearly cite the source(s) of the evidence relied upon for each impact discussion. If the City relies upon assumptions or estimates to determine impacts from potential future tenants' activities based on other similar cannabis business projects, those assumptions should be clearly described and analyzed. This information would be particularly useful for resource topics – such as air quality, energy, greenhouse gas emissions, and transportation and traffic – where modeling requires baseline assumptions for operational equipment usage, including cannabis ventilation systems, power generators, indoor lighting, and vehicle trips.

Note that DCC requires an annual-license applicant to provide operation-specific evidence of exemption from, or compliance with, CEQA (Cal. Code Regs., tit. 4 § 15010(b)). When a local jurisdiction prepares a site-specific CEQA compliance document, or a Notice of Determination for the conclusion that no further CEQA documentation is required, it improves the efficiency with which DCC can issue annual licenses for projects located within that jurisdiction.

GC 3: Subsequent CEQA Analysis/Tiering and Streamlining

If the City anticipates that site-specific CEQA compliance for individual cannabis business projects within the Woodlake Holdings Industrial Park would be completed at a later date, DCC requests that the City of Woodlake indicate how the City intends to complete any subsequent site-specific environmental assessments. This may include subsequent CEQA documents (e.g., IS/NDs, IS/MNDs, and EIRs), addenda to the Proposed Project EIR, and/or determinations that no further documentation would be needed.

DCC encourages local jurisdictions to use CEQA streamlining options when appropriate. For tenant projects that are not fully covered under the Proposed Project EIR and not exempt from CEQA, DCC recommends that the City prepare a CEQA document (an addendum, IS/ND, IS/MND, or EIR) that tiers from the Proposed Project EIR, as appropriate (e.g., incorporating by reference general discussions and concentrating the later environmental assessment solely on the issues specific to the later project). DCC recommends that the City of Woodlake prepare Notices of Determination (NODs) and file them with the State Clearinghouse for all subsequent site-specific CEQA documentation, addenda, and/or other later activities approved using CEQA streamlining approaches.

GC 4: Analysis of Site-Specific Resource Impacts

Some environmental topics are most effectively analyzed and regulated by local land use authorities that are better situated to evaluate local and regional impacts. DCC recommends that the EIR prepared for the Proposed Project contain analysis or consideration of the following issues:

Aesthetics

- Substantial adverse effects on scenic vistas, scenic resources, or State-designated scenic highway, and/or the existing visual character or quality of a site and its surroundings

Land Use and Planning

- Conflicts with any and all local land use plans, ordinances, policies, and/or resource programs, including (but not limited to) applicable Habitat Conservation Plans and Natural Community Conservation Plans

Mineral Resources

- Potential loss of availability of a known mineral resource that would be of value to the region and the residents of the state
- Potential for the extraction of substantial mineral resources from lands classified by the State as areas that contain mineral resources (Mineral Resource Zone [MRZ]-3)
- Loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan

Noise

- Exposure of people or residences to excessive noise levels within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport
- Generation of excessive ground borne vibration or ground borne noise levels
- Substantial permanent increase in ambient noise levels in the vicinity of a licensed cultivation activities above existing levels
- Excessive noise for sensitive receptors, and/or resulting in a substantial temporary or periodic increase in ambient noise levels
- Short-term construction-related impacts related to noise (if applicable)
- Long-term operation-related noise impacts resulting from traffic and related changes to existing noise levels

Odor (Air Quality)

- Creation of objectionable odors affecting a substantial number of people as a result of cannabis cultivation

Recreation

- Potential impacts to existing neighborhood and regional parks or other recreational facilities

Public Services and Utilities

- Exceedance of wastewater treatment requirements, resulting in the need to expand wastewater treatment facilities, or resulting in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project
- Need for the construction of new or expanded water treatment and/or stormwater facilities
- Potential to be served by a landfill with insufficient capacity

Traffic and Transportation

- Conflict with circulation plans, ordinances, or policies
- Conflict with congestion management programs
- Increase hazards due to a design feature or incompatible uses

GC 5: Cumulative Impacts

It is important for the Proposed Project EIR to disclose and evaluate potential cumulative impacts of cannabis business activities. Of particular importance are topics for which the impacts of the Proposed Project alone may be less than significant, but for which the Proposed Project would contribute to a significant cumulative impact when combined with other existing and proposed cannabis business operations, and/or other industrial complexes where it is allowable and reasonable to predict future cannabis operations may be permitted. These topics include:

- Impacts of groundwater diversions on the health of the underlying aquifer, including impacts on other users and impacts on stream-related resources connected to the aquifer;
- Impacts on terrestrial biological species and habitats, particularly special-status species as defined under CEQA;
- Impacts related to transportation;
- Impacts related to noise; and
- Impacts related to air quality and objectionable odors.

Specifically, the EIR should discuss any cumulative impacts that may result from the operation of other proposed or existing cannabis cultivation, manufacturing, and distribution projects in the vicinity of the Proposed Project, including but not limited to:

- 7Points Industrial Complex Project, on the southwest corner of West Ropes Avenue and Mulberry Street within the City of Woodlake;
- Concord Center Industrial Project, also on the southwest corner of West Ropes Avenue and Mulberry Street;
- Consolidated Gardens Industrial Project, at West Bravo and Road 196;
- Green Smart Farmer Expansion Project, at 915 West Ropes Avenue; and
- Woodlake Holdings Distribution Project, on Blair Road, 0.25 miles south of Ropes Ave.

GC 6: DCC Regulations

The EIR analysis would benefit from discussion of the protections for environmental resources provided by DCC's regulations. In particular, the impact analysis should acknowledge the effects of state regulations on reducing the severity of impacts on environmental resources. For current DCC regulations, please visit: https://cannabis.ca.gov/resources/rulemaking/.

Specific Comments

In addition to the general comments provide above, DCC offers the following specific comments regarding the information and analyses provided in the IS. DCC requests that these comments be addressed in preparing the EIR.

THIS SPACE INTENDED TO BE LEFT BLANK

Comment No.	Page No(s)	Section(s)	Resource Topic	IS Text	DCC Comments and Recommendations
1	11	Project Information	Tribal Consultation	The City of Woodlake has not received any project-specific requests from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the City of Woodlake.	The EIR should contain a description of the Assembly Bill 52 compliance process for the Proposed Project. The EIR should include a list of the tribes that were contacted, the dates on which such contacts were made, a description of any requests for consultation, and a summary of the results from such consultations.
2	12	Environmental Factors Potentially Affected	N/A	N/A (General Comment)	The table does not include all resource topics where the IS found a potentially significant impact. As examples, the IS found that the Proposed Project would have potentially significant impacts to biological resources and cultural resources, absent mitigation. The IS does not indicate whether the EIR will contain an analysis of all resource topics, or only the items marked as having a potentially significant impact. DCC recommends that, at a minimum, the EIR include an analysis of all resource topics where a potentially significant impact may occur, regardless of whether such impacts would be reduced to less-than-significant levels with mitigation. In addition, as detailed below, DCC

Comment No.	**Page No(s)**	**Section(s)**	**Resource Topic**	**IS Text**	**DCC Comments and Recommendations**
					recommends the EIR conduct additional analysis regarding whether the Proposed Project would have potentially significant impacts related to air quality, biological resources, hazards and hazardous materials, hydrology and water quality, noise, and utilities and service systems. (*See* Specific Comments 4, 5 6, 9, 10, and 13.)
3	16	I(d)	Aesthetics	N/A (General Comment)	The project description (p. 7) indicates that some cannabis cultivation operations within the Proposed Project site would use mixed-light cultivation techniques. If the Proposed Project includes mixed-light cultivation techniques, the EIR should reference DCC's requirement that lights used in mixed-light cultivation activities must be fully shielded from sunset to sunrise to avoid nighttime glare (Cal. Code Regs., tit. 4 § 16304(a)(7)) and describe how the Proposed Project would comply with these requirements.
4	20-22	III(d)	Air Quality	N/A (General Comment)	The IS does not discuss the potential of Proposed Project operations to create odor-related

Comment No.	Page No(s)	Section(s)	Resource Topic	IS Text	DCC Comments and Recommendations
					impacts. DCC recommends that the EIR analyze potential odor impacts from the Proposed Project.
5	23-28	IV	Biological Resources	N/A (General Comment)	The EIR should include an analysis of potential impacts to biological resources resulting from Proposed Project operations. This could include an analysis of operational impacts resulting from increased light, noise, vehicles, or heavy machinery.
6	27	IV	Biological Resources	The channelized Antelope Creek is within 50 feet of the Project site.	The EIR should include an analysis of potential impacts to biological resources resulting from Proposed Project operations. This could include an analysis of operational impacts resulting from erosion or siltation due to vehicle traffic or contamination due to spills or irrigation runoff.
7	32-33	VI	Energy	N/A (General Comment)	The EIR should describe how the Proposed Project would comply with DCC regulations relating to the use of renewable energy in cultivation projects. (Cal. Code Regs., tit. 4 § 16305.)

Comment No.	**Page No(s)**	**Section(s)**	**Resource Topic**	**IS Text**	**DCC Comments and Recommendations**
8	41-43	IX	Hazards and Hazardous Materials	N/A (General Comment)	If the project would include manufacturing using volatile solvents, the EIR should provide a description of the volatile substances that would be used in product manufacture, and should include analyses of the potential environmental impacts that may result from the use of these substances. In addition, the analyses should describe and consider any measures the Proposed Project would implement that may lessen or reduce potential impacts.
9	41-42	IX	Hazards and Hazardous Materials	The proposed Project includes land uses that are considered compatible with the surrounding uses with a Conditional Use Permit. None of these land uses routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common commercial grade hazardous materials such as household and commercial cleaners, paint, etc.	The IS does not consider the potential use of chemicals in cannabis cultivation and manufacturing activities, such as pesticides, fertilizers, fuels, and solvents. The EIR should analyze potential hazards and hazardous materials impacts related to these materials.

Comment No.	**Page No(s)**	**Section(s)**	**Resource Topic**	**IS Text**	**DCC Comments and Recommendations**
10	47	X	Hydrology and Water Quality	The proposed Project is not anticipated to result in additional demands for groundwater resources beyond those considered in the adopted City of Woodlake General Plan as the proposed Project is an allowable use within the land designation, with an approved Conditional Use Permit.	The EIR should provide substantial evidence to support the conclusion that impacts to groundwater resources would be less than significant. The analysis should include an estimate of overall water demands to serve the Proposed Project, compared with the City's present and anticipated future water supply. In addition, this analysis should examine the impacts that would result from the actual anticipated water demands of the Proposed Project as a result of cannabis cultivation, processing, and manufacturing activities, rather than an analysis based on the General Plan designation of "industrial" uses.
11	52-54	XIII	Noise	The primary source of on-going noise from the proposed Project will be from vehicles traveling to and from the site. Project implementation will generate noise associated with hitching and unhitching trailers and an increase in traffic on some roadways in the Project area.	The EIR should describe and quantify all sources of noise that would be generated from operational equipment, including HVAC and odor control systems. In addition, the EIR should include an analysis of the Proposed Project's contribution to cumulative noise impacts. (*See* GC 5.)

Comment No.	**Page No(s)**	**Section(s)**	**Resource Topic**	**IS Text**	**DCC Comments and Recommendations**
12	61-62	XVII	Traffic and Transportation	N/A (General Comment)	The EIR should include an analysis of the Proposed Project's contribution to cumulative traffic and transportation impacts. (*See* GC 5.)
13	67	XIX	Utilities and Service Systems	N/A (General Comment)	The EIR should contain an analysis, supported by data, of whether the Proposed Project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. The analysis should examine the impacts that would result from the actual anticipated water demands of the Proposed Project as a result of cannabis cultivation, processing, and manufacturing activities, rather than an analysis based on the General Plan designation of "industrial" uses. In addition, the analysis should include a discussion of the Proposed Project's contribution to cumulative impacts on water supply. (*See* GC 5.)

Conclusion

DCC appreciates the opportunity to provide comments on the IS/NOP for the Proposed Project and to provide input on topics to be addressed in the EIR. If you have any questions about our comments or wish to discuss them, please contact Kevin Ponce, Senior Environmental Scientist Supervisor, at (916) 247-1659 or via e-mail at Kevin.Ponce@cannabis.ca.gov.

Sincerely,

Lindsay Rains
Licensing Program Manager

This page intentionally left blank.

Appendix B

Air Quality, Greenhouse Gas & Energy Impact Assessment

Woodlake Cannabis Project

Air Quality, Greenhouse Gas & Energy Impact Assessment
July 2022

Prepared by:
VRPA Technologies, Inc.
4630 W. Jennifer, Suite 105
Fresno, CA 93722
Project Manager: Georgiena Vivian

VRPA TECHNOLOGIES, INC.

Table of Contents

List of Tables

List of Figures

1.0 Introduction

The Project Applicant is proposing to develop a 1,500,000 square foot indoor cannabis cultivation and distribution facility and associated parking (project) in the City of Woodlake, California.

1.1 Description of the Region/Project

This Air Quality & Greenhouse Gas Impact Assessment has been prepared for the purpose of identifying potential project-specific or site-specific air quality impacts that may result from the Woodlake Cannabis Project in the City of Woodlake. The Project is located at the southeast corner of West Ropes Avenue and South Blair Road within the Sphere of influence (SOI) of City of Woodlake. Figures 1 and 2 show the location of the Project along with major roadways and highways.

The City of Woodlake is located in Tulare County one of the most polluted air basins in the country– the San Joaquin Valley Air Basin (SJVAB). The surrounding topography includes foothills and mountains to the east and west. These mountain ranges direct air circulation and dispersion patterns. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Woodlake is characterized by hot, dry summers and cool winters with the notable presence of Tule fog.

1.2 Regulatory

Air quality within the Project area is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policymaking, education, and a variety of programs. The agencies primarily responsible for improving the air quality within the City of Woodlake and Tulare County are discussed below along with their individual responsibilities.

1.2.1 *Federal Agencies*

✓ **U.S. Environmental Protection Agency (EPA)**

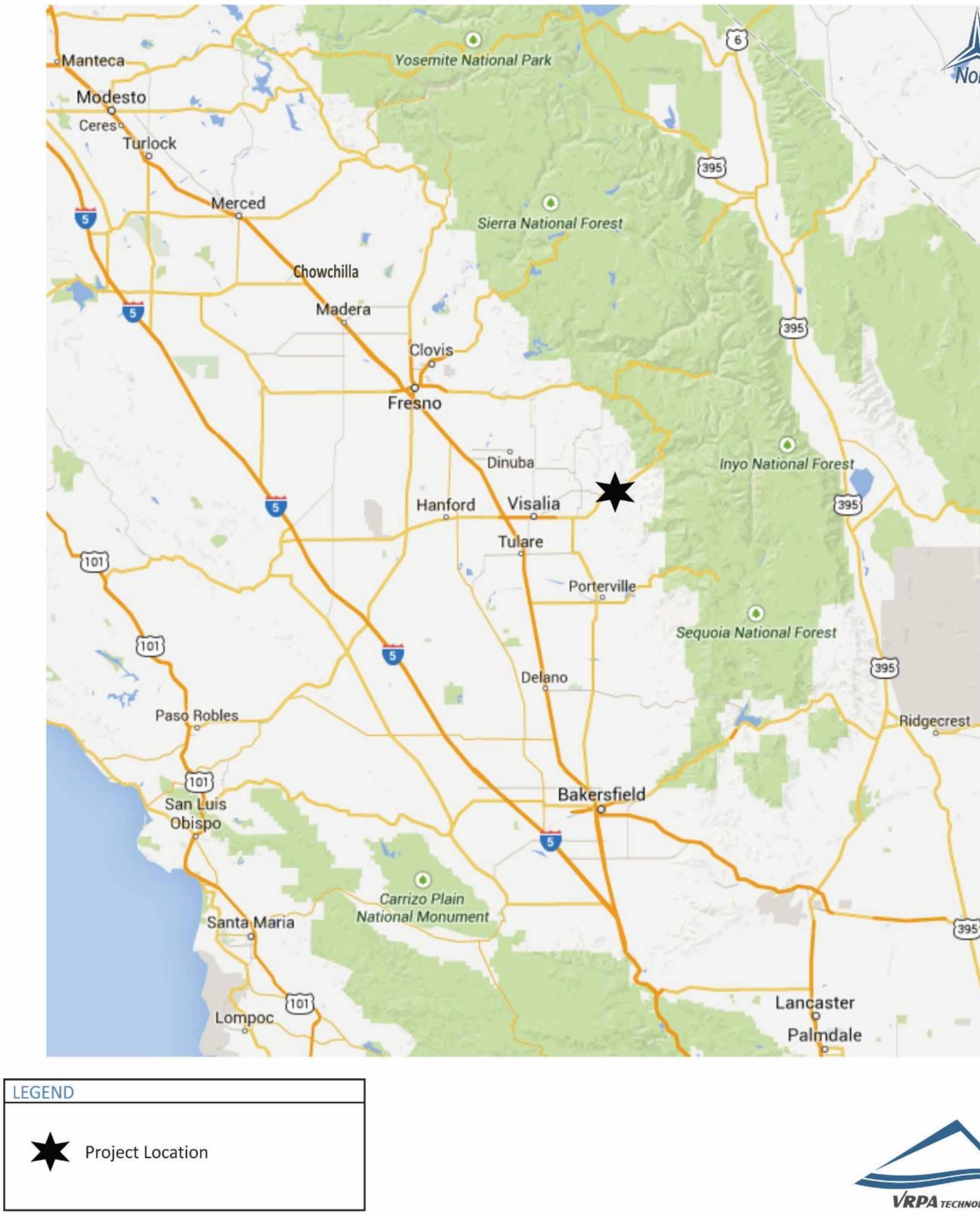
The Federal Clean Air Bill first adopted in 1967 and periodically amended since then, established federal ambient air quality standards. A 1987 amendment to the Bill set a deadline for the attainment of these standards. That deadline has since passed. The other Clean Air Act (CAA) Bill Amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources. The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the 1990 amendments.

The CAA and the national ambient air quality standards identify levels of air quality for six "criteria" pollutants, which are considered the maximum levels of ambient air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants include ozone, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide, particulate matter, and lead.

CAA Section 176(c) (42 U.S.C. 7506(c)) and EPA transportation conformity regulations (40 CFR 93 Subpart A) require that each new RTP and Transportation Improvement Program (TIP) be demonstrated to conform to the State Implementation Plan (SIP) before the RTP and TIP are approved by the Metropolitan planning organization (MPO) or accepted by the U.S. Department of Transportation (DOT). The conformity analysis is a federal requirement designed to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS). However, because the State Implementation Plan (SIP) for particulate matter ten microns or less in diameter (PM10), particulate matter 2.5 microns or less in diameter (PM2.5), and Ozone address attainment of both the State and federal standards, for these pollutants, demonstrating conformity to the federal standards is also an indication of progress toward attainment of the State standards. Compliance with the State air quality standards is provided on the pages following this federal conformity discussion.

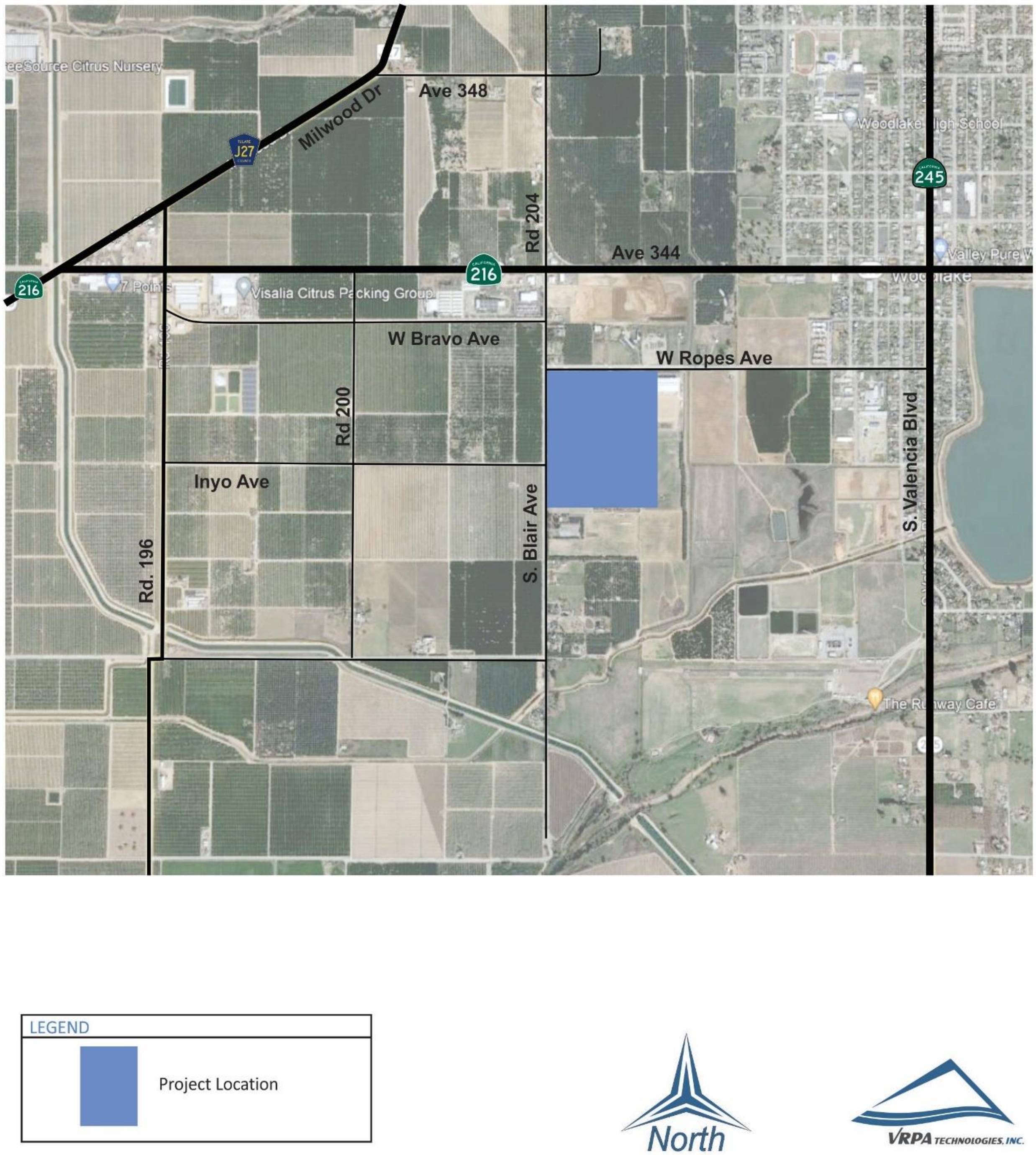
Woodlake Cannabis Project
Regional Location

Figure 1



Woodlake Cannabis Project **Figure 2**

Project Location



The EPA approved San Joaquin Valley reclassification of the ozone (8-hour) designation to extreme nonattainment in the Federal Register on May 5, 2010, even though the San Joaquin Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard. In accordance with the CAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. In the Federal Register on October 26, 2015, the EPA revised the primary and secondary standard to 0.070 parts per million (ppm) to provide increased public health protection against health effects associated with long- and short-term exposures. The previous ozone standard was set in 2010 at 0.075 ppm.

1.2.2 *Federal Regulations*

✓ **State Implementation Plan (SIP)/ Air Quality Management Plans (AQMPs)**

To ensure compliance with the NAAQS, EPA requires states to adopt SIP aimed at improving air quality in areas of nonattainment or a Maintenance Plan aimed at maintaining air quality in areas that have attained a given standard. New and previously submitted plans, programs, district rules, state regulations, and federal controls are included in the SIPs. Amendments made in 1990 to the federal CAA established deadlines for attainment based on an area's current air pollution levels. States must enact additional regulatory programs for nonattainment's areas in order to adhere with the CAA Section 172. In California, the SIPs must adhere to both the NAAQS and the California Ambient Air Quality Standards (CAAQS).

To ensure that State and federal air quality regulations are being met, Air Quality Management Plans (AQMPs) are required. AQMPs present scientific information and use analytical tools to identify a pathway towards attainment of NAAQS and CAAQS. The San Joaquin Valley Air Pollution Control District (SJVAPCD) develops the AQMPs for the region where the Tulare County Association of Governments (TCAG) operates. The regional air districts begin the SIP process by submitting their AQMPs to the California Air Resources Board (CARB). CARB is responsible for revising the SIP and submitting it to EPA for approval. EPA then acts on the SIP in the Federal Register. The items included in the California SIP are listed in the Code of Federal Regulations Title 40, Chapter 1, Part 52, Subpart 7, Section 52.220.

✓ **Transportation Control Measures**

One particular aspect of the SIP development process is the assessment of available transportation control measures (TCMs) as a part of making progress towards clean air goals. TCMs are defined in Section 108(f)(1) of the CAA and are strategies designed to reduce vehicle miles traveled, vehicle idling, and associated air pollution. These goals are generally achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

✓ **Energy Policy Act of 1992 (EPAct)**

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of alternative fueled vehicles (AFVs). States are also required by the act to consider a variety of incentive programs to help promote AFVs.

1.2.3 *State Agencies*

✓ **California Air Resources Board (CARB)**

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing its own air quality legislation called the California Clean Air Act (CCAA), adopted in 1988. CARB was created in 1967 from the merging of the California Motor Vehicle Pollution Control Board and the Bureau of Air Sanitation and its Laboratory.

CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. Whereas CARB has primary responsibility and produces a major part of the SIP for pollution sources that are statewide in scope, it relies on the local air districts to provide additional strategies for sources under their jurisdiction. CARB combines its data with all local district data and submits the completed SIP to the EPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by CARB, and attainment plans adopted by the Air Pollution Control Districts (APCDs) and Air Quality Management District's (AQMDs) and approved by CARB.

States may establish their own standards, provided the State standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to California Health and Safety Code (CH&SC) [§39606(b)] and its predecessor statutes.

The CH&SC [§39608] requires CARB to "identify" and "classify" each air basin in the State on a pollutant-by-pollutant basis. Subsequently, CARB designated areas in California as nonattainment based on violations of the CAAQSs. Designations and classifications specific to the SJVAB can be found in the next section of this document. Areas in the State were also classified based on severity of air pollution problems. For each nonattainment class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. In addition, air districts in violation of CAAQS are required to prepare an Air Quality Attainment Plan (AQAP) that lays out a program to attain and maintain the CCAA mandates.

CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the Tulare County Association of Governments (TCAG) region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. TCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects that the Tulare County region would achieve the prescribed emissions targets. That plan is currently being updated.

Other CARB duties include monitoring air quality. CARB has established and maintains, in conjunction with local APCDs and AQMDs, a network of sampling stations (called the State and Local Air Monitoring [SLAMS] network), which monitor the present pollutant levels in the ambient air.

Tulare County is in the CARB-designated, SJVAB. A map of the SJVAB is provided in Figure 3. In addition to Tulare County, the SJVAB includes Fresno, Kern, Madera, Merced, San Joaquin, Stanislaus, and Kings Counties. Federal and State standards for criteria pollutants are provided in **Table 1**.

Woodlake Cannabis Project
San Joaquin Valley Air Basin

Figure 3

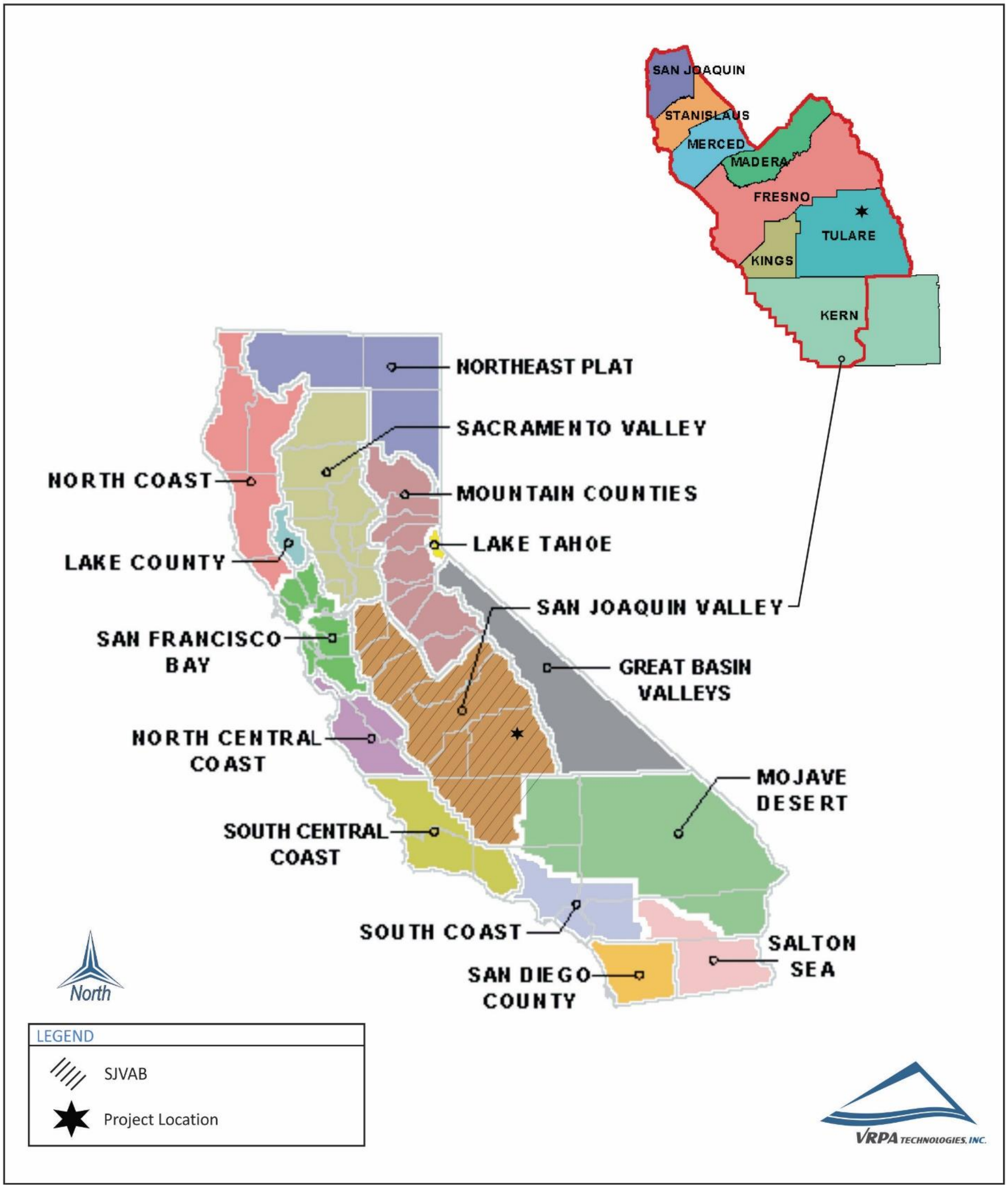


Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3) [8]	1 Hour	0.09 ppm (180 μg/m^3)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 μg/m^3)		0.070 ppm (137 μg/m^3)		
Respirable Particulate Matter (PM10) [9]	24 Hour	50 μg/m^3	Gravimetric or Beta Attenuation	150 μg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m^3		--		
Fine Particulate Matter (PM2.5) [9]	24 Hour	--	--	35 μg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 μg/m^3	Gravimetric or Beta Attenuation	12.0 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) [10]	1 Hour	0.18 ppm (339 μg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 μg/m^3)	--	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 μg/m^3)		0.053 ppm (100 μg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2) [11]	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 cetain areas) [11]	--	
	Annual Arithmetic Mean	--		0.030 ppm (for cetain areas) [11]	--	
Lead [12,13]	30 Day Average	1.5 μg/m^3	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 μg/m^3 (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average	--		0.15 μg/m^3		
Visibility Reducing Particles [14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 μg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride [12]	24 Hour	0.01 ppm (26 μg/m^3)	Gas Chromatography			

See footnotes on next page …

Footnotes:

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 the 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. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 μg/m3 to 12.0 μg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 μg/m3, as was the annual secondary standard of 15 μg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 μg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. 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 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. 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.

12. 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.
13. 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.
14. 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.

1.2.4 *State Regulations*

- ✓ **CARB Mobile-Source Regulation**

The State of California is responsible for controlling emissions from the operation of motor vehicles in the State. Rather than mandating the use of specific technology or the reliance on a specific fuel, CARB's motor vehicle standards specify the allowable grams of pollutant per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved.

- ✓ **California Clean Air Act**

The CCAA was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CCAA establishes more stringent ambient air quality standards than those included in the Federal CAA. CARB is the agency responsible for administering the CCAA. CARB established ambient air quality standards pursuant to the CH&SC [§39606(b)], which are similar to the federal standards. The SJVAPCD is one of 35 AQMDs that have prepared air quality management plans to accomplish a five percent (5%) annual reduction in emissions documenting progress toward the State ambient air quality standards.

- ✓ **Tanner Air Toxics Act**

California regulates Toxic Air Contaminants (TACs) primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted EPA's list of Hazardous Air Pollutants (HAPs) as TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators).

These rules and standards provide for:

- More stringent emission standards for some new urban bus engines, beginning with 2002 model year engines.
- Zero-emission bus demonstration and purchase requirements applicable to transit agencies
- Reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

✓ **AB 1493 (Pavley)**

AB 1493 (Pavley) enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB would apply to 2009 and later model year vehicles. CARB estimated that the regulation would reduce climate change emissions from light duty passenger vehicles by an estimated 18 percent in 2020 and by 27 percent in 2030 [Association of Environmental Professionals (AEP) 2007)]. In 2005, the CARB requested a waiver from U.S. EPA to enforce the regulation, as required under the CAA. Despite the fact that no waiver had ever been denied over a 40-year period, the then Administrator of the EPA sent Governor Schwarzenegger a letter in December 2007, indicating he had denied the waiver. On March 6, 2008, the waiver denial was formally issued in the Federal Register. Governor Schwarzenegger and several other states immediately filed suit against the federal government to reverse that decision. On January 21, 2009, CARB requested that EPA reconsider denial of the waiver. EPA scheduled a re-hearing on March 5, 2009. On June 30, 2009, EPA granted a waiver of CAA preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year.

✓ **Assembly Bill 32 (California Global Warming Solutions Act of 2006)**

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. December 31, 2020, is the deadline for achieving the 2020 GHG emissions cap. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions.

CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan adopted in December of 2008. The current plan has identified new policies and actions to accomplish the State's 2030 GHG limit.

- ✓ **Senate Bill 375**

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the Tulare County Association of Governments (TCAG), CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. TCAG 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is currently being updated, projects that the Tulare County region would achieve the prescribed emissions targets.

This law also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

- ✓ **Executive Order B-30-15**

Executive Order B-30-15, which was signed by Governor Brown in 2016, establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

✓ **California Global Warming Solutions Act of 2006: emissions limit, or SB 32**

SB 32 is a California Senate bill expanding upon AB 32 to reduce greenhouse gas (GHG) emissions. The lead author is Senator Fran Pavley, and the principal co-author is Assembly member Eduardo Garcia. SB 32 was signed into law on September 8, 2016, by Governor Brown. SB 32 sets into law the mandated reduction target in GHG emissions as written into Executive Order B-30-15. SB 32 requires that there be a reduction in GHG emissions to 40% below the 1990 levels by 2030. Greenhouse gas emissions include carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. The California Air Resources Board (CARB) is responsible for ensuring that California meets this goal. The provisions of SB 32 were added to Section 38566 of the Health and Safety Code subsequent to the bill's approval. The bill went into effect January 1, 2017. SB 32 builds onto Assembly Bill (AB) 32 written by Senator Fran Pavley and Assembly Speaker Fabian Nunez passed into law on September 27, 2006. AB 32 required California to reduce greenhouse gas emissions to 1990 levels by 2020 and SB 32 continues that timeline to reach the targets set in Executive Order B-30-15. SB 32 provides another intermediate target between the 2020 and 2050 targets set in Executive Order S-3-05.

1.2.5 *Regional Agencies*

✓ **San Joaquin Valley Air Pollution Control District**

The SJVAPCD is the agency responsible for monitoring and regulating air pollutant emissions from stationary, area, and indirect sources within Tulare County and throughout the SJVAB. The District also has responsibility for monitoring air quality and setting and enforcing limits for source emissions. CARB is the agency with the legal responsibility for regulating mobile source emissions. The District is precluded from such activities under State law.

The District was formed in mid-1991 and prepared and adopted the San Joaquin Valley Air Quality Attainment Plan (AQAP), dated January 30, 1992, in response to the requirements of the State CCAA. The CCAA requires each non-attainment district to reduce pertinent air contaminants by at least five percent (5%) per year until new, more stringent, 1988 State air quality standards are met.

Activities of the SJVAPCD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

The SJVAPCD has prepared the following State Implementation Plans to address ozone, PM-10 and PM2.5 that currently apply to non-attainment areas:

- The 2016 Ozone Plan (2008 standard) was adopted by SJVAPCD on June 16, 2016 and subsequently adopted by ARB on July 21, 2016.

- The 2013 1-Hour Ozone Plan (revoked 1997 standard) was adopted by the SJVAPCD on September 19, 2013. EPA withdrew its approval of the plan due to litigation. The District plans to submit a "redesignation substitute" to EPA to maintain its attainment status for this revoked ozone standard.
- The 2007 PM-10 Maintenance Plan (as revised in 2015) was approved by EPA on July 8, 2016 (effective September 30, 2016).
- The 2012 PM2.5 Plan (as revised in 2015) was approved by EPA on August 16, 2016 (effective September 30, 2016).

The SJVAPCD Plans identified above represent SJVAPCD's plan to achieve both state and federal air quality standards. The regulations and incentives contained in these documents must be legally enforceable and permanent. These plans break emissions reductions and compliance into different emissions source categories.

The SJVAPCD also prepared the *Guide for Assessing and Mitigation Air Quality Impacts* (GAMAQI), dated March 19, 2015. The GAMAQI is an advisory document that provides Lead Agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality impacts in environmental documents. Local jurisdictions are not required to utilize the methodology outlined therein. This document describes the criteria that SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

1.2.6 *Regional Regulations*

The SJVAPCD has adopted numerous rules and regulations to implement its air quality plans. Following, are significant rules that will apply to the Project.

✓ **Regulation VIII – Fugitive PM10 Prohibitions**

Regulation VIII is comprised of District Rules 8011 through 8081, which are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc. The proposed Project will be required to comply with this regulation. Regulation VIII control measures are provided below:

1. *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.*

2. *All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.*
3. *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.*
4. *When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.*
5. *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.*
6. *Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.*
7. *Within urban areas, track out shall be immediately removed when it extends fifty or more feet from the site and at the end of each workday.*

✓ **Rule 8021 – Construction, Demolition, Excavation, and Other Earthmoving Activities**

District Rule 8021 requires owners or operators of construction projects to submit a Dust Control Plan to the District if at any time the project involves non-residential developments of five or more acres of disturbed surface area or moving, depositing, or relocating of more than 2,500 cubic yards per day of bulk materials on at least three days of the project. The proposed Project will meet these criteria and will be required to submit a Dust Control Plan to the District in order to comply with this rule.

✓ **Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations**

If asphalt paving will be used, then paving operations of the proposed Project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

✓ **Rule 9510 – Indirect Source Review (ISR)**

The purpose of this rule is to fulfill the District's emission reduction commitments in the PM10 and Ozone Attainment Plans, achieve emission reductions from construction activities, and to provide a mechanism for reducing emissions from the construction of and use of development projects through off-site measures. The rule is expected to reduce nitrogen oxides and particulates throughout the San Joaquin Valley by more than 10 tons per day.

1.2.7 *Local Plans*

✓ **City of Woodlake General Plan**

California State Law requires every city and county to adopt a comprehensive General Plan to guide its future development. The General Plan essentially serves as a “constitution for development”— the document that serves as the foundation for all land use decisions. The updated City of Woodlake General Plan (2008 to 2028) includes Land Use element, Circulation Element and open Space, Parks, recreation and Conservation Element to local concerns and achieve the goals.

2.0 Environmental Setting

This section describes existing air quality within the San Joaquin Valley Air Basin and in Tulare County, including the identification of air pollutant standards, meteorological and topological conditions affecting air quality, and current air quality conditions. Air quality is described in relation to ambient air quality standards for criteria pollutants such as, ozone, carbon monoxide, and particulate matter. Air quality can be directly affected by the type and density of land use change and population growth in urban and rural areas.

2.1 Geographical Location

The SJVAB is comprised of the following counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Encompassing 24,840 square miles, the San Joaquin Valley is the second largest air basin in California. Cumulatively, counties within the Air Basin represent approximately 16 percent of the State's geographic area. The Air Basin is bordered by the Sierra Nevada Mountains on the east (8,000 to 14,492 feet in elevation), the Coastal Range on the west (4,500 feet in elevation), and the Tehachapi Mountains on the south (9,000 feet elevation). The San Joaquin Valley is open to the north extending to the Sacramento Valley Air Basin.

2.2 Topographic Conditions

Tulare County is located within the San Joaquin Valley Air Basin [as determined by the California Air Resources Board (CARB)]. Air basins are geographic areas sharing a common "air shed." A description of the Air Basin in the County, as designated by CARB, is provided in the paragraph below. Air pollution is directly related to the region's topographic features, which impact air movement within the Basin.

Wind patterns within the SJVAB result from marine air that generally flows into the Basin from the San Joaquin River Delta. The Coastal Range hinders wind access into the Valley from the west, the Tehachapi's prevent southerly passage of airflow, and the high Sierra Nevada Mountain Range provides a significant barrier to the east. These topographic features result in weak airflow that becomes restricted vertically by high barometric pressure over the Valley. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500-3,000 feet).

2.3 Climate Conditions

Woodlake is located in one of the most polluted air basins in the country. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Woodlake is characterized by warm, dry summers and cool winters with significant Tule fog.

Ozone, classified as a "regional" pollutant, often afflicts areas downwind of the original source of precursor emissions. Ozone can be easily transported by winds from a source area. Peak ozone levels tend to be higher in the southern portion of the Valley, as the prevailing summer winds sweep precursors downwind of northern source areas before concentrations peak. The separate designations reflect the fact that ozone precursor transport depends on daily meteorological conditions.

Other primary pollutants, carbon monoxide (CO), for example, may form high concentrations when wind speed is low. During the winter, Tulare County experiences cold temperatures and calm conditions that increase the likelihood of a climate conducive to high CO concentrations.

Precipitation and fog tend to reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog block the required radiation. CO is slightly water-soluble, so precipitation and fog tends to "reduce" CO concentrations in the atmosphere. PM10 is somewhat "washed" from the atmosphere with precipitation. Precipitation in the San Joaquin Valley is strongly influenced by the position of the semi-permanent subtropical high-pressure belt located off the Pacific coast. In the winter, this high- pressure system moves southward, allowing Pacific storms to move through the San Joaquin Valley. These storms bring in moist, maritime air that produces considerable precipitation on the western, upslope side of the Coast Ranges. Significant precipitation also occurs on the western side of the Sierra Nevada. On the valley floor, however, there is some down slope flow from the Coast Ranges and the resultant evaporation of moisture from associated warming results in a minimum of precipitation. Nevertheless, the majority of the precipitation falling in the San Joaquin Valley is produced by those storms during the winter. Precipitation during the summer months is in the form of convective rain showers and is rare. It is usually associated with an influx of moisture into the San Joaquin Valley through the San Francisco area during an anomalous flow pattern in the lower layers of the atmosphere. Although the hourly rates of precipitation from these storms may be high, their rarity keeps monthly totals low.

Precipitation on the San Joaquin Valley floor and in the Sierra Nevada decreases from north to south. Stockton in the north receives about twenty inches of precipitation per year, the center receives about ten inches per year, and Bakersfield at the southern end of the valley receives less than 6 inches per year. This is primarily because the Pacific storm track often passes through the northern part of the state while the southern part of the state remains protected by the Pacific High. Precipitation in the San Joaquin Valley Air Basin (SJVAB) is confined primarily to the winter months with some also occurring in late summer and fall. Average annual rainfall for the entire San Joaquin Valley is approximately 5 to 16 inches. Snowstorms, hailstorms, and ice storms occur infrequently in the San Joaquin Valley and severe occurrences of any of these are very rare.

The winds and unstable air conditions experienced during the passage of storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong low-level temperature inversions and very stable air conditions. This situation leads to the San

Joaquin Valley's famous Tule Fogs. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog, is more likely to occur inland. Cooling may also be accomplished by heat radiation losses or by horizontal movement of a mass of air over a colder surface. This second type of fog, known as advection fog, generally occurs along the coast.

Conditions favorable to fog formation are also conditions favorable to high concentrations of CO and PM10. Ozone levels are low during these periods because of the lack of sunlight to drive the photochemical reaction. Maximum CO concentrations tend to occur on clear, cold nights when a strong surface inversion is present and large numbers of fireplaces are in use. A secondary peak in CO concentrations occurs during morning commute hours when a large number of motorists are on the road and the surface inversion has not yet broken.

The water droplets in fog, however, can act as a sink for CO and nitrogen oxides (NOx), lowering pollutant concentrations. At the same time, fog could help in the formation of secondary particulates such as ammonium sulfate. These secondary particulates are believed to be a significant contributor of winter season violations of the PM10 and PM2.5 standards.

2.4 Anthropogenic (Man-made) Sources

In addition to climatic conditions (wind, lack of rain, etc.), air pollution can be caused by anthropogenic or man-made sources. Air pollution in the SJVAB can be directly attributed to human activities, which cause air pollutant emissions. Human causes of air pollution in the Valley consist of population growth, urbanization (gas-fired appliances, residential wood heaters, etc.), mobile sources (i.e., cars, trucks, airplanes, trains, etc.), oil production, agriculture, and other socioeconomic activities. The most significant factors, which are accelerating the decline of air quality in the SJVAB, are the Valley's rapid population growth and its associated increases in traffic, urbanization, and industrial activity.

Carbon monoxide emissions overwhelmingly come from mobile sources in the San Joaquin Valley; on-road vehicles contributed 34 percent, while other mobile vehicles, such as trains, planes, and off-road vehicles, contribute another 20 percent in 2012 according to emission projections from the CARB. Motor vehicles account for significant portions of regional gaseous and particulate emissions. Local large employers such as industrial plants can also generate substantial regional gaseous and particulate emissions. In addition, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.).

Ozone is the result of a photochemical reaction between Oxides of nitrogen (NOx) and Reactive Organic Gases (ROG). Mobile sources contribute 84 percent of all NOx emitted from anthropogenic sources based on data provided in Appendix B of the Air District's 2016 Ozone Plan. In addition, mobile sources contribute 26 percent of all the ROG emitted from sources within the San Joaquin Valley.

The principal factors that affect air quality in and around Woodlake are:

1. The sink effect, climatic subsidence and temperature inversions and low wind speeds
2. Automobile and truck travel
3. Increases in mobile and stationary pollutants generated by local urban growth

Automobiles, trucks, buses and other vehicles using hydrocarbon (HC) fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.

Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters; animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Tulare County, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities. Finally, industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Tulare County consist of agricultural production and processing operations.

The primary contributors of PM10 emissions in the San Joaquin Valley are farming activities (22%) and road dust, both paved and unpaved (35%) in 2020 according to emission projections from the CARB. Fugitive windblown dust from "open" fields contributed 14 percent of the PM10.

The four major sources of air pollutant emissions in the SJVAB include industrial plants, motor vehicles, construction activities, and agricultural activities. Industrial plants account for significant portions of regional gaseous and particulate emissions. Motor vehicles, including those from large employers, generate substantial regional gaseous and particulate emissions. Finally, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.). In addition to these primary sources of air pollution, urban areas upwind from Tulare County including areas north and west of the San Joaquin Valley, can cause or generate emissions that are transported into Tulare County. All four of the major pollutant sources affect ambient air quality throughout the Air Basin.

2.4.1 *Motor Vehicles*

Automobiles, trucks, buses and other vehicles using hydrocarbon fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.

2.4.2 *Agricultural and Other Miscellaneous Activities*

Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters, animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Woodlake, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities.

2.4.3 *Industrial Plants*

Industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Tulare County consist of agricultural production and processing operations.

2.5 San Joaquin Valley Air Basin Monitoring

SJVAPCD and the CARB maintain numerous air quality monitoring sites throughout each County in the Air Basin to measure ozone, PM2.5, and PM10. It is important to note that the federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. The closest monitoring station to the Project is located in Visalia at 310 N. Church Street. The station monitors particulates, ozone, carbon monoxide, and nitrogen dioxide. Monitoring data for the past three years is summarized in **Table 2**.

Table 3 identifies Tulare County's attainment status. As indicated, the SJVAB is nonattainment for Ozone (1 hour and 8 hour) and PM. In accordance with the FCAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. The FCAA contains provisions for changing the classifications using factors such as clean air progress rates and requests from States to move areas to a higher classification.

On April 16, 2004, EPA issued a final rule classifying the SJVAB as extreme nonattainment for Ozone, effective May 17, 2004 (69 FR 20550). The (federal) 1-hour ozone standard was revoked on June 6, 2005. However, many of the requirements in the 1-hour attainment plan (SIP) continue to apply to the SJVAB. The current ozone plan is the (federal) 8-hour ozone plan adopted in 2007. The SJVAB was reclassified from a "serious" nonattainment area for the 8-hour ozone standard to "extreme" effective June 4, 2010.

Table 2
Maximum Pollutant Levels at Tulare's Visalia N-Church Monitoring Station Drummond Monitoring Station

Pollutant	Time Averaging	2018 Maximums	2019 Maximums	2020 Maximums	Standards National	Standards State
Ozone (O_3)	1 hour	0.112 ppm	0.093 ppm	0.127 ppm	0.107ppm	0.105 ppm
Ozone (O_3)	8 hour	0.101 ppm	0.093 ppm	0.114 ppm	0.085 ppm	0.085 ppm
Nitrogen Dioxide (NO_2)	1 hour	69.2ppm	70.7 ppm	53.4 ppm	55 ppm	70 ppm
Nitrogen Dioxide (NO_2)	Annual Average	*	*	*	10 ppm	9 ppm
Particulates (PM_{10})	24 hour	153.4µg/m3	411.1µg/m3	317.4µg/m3	59.4 µg/m^3	60.5 µg/m^3
Particulates (PM_{10})	Federal Annual Arithmetic Mean	52.5µg/m3	45.7µg/m3	59.4 µg/m^3	49.8 µg/m3	20 µg/m^3
Particulates ($PM_{2.5}$)	24 hour	86.8 µg/m^3	47.2 µg/m^3	127.1 µg/m^3	64 µg/m^3	20 µg/m^4
Particulates ($PM_{2.5}$)	Federal Annual Arithmetic Mean	17.3µg/m^3	12.9 µg/m^3	19.6 µg/m^3	12 µg/m^3	12 µg/m^3

Source: California Air Resources Board (ADAM) Air Pollution Summaries,2022

* Means there was insufficient data available to determine the value.

Table 3
Tulare County Attainment Status

Pollutant	Designation/Classification	
	Federal Standards	**State Standards**
Ozone - 1 Hour	Revoked in 2005	Nonattainment/Severe
Ozone - 8 Hour	Nonattainment/Extreme [a]	No State Standard
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon Monoxide	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified/Attainment	Attainment
Lead (Particulate)	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: ARB Website, 2022

a. 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).

Notes:

National Designation Categories

Non-Attainment Area: Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Unclassified/Attainment Area: Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant or meets the national primary or secondary ambient air quality standard for the pollutant.

State Designation Categories

Unclassified: A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non-attainment.

Attainment: A pollutant is designated attainment if the State standard for that pollutant was not violated at any site in the area during a three-year period.

Non-attainment: A pollutant is designated non-attainment if there was at least one violation of a State standard for that pollutant in the area.

Non-Attainment/Transitional: A subcategory of the non-attainment designation. An area is designated non-attainment/transitional to signify that the area is close to attaining the standard for the pollutant.

2.6 Air Quality Standards

The FCAA, first adopted in 1963, and periodically amended since then, established National Ambient Air Quality Standards (NAAQS). A set of 1977 amendments determined a deadline for the attainment of these standards. That deadline has since passed. Other CAA amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources.

In 1988, the State of California passed the CCAA (State 1988 Statutes, Chapter 568), which set forth a program for achieving more stringent California Ambient Air Quality Standards. The CARB implements State ambient air quality standards, as required in the CCAA, and cooperates with the federal government in implementing pertinent sections of the FCAA Amendments (FCAAA). Further, CARB regulates vehicular emissions throughout the State. The SJVAPCD regulates stationary sources, as well as some mobile sources. Attainment of the more stringent State PM10 Air Quality Standards is not currently required.

The EPA uses six "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called the NAAQS.

The SJVAPCD operates regional air quality monitoring networks that provide information on average concentrations of pollutants for which State or federal agencies have established ambient air quality standards. Descriptions of nine pollutants of importance in Tulare County follow.

2.6.1 *Ozone (1-hour and 8-hour)*

The most severe air quality problem in the Air Basin is the high level of ozone. Ozone occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. Here, ground level, or "bad" ozone, is an air pollutant that damages human health, vegetation, and many common materials. It is a key ingredient of urban smog. The troposphere extends to a level about ten miles up, where it meets the second layer, the stratosphere. The stratospheric, or "good" ozone layer, extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

"Bad" ozone is what is known as a photochemical pollutant. It needs reactive organic gases (ROG), NOx, and sunlight. ROG and NOx are emitted from various sources throughout Tulare County. In order to reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors.

Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. Ozone, the primary constituent of smog, is the most complex, difficult to control, and pervasive of the criteria pollutants. Unlike other pollutants, ozone is not emitted directly into the air by specific sources. Ozone is created by sunlight acting on other air pollutants (called precursors), specifically NOx and ROG. Sources of precursor gases to the photochemical reaction that form ozone number in the thousands. Common sources include consumer products, gasoline vapors, chemical solvents, and combustion products of various fuels. Originating from gas stations, motor vehicles, large industrial facilities, and small businesses such as bakeries and dry cleaners, the ozone-forming chemical reactions often take place in another location, catalyzed by sunlight and heat. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins. Approximately fifty million people lived in counties with air quality levels above the EPA's health-based national air quality standard in 1994. The highest levels of ozone were recorded in Los Angeles, closely followed by the San Joaquin Valley. High levels also persist in other heavily populated areas, including the Texas Gulf Coast and much of the Northeast.

While the ozone in the upper atmosphere absorbs harmful ultraviolet light, ground-level ozone is damaging to the tissues of plants, animals, and humans, as well as to a wide variety of inanimate materials such as plastics, metals, fabrics, rubber, and paints. Societal costs from ozone damage include increased medical costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

✓ ***Health Effects***

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as: forests and foothill communities; agricultural crops; and some man-made materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone accelerates aging and exacerbates pre-existing asthma and bronchitis and, in cases with high concentrations, can lead to the development of asthma in active children. Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. Additionally, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

People who work or play outdoors are at a greater risk for harmful health effects from ozone. Children and adolescents are also at greater risk because they are more likely than adults to spend time engaged in vigorous activities. Research indicates that children under 12 years of age spend nearly twice as much time outdoors daily than adults. Teenagers spend at least twice as much time as adults in active sports and outdoor activities. In addition, children inhale more air per pound of body weight than adults, and they breathe more rapidly than adults. Children are less likely than adults to notice their own symptoms and avoid harmful exposures.

Ozone is a powerful oxidant—it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract, causing inflammation and irritation, and it can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation and lung tissue damage and a reduction in the amount of air inhaled into the lungs.

The CARB found ozone standards in Tulare County nonattainment/extreme of Federal and no standard for State standards.

2.6.2 *Suspended PM (PM10 and PM2.5)*

Particulate matter pollution consists of very small liquid and solid particles that remain suspended in the air for long periods. Some particles are large or concentrated enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter is emitted from stationary and mobile sources, including diesel trucks and other motor vehicles; power plants; industrial processes; wood-burning stoves and fireplaces; wildfires; dust from roads, construction, landfills, and agriculture; and fugitive windblown dust. PM10 refers to particles less than or equal to 10 microns in aerodynamic diameter. PM2.5 refers to particles less than or equal to 2.5 microns in aerodynamic diameter and are a subset of PM10. Particulates of concern are those that are ten microns or less in diameter. These are small enough to be inhaled, pass through the respiratory system and lodge in the lungs, possibly leading to adverse health effects.

In the western United States, there are sources of PM10 in both urban and rural areas. Because particles originate from a variety of sources, their chemical and physical compositions vary widely. The composition of PM10 and PM2.5 can also vary greatly with time, location, the sources of the material and meteorological conditions. Dust, sand, salt spray, metallic and mineral particles, pollen, smoke, mist, and acid fumes are the main components of PM10 and PM2.5. In addition to those listed previously, secondary particles can also be formed as precipitates from chemical and photochemical reactions of gaseous sulfur dioxide (SO2) and NOx in the atmosphere to create sulfates (SO4) and nitrates (NO3). Secondary particles are of greatest concern during the winter months where low inversion layers tend to trap the precursors of secondary particulates.

The District's 2008 PM2.5 Plan built upon the aggressive emission reduction strategy adopted in the 2007 Ozone Plan and strives to bring the valley into attainment status for the 1997 NAAQS for PM2.5. The District's 2012 PM2.5 Plan provides multiple control strategies to reduce emissions of PM2.5 and other pollutants that form PM2.5. The plan's comprehensive control strategy includes regulatory actions, incentive programs, technology advancement, policy and legislative positions, public outreach, participation and communication, and additional strategies.

- ***Health Effects***

PM10 and PM2.5 particles are small enough—about one-seventh the thickness of a human hair, or smaller—to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system's natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health-related effects include reduced visibility and soiling of buildings. PM10 can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. PM10 and PM2.5 can aggravate respiratory disease and cause lung damage, cancer, and premature death.

Although particulate matter can cause health problems for everyone, certain people are especially vulnerable to adverse health effects of PM10. These "sensitive populations" include children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis. Of greatest concern are recent studies that link PM10 exposure to the premature death of people who already have heart and lung disease, especially the elderly. Acidic PM10 can also damage manmade materials and is a major cause of reduced visibility in many parts of the United States.

The CARB found PM10 standards in Tulare County in attainment of Federal standards and nonattainment for State standards. The CARB found PM2.5 standards in Tulare County nonattainment of Federal and State standards.

2.6.3 *Carbon Monoxide (CO)*

Carbon monoxide (CO) is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive. CO is a byproduct of motor vehicle exhaust, contributes more than two thirds of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators. Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO.

- ***Health Effects***

CO enters the bloodstream and binds more readily to hemoglobin than oxygen, reducing the oxygen-carrying capacity of blood and thus reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and in prolonged, enclosed exposure, death.

The adverse health effects associated with exposure to ambient and indoor concentrations of CO are related to the concentration of carboxyhemoglobin (COHb) in the blood. Health effects observed may include an early onset of cardiovascular disease; behavioral impairment; decreased exercise performance of young, healthy men; reduced birth weight; sudden infant death syndrome (SIDS); and increased daily mortality rate.

Most of the studies evaluating adverse health effects of CO on the central nervous system examine high-level poisoning. Such poisoning results in symptoms ranging from common flu and cold symptoms (shortness of breath on mild exertion, mild headaches, and nausea) to unconsciousness and death.

The CARB found CO standards in Tulare County as unclassified/attainment of Federal standards and attainment for State standards.

2.6.4 *Nitrogen Dioxide (NO2)*

Nitrogen oxides (NOx) is a family of highly reactive gases that are primary precursors to the formation of ground-level ozone and react in the atmosphere to form acid rain. NOx is emitted from combustion processes in which fuel is burned at high temperatures, principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NOx is a strong oxidizing agent that reacts in the air to form corrosive nitric acid, as well as toxic organic nitrates. EPA regulates only nitrogen dioxide (NO2) as a surrogate for this family of compounds because it is the most prevalent form of NOx in the atmosphere that is generated by anthropogenic (human) activities.[1]

✓ ***Health Effects***

NOx is an ozone precursor that combines with Reactive Organic Gases (ROG) to form ozone. See the ozone section above for a discussion of the health effects of ozone.

Direct inhalation of NOx can also cause a wide range of health effects. NOx can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza.

1 United States Environmental Protection Agency (EPA), Nitrogen Oxides (NOx). Why and How They Are Controlled, 456/F-99-006R, November 2019

Short-term exposures (e.g., less than 3 hours) to low levels of nitrogen dioxide (NO2) may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO2 may lead to increased susceptibility to respiratory infection and may cause irreversible alterations in lung structure. Other health effects associated with NOx are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO2 may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NOx can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NOx can also impair visibility. NOx is a major component of acid deposition in California. NOx may affect both terrestrial and aquatic ecosystems. NOx in the air is a potentially significant contributor to a number of environmental effects such as acid rain and eutrophication in coastal waters. Eutrophication occurs when a body of water suffers an increase in nutrients that reduce the amount of oxygen in the water, producing an environment that is destructive to fish and other animal life.

NO2 is toxic to various animals as well as to humans. Its toxicity relates to its ability to combine with water to form nitric acid in the eye, lung, mucus membranes, and skin. Studies of the health impacts of NO2 include experimental studies on animals, controlled laboratory studies on humans, and observational studies.

In animals, long-term exposure to NOx increases susceptibility to respiratory infections, lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of NO2, can suffer lung irritation and, potentially, lung damage. Epidemiological studies have also shown associations between NO2 concentrations and daily mortality from respiratory and cardiovascular causes as well as hospital admissions for respiratory conditions.

NOx contributes to a wide range of environmental effects both directly and when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication as discussed above. Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms.

The CARB found NO2 standards in Tulare County as unclassified/attainment of Federal standards and attainment for State standards.

2.6.5 *Sulfur Dioxide (SO2)*

The major source of sulfur dioxide (SO2) is the combustion of high-sulfur fuels for electricity generation, petroleum refining and shipping. High concentrations of SO2 can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of asthmatic individuals to elevated SO2 levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of SO2, in conjunction with high levels of PM, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. SO2 also is a major precursor to PM2.5, which is a significant health concern and a main contributor to poor visibility. In humid atmospheres, sulfur oxides can react with vapor to produce sulfuric acid, a component of acid rain.

The CARB found SO2 standards in the Tulare County as unclassified for federal standards and attainment for State standards.

2.6.6 *Lead (Pb)*

Lead, a naturally occurring metal, can be a constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used until recently to increase the octane rating in automobile fuel. Since the 1980s, lead has been phased out in gasoline, reduced in drinking water, reduced in industrial air pollution, and banned or limited in consumer products. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels; however, the use of leaded fuel has been mostly phased out. Since this has occurred the ambient concentrations of lead have dropped dramatically.

Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children. Effects on the nervous systems of children are one of the primary health risk concerns from lead. In high concentrations, children can even suffer irreversible brain damage and death. Children 6 years old and under are most at risk, because their bodies are growing quickly.

The CARB found Lead standards in Tulare County as unclassified/attainment of Federal standards and attainment for State standards.

2.6.7 *Toxic Air Contaminants (TAC)*

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TAC) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TAC is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TAC are regulated on the basis of risk rather than specification of safe levels of contamination. The ten TAC are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (diesel PM). Caltrans' guidance for transportation studies references the Federal Highway Administration (FHWA) memorandum titled "Interim Guidance on Air Toxic Analysis in NEPA Documents" which discusses emissions quantification of six "priority" compounds of 21 Mobile Source Air Toxics (MSAT) identified by the United States Environmental Protection Agency (USEPA). The six "priority" compounds are diesel exhaust (particulate matter and organic gases), benzene, 1,3-butadiene, acetaldehyde, formaldehyde, and acrolein.

Some studies indicate that diesel PM poses the greatest health risk among the TAC listed above. A 10-year research program (California Air Resources Board 1998) demonstrated that diesel PM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to diesel PM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Diesel PM differs from other TAC in that it is not a single substance but a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TAC, however, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The CARB has made preliminary concentration estimates based on a diesel PM exposure method. This method uses the CARB emissions inventory's PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of diesel PM. **Table 4** depicts the CARB Handbook's recommended buffer distances associated with various types of common sources.

Existing air quality concerns within Woodlake and the entire SJVAB are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

TABLE 4
Recommendations on Siting New Sensitive Land Uses Such as Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads [1]	- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). - Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	- Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. - Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

1: The recommendation to avoid siting new sensitive land uses within 500 feet of a freeway was identified in CARB's Air Quality and Land Use Handbook published in 2005. CARB recently published a technical advisory to the Air Quality and Land Use Handbook indicating that new research has demonstrated promising strategies to reduce pollution exposure along transportation corridors.

*Notes:
• These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.
• Recommendations are based primarily on data showing that the air pollution exposures addressed here (i.e., localized) can be reduced as much as 80% with the recommended separation.
• The relative risk for these categories varies greatly (see Table 1-2). To determine the actual risk near a particular facility, a site-specific analysis would be required. Risk from diesel PM will decrease over time as cleaner technology phases in.
• These recommendations are designed to fill a gap where information about existing facilities may not be readily available and are not designed to substitute for more specific information if it exists. The recommended distances take into account other factors in addition to available health risk data (see individual category descriptions).
• Site-specific project design improvements may help reduce air pollution exposures and should also be considered when siting new sensitive land uses.
• This table does not imply that mixed residential and commercial development in general is incompatible. Rather it focuses on known problems like dry cleaners using perchloroethylene that can be addressed with reasonable preventative actions.
• A summary of the basis for the distance recommendations can be found in the ARB Handbook: Air Quality and Land Use Handbook: A Community Health Perspective.

Source: SJVAPCD 2022

2.6.8 *Odors*

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJVAB. The types of facilities that are known to produce odors are shown in **Table 5** along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The Project does not propose any uses that would be considered traditional potential odor sources; however, the information presented in **Table 5** will be used as a screening level analysis to determine if the Project would be impacted by existing odor sources in the study area. Such information is presented for informational purposes, but it is noted that the environment's effect on the Project, including exposure to potential odors, would not be an impact for CEQA purposes

TABLE 5
Screening Levels for Potential Odor Sources

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Compositing Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

Source: SJVAPCD 2022

2.6.9 *Naturally Occurring Asbestos (NOA)*

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Asbestos is commonly found in ultramafic rock and near fault zones. The amount of asbestos that is typically present in these rocks' ranges from less than 1% up to approximately 25% and sometimes more. It is released from ultramafic rock when it is broken or crushed. This can happen when cars drive over unpaved roads or driveways, which are surfaced with these rocks, when land is graded for building purposes, or at quarrying operations. Asbestos is also released naturally through weathering and erosion. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. Asbestos is hazardous and can cause lung disease and cancer dependent upon the level of exposure. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem.

The proposed Project's construction phase may cause asbestos to become airborne due to the construction activities that will occur on site. The Project would be required to submit a Dust Control Plan under the SJVAPCD's Rule 8021.

2.6.10 *Greenhouse Gas Emissions*

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are:

- ✓ **Carbon Dioxide (CO2):** Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement, asphalt paving, truck trips). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- ✓ **Methane (CH4):** Methane is 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.
- ✓ **Nitrous Oxide (N2O):** Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- ✓ **Fluorinated Gases:** Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (i.e., CFCs, HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases ("High GWP gases").

3.0 Air-Quality Impacts

3.1 Methodology

The impact assessment for air quality focuses on potential effects the Project might have on air quality within the Tulare County region. The SJVAPCD has established thresholds of significance for determining environmental significance. These thresholds separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project, which are recognized to be short in duration. The long-term emissions are primarily related to the activities that will occur indefinitely as a result of Project operations. Impacts will be evaluated both on the basis of CEQA Appendix G criteria and SJVAPCD significance criteria. The impacts to be evaluated will be those involving construction and operational emissions of criteria pollutants. The SJVAPCD has established thresholds for certain pollutants shown in **Table 6**.

Table 6
SJVAPCD Air Quality Thresholds of Significance

Project Type	Ozone Precursor Emissions (tons/year)					
	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Construction Emissions	100	10	10	27	15	15
Operational Emissions (Permitted Equipment and Activities)	100	10	10	27	15	15
Operational Emissions (Non-Permitted Equipment and Activities)	100	10	10	27	15	15

Source: SJVAPCD 2022

3.1.1 *CalEEMod*

CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as CEQA and NEPA documents, pre-project planning, compliance with local air quality rules and regulations, etc.

3.2 Short-Term Impacts

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust and exhaust pollutants generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture. Exhaust pollutants are the non-useable gaseous waste products produced during the combustion process. Engine exhaust contains CO, HC, and NOx pollutants which are harmful to the environment.

Adverse effects of construction activities cause increased dust-fall and locally elevated levels of total suspended particulate. Dust-fall can be a nuisance to neighboring properties or previously completed developments surrounding or within the Project area and may require frequent washing during the construction period.

PM10 emissions can result from construction activities of the Project. The SJVAPCD has determined that compliance with Regulation VIII and other control measures will constitute sufficient mitigation to reduce PM10 impacts to a level considered less-than significant for most development projects. Even with implementation of District Regulation VIII and District Rule 9510, large development projects may not be able to reduce project specific construction impacts below District thresholds of significance.

Ozone precursor emissions are also an impact of construction activities and can be quantified through calculations. Numerous variables factored into estimating total construction emission include level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and amount of materials to be transported onsite or offsite. Additional exhaust emissions would be associated with the transport of workers and materials. Because the specific mix of construction equipment is not presently known for this Project, construction emissions were estimated using CalEEMod Model defaults for construction equipment.

Table 7 shows the CalEEMod estimated construction emissions that would be generated from construction of the Project. The construction emission from Project will not exceed the SJVAPCD emission thresholds for criteria pollutants. Result is shown in **Table 7**.

Table 7
Project Construction Emissions (tons/year)

Summary Report	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$	CO2e
Project Construction Emissions	4.90	3.90	3.73	0.02	1.20	0.45	1405.40
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod

3.3 Long-Term Emissions

Long-Term emissions from the Project would be generated primarily by stationary source (operation of the Project) and mobile source (Autos and Trucks) emissions from the Project site and area sources such as Importing of the products, employee's commute, use of motors to operate the facility etc.

3.3.1 *Localized Operational Emissions – Ozone/Particulate Matter*

Significance criteria have been established for criteria pollutant emissions as documented in Section 3.1. Operational emissions have been estimated for the Project using the CalEEMod Model and detailed results are included in Appendix A of this report.

Results of the CalEEMod analysis are shown in **Table 8**. Results indicate that the annual operational emissions from the Project is less than the SJVAPCD emission thresholds for criteria pollutants.

Table 8
Project Operational Emissions (tons/year)

Summary Report	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$	CO2e
Project Operational Emissions	41.40	8.84	9.80	0.10	9.86	2.76	13160.45
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod

3.3.2 *Localized Operational Emissions*

✓ **Carbon Monoxide**

The SJVAPCD is currently in unclassified/attainment for Federal standards and attainment for State standards for CO. An analysis of localized CO concentrations is typically warranted to ensure that standards are maintained.P Also, an analysis is required to ensure that localized concentrations do not reach potentially unhealthful levels that could affect sensitive receptors (residents, school children, hospital patients, the elderly, etc.).

Typically, high CO concentrations are associated with roadways or intersections operating at an unacceptable Level of Service (LOS). "Hot Spot" modeling is required if a traffic study reveals that the project will reduce the LOS on one or more streets to E or F or if the project will worsen an existing LOS F.

To analyze the Future horizon year with Project "worst case" CO concentrations at study roadway segments, the analysis methodology considered the highest annual maximum CO concentration reported in 2013, using 1.0 PPM as an estimate of the background concentration for the 8-hour standard and 2.2 PPM for the 1-hour standard (source: CARB annual publications). Other modeling assumptions include a wind speed of .5 m/s, flat topography, 1,000-meter mixing height, and a 5-degree wind deviation.

Toxic Air Contaminants (TAC)

The SJVAPCD's Guidance Document, Guidance for Assessing and Mitigating Air Quality Impacts – 2015, identifies the need for projects to analyze the potential for adverse air quality impacts to sensitive receptors. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, this is Type A Project in that it may potentially place toxic sources in the vicinity of existing sensitive receptors.

The SJVAPCD's current thresholds of significance for TAC emissions from the operations of both permitted and non-permitted sources are presented below:

- Carcinogens: Maximally Exposed Individual risk equals or exceeds ten in one million
- Chronic: Hazard Index equals or exceeds one for the Maximally Exposed Individual
- Acute: Hazard Index equals or exceeds one for the Maximally Exposed Individual

Carcinogenic (cancer) risk is expressed as cancer cases per one million. Noncarcinogenic (acute and chronic) hazard indices (HI) are expressed as a ratio of expected exposure levels to acceptable exposure levels.

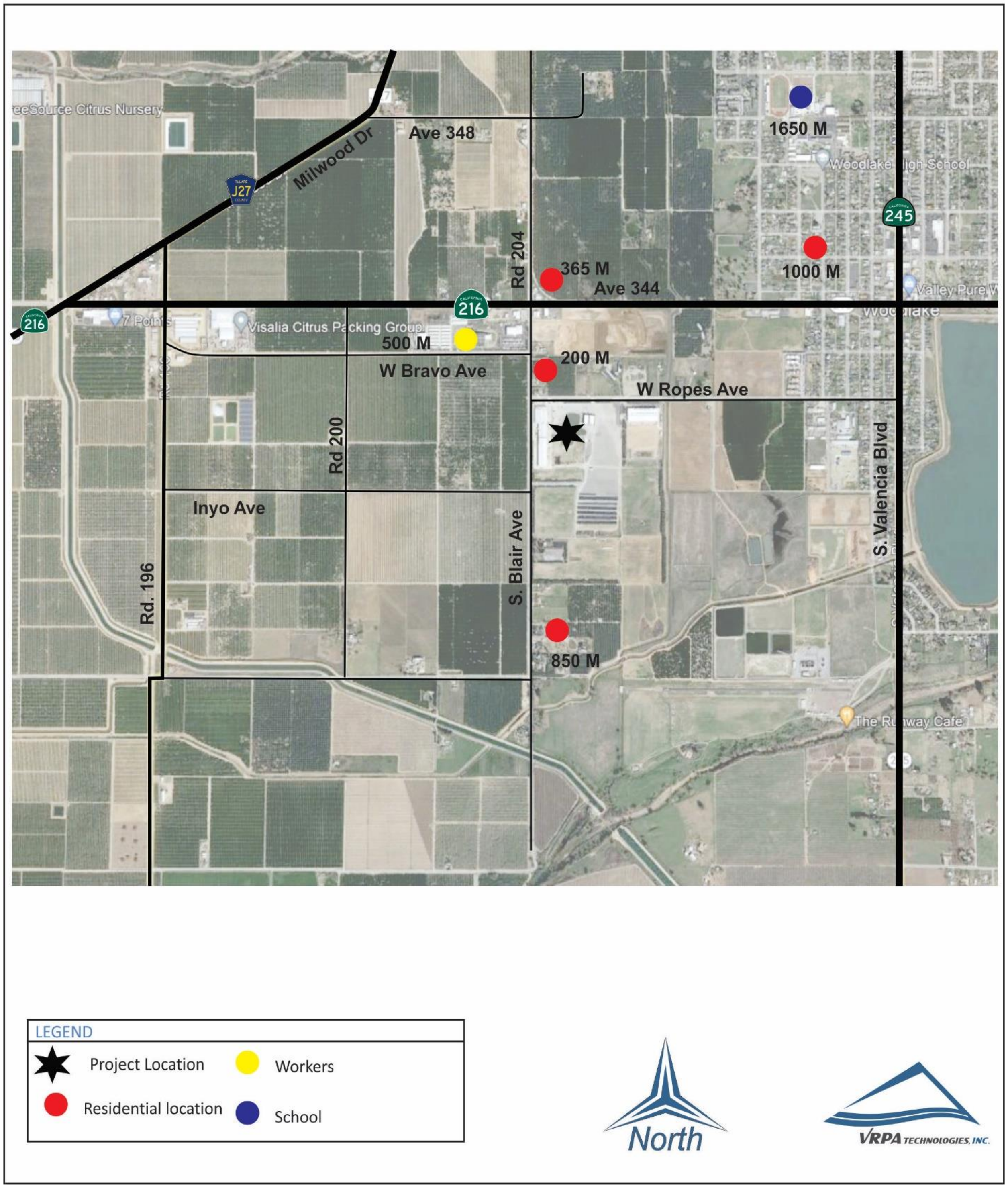
These metrics are generally applied to the maximally exposed individual (MEI). There are separate MEIs for residential exposure (i.e., residential areas) and for worker exposure (i.e., off-site workplaces). Residential exposure is for a worst-case exposure duration of 24 hours a day, 350 days a year for 70 years. For off-site workplaces, the exposure is 8 hours a day, 245 days a year for 40 years.

The first step in evaluating the potential for impacts to sensitive receptors for TACs from the Project is to perform a screening level analysis that includes all sources of emissions. The recommended screening method by the SVAPCD is a 'prioritization' using the latest approved

California Air Pollution Control Officer's Association (CAPCOA) methodology. A prioritization score of 10 or greater triggers the need for a refined Health Risk Assessment (HRA).

Health risks such as cancer risk, chronic hazard index, and acute hazard index needs to be calculated for a variety of receptor locations. Receptors of primary interest are those at residential locations, at sensitive population locations, and at off-site worker locations. However, in order to get a more complete picture of the patterns of exposure, and for consistency with the HARP software, concentrations and risk needs to be calculated along the proposed Project's boundary. The receptors used to analyze project impacts include on-site and off-site worker locations and residences adjacent to the Project. Sensitive receptor locations are depicted in Figure 4. The nearest residential location is at 175m (approx. 575 ft) that will require the need of Health Risk assessments for this Project.

Woodlake Cannabis Project **Figure**
Sensitive Receptor Location/ Distance from Project Source **4**



✓ Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. Any Project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact.

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- Generators – Projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The proposed Project may generate odorous emission given the nature or characteristics of cannabis grow facility. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The types of facilities that are known to produce odors are shown in **Table 5** above along with a reasonable distance from the source within which, the degree of odors could possibly be significant. It should be noted that other facilities known to generate odorous emissions are also located near or adjacent to the Project. In addition, Project operations needs to include carbon filtration, masking or the use of odor neutralizing tanks so that odorous emissions generated from the Project to optimize the odor and make it less than significant.

✓ **Naturally Occurring Asbestos (NOA)**

Asbestos is a term used for several types of naturally occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Construction of the Project may cause asbestos to become airborne due to the construction activities that will occur on site. The Project would be required to submit a Dust Control Plan under the SJVAPCD's Rule 8021. Compliance with Rule 8021 would limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities associated with the Project.
The Dust Control Plan may include the following measures:

1. Water wetting of road surfaces
2. Rinse vehicles and equipment
3. Wet loads of excavated material, and
4. Cover loads of excavated material

✓ **Greenhouse Gas Emissions**

CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the TCAG region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. TCAG's 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) projects that the Tulare County region would achieve the prescribed emissions targets.

In 2009, the SJVAPCD adopted the following guidance documents applicable to projects within the San Joaquin Valley:

✓ Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009), and
✓ District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency (SJVAPCD 2009).

This guidance and policy are the reference documents referenced in the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts adopted in March 2015 (SJVAPCD 2015). Consistent with the District Guidance and District Policy above, SJVAPCD (2015) acknowledges the current absence of numerical thresholds, and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

i. If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
ii. If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance

Standards (BPS); and

iii. If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

The construction and operation of cannabis grow sites would result in GHG emissions. During the construction of grow sites GHGs would be emitted by the construction equipment, haul trips transporting equipment and materials and commute trips by construction workers. The establishment of new growth facility would also result in removal of vegetation that serves to sequester carbon. Grow sites would result in long term operational emissions of GHGs associated with the use of off-road equipment, worker commute trips, and on-site combustion pf propane and natural gas for heating indoor grow sites or processing facilities. These GHG related emission from construction and operation sources were estimated using CalEEmod. As shown in **Table 9**, the Project would generate 17,138.76 Metric Tons of Carbon Dioxide Equivalent per year (MTCO2eq./year) using an operational year of 2005, which includes area, energy, mobile, waste, and water sources. "Business as usual" (BAU) is referenced in CARB's AB 32 Scoping Plan as emissions projected to occur in 2020 if the average baseline emissions during the 2002-2004 period grew to 2020 levels, without control or Best Performance Standards (BPS) offsets. As a result, an estimate of the Project's operational emissions in 2005 were compared to operational emissions in 2020 in order to determine, if the Project meets the 29% emission reduction. The SJVAPCD has reviewed relevant scientific information related to GHG emissions and has determined that they are not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. As a result, the SJVAPCD has determined that projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG. Results of the analysis show that the Project's GHG emissions in the year 2020 is 14,482.75 MTCO2eq./year. This represents an achievement of 15% GHG emission reduction on the basis of BAU, which does not meet the 29% GHG emission reduction target.

GHG threshold provides some perspective on the 30 years amortized GHG emissions generated by the Project. **Table 10** shows the yearly GHG emissions generated by the Project as determined by the CalEEMod model.

Table 9
2005/2020 Operational Gas Emissions

Summary Report	CO_2e
Operational Emissions Per Year (2005)	17138.76 MT/yr
Operational Emissions Per Year (2020)	14,482.75 MT/yr
SJVAPCD Level of Significance	29% Reduction Compared to BAU
Does the Project Meet the Standard	No

Source: CalEEMod

Table 10
Project Operational Greenhouse Gas Emissions

Summary Report	CO_2e
Project Operational Emissions Per Year(plus amortized construction emissions)	13,207.30 MT/yr

Source: CalEEMod

3.3.3 *Indirect Source Review*

The Project is subject to the SJVAPCD's ISR program, which is also known as Rule 9510. Rule 9510 and the Administrative ISR Fee Rule (Rule 3180) are the result of state requirements outlined in the California Health and Safety Code, Section 40604 and the State Implementation Plan (SIP). The purpose of the SJVAPCD's ISR program is to reduce emissions of NOx and PM10 from new projects. In general, new development contributes to the air-pollution problem in the Valley by increasing the number of vehicles and vehicle miles traveled.

Utilizing the ISR Fee Estimator calculator available on the SJVAPCD website, it was determined that the Project's total cost for emission reductions is $691,151.76 without implementation of emission reduction measures. The ISR Fee Estimator worksheets are included in Appendix B. The fee noted above may be reduced dependent upon the formal ISR review process.

4.0 Impact Determinations and Recommended Mitigation

In accordance with CEQA, when a proposed project is consistent with a General Plan for which an EIR has been certified, the effects of that project are evaluated to determine if they will result in project-specific significant adverse impacts on the environment. The criteria used to determine the significance of an air quality or greenhouse gas impact are based on the following thresholds of significance, which come from Appendix G of the CEQA Guidelines and the General Plan EIR. Accordingly, air quality or greenhouse gas impacts resulting from the Project are considered significant if the Project would:

Air Quality

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?

Greenhouse Gas Emissions

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?

4.1 Air Quality

4.1.1 *Conflict with or obstruct implementation of the applicable air quality plan*

The primary way of determining consistency with the air quality plan's (AQP's) assumptions is determining consistency with the applicable General Plan to ensure that the Project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. City of Woodlake uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards.

The applicable General Plan for the Project is the City of Woodlake General Plan. The Project is consistent with the currently adopted General Plan and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the Project is consistent with the growth assumptions used in the applicable AQPs. As a result, the Project will not conflict with or obstruct implementation of any air quality plans. Hence, no mitigation is needed.

4.1.2 *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*

The Tulare County area is nonattainment for Federal and State air quality standards for ozone, in attainment of Federal standards and nonattainment for State standards for PM10, and nonattainment for Federal and State standards for PM2.5. The SJVAPCD has prepared the 2016 and 2013 Ozone Plans, 2007 PM10 Maintenance Plan, and 2012 PM2.5 Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone and PM. Inconsistency with any of the plans would be considered a cumulatively adverse air quality impact. As discussed in Section 4.1.1, the Project is consistent with the currently adopted City of Woodlake General Plan and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the project is consistent with the growth assumptions used in 2011 Air Quality Plan.

Project specific emissions that exceed the thresholds of significance for criteria pollutants would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the County is in non-attainment under applicable federal or state ambient air quality standards. It should be noted that a project is not characterized as cumulatively insignificant when project emissions fall below thresholds of significance. As discussed in Section 3.1, the SJVAPCD has established thresholds of significance for determining environmental significance which are provided in **Table 6**.

As discussed above in Section 3.2 and 3.3, results of the analysis show that emissions generated from construction and operation of the Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants. Hence, there will be no significant impact and mitigation measures are not required.

4.1.3 *Expose sensitive receptors to substantial pollutant concentrations*

Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the Project is a Type A project in that it may potentially place toxic sources in the vicinity of existing sensitive receptors. A Health Risk Assessment would be required to determine specific potential impacts to sensitive receptors.

4.1.4 *Result in other emissions such as those leading to odors adversely affecting a substantial number of people*

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- ✓ Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and

- ✓ Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in **Table 5** above along with a reasonable distance from the source within which, the degree of odors could possibly be significant. The cannabis grow facility might generate localize construction and operational odors associated with the equipment operation, which could be potential odor sources for nearby residents. Chapter 5.48 (N) of the City of Woodlake Municipal Code states, "Cannabis business shall provide a sufficient odor absorbing ventilation and exhaust system so that odor generated inside the facility that is distinctive to its operation is not detected outside the Premises, outside the building housing the Cannabis business, or anywhere on adjacent property of public rights-of-way." As such, the proposed Project and it future tenants are not expected to produce any offensive odors that would result in frequent odor complaints. Any impacts would be less than significant.

4.2 Greenhouse Gas Emissions

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

The SJVAPCD acknowledges the current absence of numerical thresholds and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

i. If a project complies with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, then the Project would be determined to have a less than significant individual and cumulative impact for GHG emissions;

ii. If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance Standards (BPS); and
iii. If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

The resulting permanent greenhouse gas increases related to Project operations will be within the greenhouse gas increases analyzed in the City of Woodlake General Plan EIR since the Project meets the applicable zoning requirements. However, the increase in greenhouse gas impacts, and implementation of the Project will result in Project-specific or site-specific significant adverse impacts from greenhouse gas emissions within the Project study area. Since the project is not reduced by 29 percent compared to BAU it should implement Best Performance standards to ensure impacts are less than significant with mitigation incorporated.

Some of the mitigation measures that can be incorporated in order to reduce the greenhouse gas impact by the Project are listed below. However, the final implementation of the strategies for the reduction should be approved by district for respective class and category of equipment or operation being proposed.

i. Prohibit the use of fossil fuel powered outdoor power equipment at cannabis grow sites and processing facilities.
ii. Refrain from using portable generators and off-road equipment that is powered by gasoline, diesel or other fossil fuels to assist in the cultivation and harvesting of cannabis. This requirement applies to all off-road equipment including but not limited to utility vehicles, tractors, and trimmers. However, electric or human powered versions of these equipment can be used.
iii. On site structures can be powered with the photovoltaic panels that is feasible with solar.
iv. The well pump used for supply of irrigation water for the cannabis production can be powered with photovoltaic cells.

4.2.2 *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases*

California passed the California Global Warming Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. Under AB 32, CARB must adopt regulations by January 1, 2011, to achieve reductions in GHGs to meet the 1990 emission cap by 2020. On December 11, 2008, CARB adopted its initial Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan.

SB 375 requires MPOs to adopt a SCS or APS that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, has provided each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. For the TCAG region, CARB set targets at five (5) percent per capita decrease in 2020 and a ten (10) percent per capita decrease in 2035 from a base year of 2005. TCAG's 2018 RTP/SCS, projects that the Tulare County region would achieve the prescribed emissions targets.

Executive Order B-30-15 establishes a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. Executive Order B-30-15 requires MPO's to implement measures that will achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. City of Woodlake uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. The applicable General Plan for the Project is City of Woodlake General Plan.

The Project is consistent with the currently adopted General Plan for the City of Woodlakeis therefore consistent with the population growth and VMT applied in that plan

CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan. The current plan has identified new policies and actions to accomplish the State's 2030 GHG limit. Below is a list of applicable strategies in the Scoping Plan and the Project's consistency with those strategies.

- ✓ California Light-Duty Vehicle GHG Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs for long-term climate change goals.
    - The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to light-duty vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.
- ✓ Energy Efficiency – Pursuit of comparable investment in energy efficiency from all retail providers of electricity in California. Maximize energy efficient building and appliance standards.
    - The Project is consistent with this reduction measure. Though this measure applies to

the State to increase its energy standards, the Project would comply with this measure through existing regulation. The Project would not conflict or obstruct this reduction measure.

- ✓ Low Carbon Fuel – Development and adoption of the low carbon fuel standard.

  - The Project is consistent with this reduction measure. This measure cannot be implemented by a particular project or lead agency since it is a statewide measure. When this measure is implemented, standards would be applicable to the fuel used by vehicles that would access the Project. The Project would not conflict or obstruct this reduction measure.

5.0 Energy Assessment

This section has been prepared for the purpose of identifying potential project-specific or site-specific energy impacts that may result from the proposed Project. In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of an energy impact are based on the following thresholds of significance, which come from Appendix G of the CEQA Guidelines. Accordingly, energy impacts resulting from the Project are considered significant if the Project would:

Energy

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?

Energy is fundamental to the economy and the quality of life of the Tulare County region. The primary energy source for the U.S. is petroleum (also referred to as "oil"), which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily since 1983; as of 2016, world consumption of oil had reached 99.5 million barrels per day by 2021 Dec (IEA Oil Market Report). The world supply of oil is anticipated to peak (i.e., reach the point of maximum production) sometime between now and 2042, before beginning a terminal decline that will put a significant strain on the economy if not anticipated and mitigated. However, the timing of the peak depends on multiple, uncertain factors that will affect how quickly remaining oil is consumed, such as the amount of oil that still remains in the ground; how much of the amount in the ground can be extracted and produced based on technological, economic, and environmental feasibility; and future demand for oil.

California's transportation sector is equally dependent upon oil, with petroleum-based fuels currently providing nearly all (96 percent) of California's transportation energy needs (CEC 2018). Furthermore, transportation-related activities represent almost half (48 percent) of California's petroleum-based fuel consumption. California refineries increasingly rely on imported petroleum products to meet this demand. In 2003 the CEC and ARB adopted a two-part strategy to reduce the state's petroleum demand: promoting improved vehicle efficiency and increasing the use of alternative fuels. In 2006, CEC and ARB set a goal that 20 percent of all transportation energy in 2020 comes from alternative fuels. State plans, programs, and regulations to implement this strategy are further discussed in the Regulatory Setting section below.

Similar to California and the U.S. as a whole, the Tulare region relies primarily on oil to meet its transportation needs. Motor vehicles are the largest consumer of fuels in the region's transportation sector. After gasoline, diesel fuel is the most utilized transportation energy source. The primary consumers of diesel fuel in the transportation sector are heavy-duty trucks, with medium-duty trucks, buses, light-duty passenger cars, and railway locomotives accounting for remaining diesel fuel consumption.

Alternative fuels are defined as fuels not derived from petroleum, such as natural gas, ethanol, and electricity. However, like petroleum, alternative fuels like natural gas and ethanol (which is primarily composed of diesel fuel) are also nonrenewable, finite resources. Electricity is also considered nonrenewable when generated from natural gas or coal, but considered renewable when generated from sources like solar, hydroelectric, or wind energy. Most alternative fuel facilities in the region supply compressed natural gas (CNG) or electricity. The region's limited alternative fuel infrastructure severely constrains the use of alternative fuel passenger vehicles.

Although average fuel efficiency for autos and trucks has experienced some improvements during the last quarter-century, fuel consumption associated with the large increase in VMT has exceeded the fuel consumption reductions achieved by improved efficiency, and the total amount of annual fuel consumption has continued to increase. The equipment and vehicles involved in the construction of residential and commercial development also consume energy. Currently, construction equipment and vehicles are generally dependent on petroleum-based fuels.

Fuel consumption in Tulare County is supposed to be decreased by the year 2046 due to implementation of electric charging station plan, as mentioned in the TCAG 2022 RTP/SCS Draft report. Along with that supply of alternative transportation fuels will further reduce fuel consumption. The fuel consumption outputs reflect a decreasing trend of fuel consumption per capita. The 2022 RTP/SCS shows that the VMT in 2021 baseline condition is 10,617,248 which will increase to 12,465,620, however with the proposed RTP/SCS it will decrease to12,241,939 which would be an approximately 2%. This analysis shows that with implementation of the various multi-modal improvements (bike/pedestrian facilities, transit infrastructure/service, etc.), considering future land use development under the 2022 RTP/SCS, VMT and fuel consumption will decrease.

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

Short-Term (Construction)

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Energy impacts from construction are generally attributable to the manufacture and transportation of building materials, preparation of the site for grading activities, utility installation, paving, and building construction and architectural coating. It should be noted that the Project is subject to California Code of Regulations (CCR), Title 24 building standards. The Title 24 California Building Standards Code is a wide-ranging set of requirements for energy conservation and green design that apply to the structural, mechanical, electrical, and plumbing systems in a building.

The operation of off-road equipment, trucks, and worker traffic would be the primary source of energy consumption during the construction of the Project. Energy consumption generated during the construction phase was estimated using CalEEMod Model defaults for construction equipment since the specific mix of construction equipment is not presently known for this Project. It should be noted that energy usage from construction of the Project would be temporary in nature and would cease upon completion of the Project.

The estimated consumption of diesel fuel, considering the construction schedule and hours of use determined by CalEEMod, is 1,117 gallons for the development/construction of the Project.

Vehicle Miles Traveled (VMT) estimates during the construction of the Project were also determined by data points in the CalEEMod program. Worker, vendor, and haul trips would result in 2,549 VMT for the duration of construction activities. As noted in Table 11 below, construction trips would account for approximately 256 gallons of motor vehicle fuel.

Long-Term

As noted previously, the Project includes the development of indoor growth of cannabis. Electricity is the primary source of energy that would be used for lighting, cooling dehumidification during indoor growing of cannabis. Table 12 provides an estimate of energy use for the proposed Project. High intensity discharge grow lights will be used that will produce significant amount of heat and light. Estimated electricity, natural gas, and motor vehicle gasoline consumption were derived from estimates included in the CalEEMod program. As shown below, the Project would consume approximately 3,578,000 kWh of electricity, 24,945,000 Btu of natural gas, and 1,002,601 gallons of gasoline per year.

Table 11
Project Construction Energy Consumption

ACTIVITY	VARIABLE	CONSUMPTION RATE	TOTAL CONSUMPTION
Construction Equipment - Diesel	Equipment Use - hp-hr	0.05 gallons/hp-hr	1,117 gallons (diesel)
	Hours of Use	148 hours	
Construction Worker VMT	VMT	VMT = 622 mpg = 25.73	24 gallons (gasoline)
Construction Vendor VMT	VMT	VMT = 1927 mpg = 8.29	232 gallons (diesel)

Source: CalEEMod 2016.3.2 / EMFAC 2011 Tulare County 2022
Notes:
hp-hr = horsepower per hour
VMT = Vehicle Miles Traveles
mpg = miles per gallon

Table 12
Project Operational Energy Consumption

LAND USE	ELECTRICITY USE (kWh/year)	NATURAL GAS (Btu/year)	VEHICLE GASOLINE (gallons/year)
Cannabbis project	3,578,000	24,945,000	1,002,601

Source: CalEEMod 2020.4.0 / Emfac 2020 Tulare County County 2022
Notes:
kWh = kilowatt hours
Btu = British thermal units

As noted above, the Project is subject to CCR, Title 24 building standards. Compliance with Title 24 of the CCR would improve energy efficiency and consumption. As a result, construction of the Project will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Operation of the Project would include the use of electricity for lighting, cooling dehumidification during indoor growing of cannabis. As discussed above, the Title 24 California Building Standards Code is a wide-ranging set of requirements for energy conservation and green design that apply to the structural, mechanical, electrical, and plumbing systems in a building. For the cannabis production energy documents will be required for lighting, cooling, heating, water heating and building modifications envelopes to be compliance with Building energy efficiency standards and other applicable building codes. These will be submitted with building plans prior to construction at the time of approval. As a result, the electricity use will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the USDOT, is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. The Energy Independence and Security Act of 2007 seeks to achieve energy security in the United States by increasing renewable fuel production, improving energy efficiency and performance, protecting consumers, improving vehicle fuel economy, and promoting research on greenhouse gas capture and storage. The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has gradually increased from about 14.9 mpg in 1980 to 22.3 mpg in 2017 based on data provided by the U.S. Department of Transportation, National Highway Traffic Safety Administration, Fleet Fuel Economy Performance Report, available at https://one.nhtsa.gov/cafe_pic/CAFE_PIC_fleet_LIVE.html.

The Project will result in an annual VMT increase of 257,96,914 considering CalEEMod calculations, which results in 1,002,601 gallons of gasoline per year as noted in Table 12 (assuming 25.73 mpg). However, new vehicles accessing the Project site would be in compliance with the federal fuel economy standards described above. As a result, fuel efficiency from vehicles accessing the site would increase over the life of the Project. Therefore, energy impacts related to fuel consumption during Project operations would be less than significant.

Based on the assessment above, the Project will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. Therefore, any impacts would be less than significant.

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

As discussed above in Section 5.1, the Project is subject to CCR, Title 24 building standards. Compliance with Title 24 of the CCR would improve energy efficiency and consumption. Therefore, the Project would be consistent with applicable plans related to renewable energy and energy efficiency. As a result, the Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Appendix - A

CALEEMod Worksheets

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

Kopitar Cannabis Project - Revised v2

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1,500.00	1000sqft	34.44	1,500,000.00	0
Parking Lot	700.00	Space	6.30	280,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	7			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Land Use - General Light Industry is typicaly used for cannabis grow operations, however CalEEMod will not let this category be chosen if square footage is
greater than 50,000.

Area Mitigation - Architectural Coating - paints applied to buildings and parking limited to 50g/L VOC content.

Construction Off-road Equipment Mitigation -

Construction Phase - Construction date modified to reflect realistic timeframe for this particular project.

Architectural Coating - Paints applied to buildings and parking limited to 50 g/L

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00

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

tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	150	50
tblConstructionPhase	NumDays	740.00	219.00
tblConstructionPhase	PhaseEndDate	9/7/2026	9/6/2024
tblConstructionPhase	PhaseEndDate	4/6/2026	4/6/2024
tblConstructionPhase	PhaseEndDate	6/22/2026	6/21/2024
tblConstructionPhase	PhaseStartDate	6/23/2026	6/23/2024
tblConstructionPhase	PhaseStartDate	4/7/2026	4/7/2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0595	0.5670	0.4660	8.9000e-004	4.1000e-003	0.0274	0.0315	1.0900e-003	0.0254	0.0265	0.0000	78.1361	78.1361	0.0211	9.0000e-005	78.6916
2023	0.5445	3.9074	4.9037	0.0151	1.4764	0.1367	1.6132	0.5139	0.1271	0.6410	0.0000	1,380.3273	1,380.3273	0.1419	0.0722	1,405.3993
2024	3.7535	1.2668	2.1553	6.6900e-003	0.4431	0.0405	0.4837	0.1192	0.0380	0.1571	0.0000	613.1066	613.1066	0.0449	0.0339	624.3305
Maximum	**3.7535**	**3.9074**	**4.9037**	**0.0151**	**1.4764**	**0.1367**	**1.6132**	**0.5139**	**0.1271**	**0.6410**	**0.0000**	**1,380.3273**	**1,380.3273**	**0.1419**	**0.0722**	**1,405.3993**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0595	0.5670	0.4660	8.9000e-004	4.1000e-003	0.0274	0.0315	1.0900e-003	0.0254	0.0265	0.0000	78.1360	78.1360	0.0211	9.0000e-005	78.6915
2023	0.5445	3.9074	4.9037	0.0151	1.0611	0.1367	1.1978	0.3266	0.1271	0.4537	0.0000	1,380.3268	1,380.3268	0.1419	0.0722	1,405.3987
2024	3.7535	1.2668	2.1553	6.6900e-003	0.4431	0.0405	0.4837	0.1192	0.0380	0.1571	0.0000	613.1064	613.1064	0.0449	0.0339	624.3304
Maximum	**3.7535**	**3.9074**	**4.9037**	**0.0151**	**1.0611**	**0.1367**	**1.1978**	**0.3266**	**0.1271**	**0.4537**	**0.0000**	**1,380.3268**	**1,380.3268**	**0.1419**	**0.0722**	**1,405.3987**

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**	**21.59**	**0.00**	**19.52**	**29.53**	**0.00**	**22.71**	**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	**11-1-2022**	**1-31-2023**	0.9355	0.9355
2	**2-1-2023**	**4-30-2023**	1.1527	1.1527
3	**5-1-2023**	**7-31-2023**	1.1540	1.1540
4	**8-1-2023**	**10-31-2023**	1.1043	1.1043
5	**11-1-2023**	**1-31-2024**	1.1079	1.1079
6	**2-1-2024**	**4-30-2024**	0.8614	0.8614
7	**5-1-2024**	**7-31-2024**	2.0264	2.0264
8	**8-1-2024**	**9-30-2024**	1.7302	1.7302
		Highest	2.0264	2.0264

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	6.9269	1.8000e-004	0.0202	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0393	0.0393	1.0000e-004	0.0000	0.0419
Energy	0.1345	1.2228	1.0272	7.3400e-003		0.0929	0.0929		0.0929	0.0929	0.0000	1,965.7026	1,965.7026	0.0791	0.0309	1,976.8865
Mobile	3.8778	7.6196	39.9932	0.1003	9.6811	0.0889	9.7699	2.5911	0.0835	2.6746	0.0000	9,279.7239	9,279.7239	0.4502	0.5047	9,441.3911
Waste						0.0000	0.0000		0.0000	0.0000	377.5632	0.0000	377.5632	22.3134	0.0000	935.3968
Water						0.0000	0.0000		0.0000	0.0000	110.0474	332.8671	442.9145	11.3310	0.2703	806.7371
Total	**10.9393**	**8.8426**	**41.0405**	**0.1076**	**9.6811**	**0.1819**	**9.8629**	**2.5911**	**0.1765**	**2.7676**	**487.6106**	**11,578.3329**	**12,065.9435**	**34.1737**	**0.8059**	**13,160.4533**

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	5.7898	1.8000e-004	0.0202	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0393	0.0393	1.0000e-004	0.0000	0.0419
Energy	0.1345	1.2228	1.0272	7.3400e-003		0.0929	0.0929		0.0929	0.0929	0.0000	1,965.7026	1,965.7026	0.0791	0.0309	1,976.8865
Mobile	3.8778	7.6196	39.9932	0.1003	9.6811	0.0889	9.7699	2.5911	0.0835	2.6746	0.0000	9,279.7239	9,279.7239	0.4502	0.5047	9,441.3911
Waste						0.0000	0.0000		0.0000	0.0000	377.5632	0.0000	377.5632	22.3134	0.0000	935.3968
Water						0.0000	0.0000		0.0000	0.0000	110.0474	332.8671	442.9145	11.3310	0.2703	806.7371
Total	**9.8021**	**8.8426**	**41.0405**	**0.1076**	**9.6811**	**0.1819**	**9.8629**	**2.5911**	**0.1765**	**2.7676**	**487.6106**	**11,578.3329**	**12,065.9435**	**34.1737**	**0.8059**	**13,160.4533**

	ROG	NOx	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	**10.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2022	1/9/2023	5	50	
2	Site Preparation	Site Preparation	1/10/2023	2/20/2023	5	30	
3	Grading	Grading	2/21/2023	6/5/2023	5	75	

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

4	Building Construction	Building Construction	6/6/2023	4/6/2024	5	219	
5	Paving	Paving	4/7/2024	6/21/2024	5	55	
6	Architectural Coating	Architectural Coating	6/23/2024	9/6/2024	5	55	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 6.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,250,000; Non-Residential Outdoor: 750,000; Striped Parking Area: 16,800 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

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

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

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	748.00	292.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	150.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0581	0.5658	0.4531	8.5000e-004		0.0273	0.0273		0.0254	0.0254	0.0000	74.7785	74.7785	0.0210	0.0000	75.3036
Total	**0.0581**	**0.5658**	**0.4531**	**8.5000e-004**		**0.0273**	**0.0273**		**0.0254**	**0.0254**	**0.0000**	**74.7785**	**74.7785**	**0.0210**	**0.0000**	**75.3036**

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	1.4800e-003	1.1300e-003	0.0130	4.0000e-005	4.1000e-003	2.0000e-005	4.1200e-003	1.0900e-003	2.0000e-005	1.1100e-003	0.0000	3.3576	3.3576	9.0000e-005	9.0000e-005	3.3879
Total	**1.4800e-003**	**1.1300e-003**	**0.0130**	**4.0000e-005**	**4.1000e-003**	**2.0000e-005**	**4.1200e-003**	**1.0900e-003**	**2.0000e-005**	**1.1100e-003**	**0.0000**	**3.3576**	**3.3576**	**9.0000e-005**	**9.0000e-005**	**3.3879**

3.2 Demolition - 2022

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	0.0581	0.5658	0.4531	8.5000e-004		0.0273	0.0273		0.0254	0.0254	0.0000	74.7784	74.7784	0.0210	0.0000	75.3035
Total	**0.0581**	**0.5658**	**0.4531**	**8.5000e-004**		**0.0273**	**0.0273**		**0.0254**	**0.0254**	**0.0000**	**74.7784**	**74.7784**	**0.0210**	**0.0000**	**75.3035**

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	1.4800e-003	1.1300e-003	0.0130	4.0000e-005	4.1000e-003	2.0000e-005	4.1200e-003	1.0900e-003	2.0000e-005	1.1100e-003	0.0000	3.3576	3.3576	9.0000e-005	9.0000e-005	3.3879
Total	**1.4800e-003**	**1.1300e-003**	**0.0130**	**4.0000e-005**	**4.1000e-003**	**2.0000e-005**	**4.1200e-003**	**1.0900e-003**	**2.0000e-005**	**1.1100e-003**	**0.0000**	**3.3576**	**3.3576**	**9.0000e-005**	**9.0000e-005**	**3.3879**

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8100e-003	0.0645	0.0589	1.2000e-004		2.9900e-003	2.9900e-003		2.7800e-003	2.7800e-003	0.0000	10.1976	10.1976	2.8600e-003	0.0000	10.2690
Total	**6.8100e-003**	**0.0645**	**0.0589**	**1.2000e-004**		**2.9900e-003**	**2.9900e-003**		**2.7800e-003**	**2.7800e-003**	**0.0000**	**10.1976**	**10.1976**	**2.8600e-003**	**0.0000**	**10.2690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.3000e-004	1.6000e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4432	0.4432	1.0000e-005	1.0000e-005	0.4469
Total	**1.8000e-004**	**1.3000e-004**	**1.6000e-003**	**0.0000**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4432**	**0.4432**	**1.0000e-005**	**1.0000e-005**	**0.4469**

3.2 Demolition - 2023

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	6.8100e-003	0.0645	0.0589	1.2000e-004		2.9900e-003	2.9900e-003		2.7800e-003	2.7800e-003	0.0000	10.1976	10.1976	2.8600e-003	0.0000	10.2690
Total	**6.8100e-003**	**0.0645**	**0.0589**	**1.2000e-004**		**2.9900e-003**	**2.9900e-003**		**2.7800e-003**	**2.7800e-003**	**0.0000**	**10.1976**	**10.1976**	**2.8600e-003**	**0.0000**	**10.2690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.3000e-004	1.6000e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4432	0.4432	1.0000e-005	1.0000e-005	0.4469
Total	**1.8000e-004**	**1.3000e-004**	**1.6000e-003**	**0.0000**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4432**	**0.4432**	**1.0000e-005**	**1.0000e-005**	**0.4469**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2949	0.0000	0.2949	0.1515	0.0000	0.1515	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4129	0.2737	5.7000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	50.1760	50.1760	0.0162	0.0000	50.5817
Total	**0.0399**	**0.4129**	**0.2737**	**5.7000e-004**	**0.2949**	**0.0190**	**0.3139**	**0.1515**	**0.0175**	**0.1690**	**0.0000**	**50.1760**	**50.1760**	**0.0162**	**0.0000**	**50.5817**

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	1.1100e-003	8.0000e-004	9.6100e-003	3.0000e-005	3.3600e-003	2.0000e-005	3.3700e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	2.6589	2.6589	7.0000e-005	7.0000e-005	2.6816
Total	**1.1100e-003**	**8.0000e-004**	**9.6100e-003**	**3.0000e-005**	**3.3600e-003**	**2.0000e-005**	**3.3700e-003**	**8.9000e-004**	**2.0000e-005**	**9.1000e-004**	**0.0000**	**2.6589**	**2.6589**	**7.0000e-005**	**7.0000e-005**	**2.6816**

3.3 Site Preparation - 2023

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					0.1035	0.0000	0.1035	0.0532	0.0000	0.0532	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4129	0.2737	5.7000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	50.1760	50.1760	0.0162	0.0000	50.5817
Total	**0.0399**	**0.4129**	**0.2737**	**5.7000e-004**	**0.1035**	**0.0190**	**0.1225**	**0.0532**	**0.0175**	**0.0707**	**0.0000**	**50.1760**	**50.1760**	**0.0162**	**0.0000**	**50.5817**

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	1.1100e-003	8.0000e-004	9.6100e-003	3.0000e-005	3.3600e-003	2.0000e-005	3.3700e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	2.6589	2.6589	7.0000e-005	7.0000e-005	2.6816
Total	**1.1100e-003**	**8.0000e-004**	**9.6100e-003**	**3.0000e-005**	**3.3600e-003**	**2.0000e-005**	**3.3700e-003**	**8.9000e-004**	**2.0000e-005**	**9.1000e-004**	**0.0000**	**2.6589**	**2.6589**	**7.0000e-005**	**7.0000e-005**	**2.6816**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3451	0.0000	0.3451	0.1370	0.0000	0.1370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1246	1.2943	1.0519	2.3300e-003		0.0534	0.0534		0.0491	0.0491	0.0000	204.5070	204.5070	0.0661	0.0000	206.1606
Total	**0.1246**	**1.2943**	**1.0519**	**2.3300e-003**	**0.3451**	**0.0534**	**0.3986**	**0.1370**	**0.0491**	**0.1862**	**0.0000**	**204.5070**	**204.5070**	**0.0661**	**0.0000**	**206.1606**

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	3.0800e-003	2.2300e-003	0.0267	8.0000e-005	9.3200e-003	5.0000e-005	9.3700e-003	2.4800e-003	4.0000e-005	2.5200e-003	0.0000	7.3858	7.3858	1.8000e-004	2.0000e-004	7.4488
Total	**3.0800e-003**	**2.2300e-003**	**0.0267**	**8.0000e-005**	**9.3200e-003**	**5.0000e-005**	**9.3700e-003**	**2.4800e-003**	**4.0000e-005**	**2.5200e-003**	**0.0000**	**7.3858**	**7.3858**	**1.8000e-004**	**2.0000e-004**	**7.4488**

3.4 Grading - 2023

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					0.1211	0.0000	0.1211	0.0481	0.0000	0.0481	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1246	1.2943	1.0519	2.3300e-003		0.0534	0.0534		0.0491	0.0491	0.0000	204.5068	204.5068	0.0661	0.0000	206.1603
Total	**0.1246**	**1.2943**	**1.0519**	**2.3300e-003**	**0.1211**	**0.0534**	**0.1746**	**0.0481**	**0.0491**	**0.0972**	**0.0000**	**204.5068**	**204.5068**	**0.0661**	**0.0000**	**206.1603**

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	3.0800e-003	2.2300e-003	0.0267	8.0000e-005	9.3200e-003	5.0000e-005	9.3700e-003	2.4800e-003	4.0000e-005	2.5200e-003	0.0000	7.3858	7.3858	1.8000e-004	2.0000e-004	7.4488
Total	**3.0800e-003**	**2.2300e-003**	**0.0267**	**8.0000e-005**	**9.3200e-003**	**5.0000e-005**	**9.3700e-003**	**2.4800e-003**	**4.0000e-005**	**2.5200e-003**	**0.0000**	**7.3858**	**7.3858**	**1.8000e-004**	**2.0000e-004**	**7.4488**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1172	1.0717	1.2102	2.0100e-003		0.0521	0.0521		0.0491	0.0491	0.0000	172.6945	172.6945	0.0411	0.0000	173.7216
Total	**0.1172**	**1.0717**	**1.2102**	**2.0100e-003**		**0.0521**	**0.0521**		**0.0491**	**0.0491**	**0.0000**	**172.6945**	**172.6945**	**0.0411**	**0.0000**	**173.7216**

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	0.0231	0.8949	0.2866	4.0000e-003	0.1305	5.6400e-003	0.1361	0.0377	5.3900e-003	0.0431	0.0000	383.4861	383.4861	1.6900e-003	0.0574	400.6351
Worker	0.2287	0.1660	1.9844	5.9800e-003	0.6927	3.5100e-003	0.6962	0.1841	3.2300e-003	0.1873	0.0000	548.7780	548.7780	0.0136	0.0146	553.4540
Total	**0.2517**	**1.0609**	**2.2710**	**9.9800e-003**	**0.8232**	**9.1500e-003**	**0.8323**	**0.2218**	**8.6200e-003**	**0.2304**	**0.0000**	**932.2642**	**932.2642**	**0.0153**	**0.0720**	**954.0891**

3.5 Building Construction - 2023

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	0.1172	1.0717	1.2102	2.0100e-003		0.0521	0.0521		0.0491	0.0491	0.0000	172.6943	172.6943	0.0411	0.0000	173.7214
Total	**0.1172**	**1.0717**	**1.2102**	**2.0100e-003**		**0.0521**	**0.0521**		**0.0491**	**0.0491**	**0.0000**	**172.6943**	**172.6943**	**0.0411**	**0.0000**	**173.7214**

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	0.0231	0.8949	0.2866	4.0000e-003	0.1305	5.6400e-003	0.1361	0.0377	5.3900e-003	0.0431	0.0000	383.4861	383.4861	1.6900e-003	0.0574	400.6351
Worker	0.2287	0.1660	1.9844	5.9800e-003	0.6927	3.5100e-003	0.6962	0.1841	3.2300e-003	0.1873	0.0000	548.7780	548.7780	0.0136	0.0146	553.4540
Total	**0.2517**	**1.0609**	**2.2710**	**9.9800e-003**	**0.8232**	**9.1500e-003**	**0.8323**	**0.2218**	**8.6200e-003**	**0.2304**	**0.0000**	**932.2642**	**932.2642**	**0.0153**	**0.0720**	**954.0891**

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	0.0515	0.4705	0.5658	9.4000e-004		0.0215	0.0215		0.0202	0.0202	0.0000	81.1472	81.1472	0.0192	0.0000	81.6269
Total	**0.0515**	**0.4705**	**0.5658**	**9.4000e-004**		**0.0215**	**0.0215**		**0.0202**	**0.0202**	**0.0000**	**81.1472**	**81.1472**	**0.0192**	**0.0000**	**81.6269**

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	0.0106	0.4207	0.1315	1.8500e-003	0.0613	2.6700e-003	0.0640	0.0177	2.5500e-003	0.0203	0.0000	177.2779	177.2779	7.6000e-004	0.0265	185.2009
Worker	0.0992	0.0683	0.8574	2.7200e-003	0.3254	1.5600e-003	0.3270	0.0865	1.4400e-003	0.0879	0.0000	249.3670	249.3670	5.7200e-003	6.2900e-003	251.3835
Total	**0.1097**	**0.4890**	**0.9888**	**4.5700e-003**	**0.3867**	**4.2300e-003**	**0.3910**	**0.1042**	**3.9900e-003**	**0.1082**	**0.0000**	**426.6449**	**426.6449**	**6.4800e-003**	**0.0328**	**436.5844**

3.5 Building Construction - 2024

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	0.0515	0.4705	0.5658	9.4000e-004		0.0215	0.0215		0.0202	0.0202	0.0000	81.1471	81.1471	0.0192	0.0000	81.6268
Total	**0.0515**	**0.4705**	**0.5658**	**9.4000e-004**		**0.0215**	**0.0215**		**0.0202**	**0.0202**	**0.0000**	**81.1471**	**81.1471**	**0.0192**	**0.0000**	**81.6268**

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	0.0106	0.4207	0.1315	1.8500e-003	0.0613	2.6700e-003	0.0640	0.0177	2.5500e-003	0.0203	0.0000	177.2779	177.2779	7.6000e-004	0.0265	185.2009
Worker	0.0992	0.0683	0.8574	2.7200e-003	0.3254	1.5600e-003	0.3270	0.0865	1.4400e-003	0.0879	0.0000	249.3670	249.3670	5.7200e-003	6.2900e-003	251.3835
Total	**0.1097**	**0.4890**	**0.9888**	**4.5700e-003**	**0.3867**	**4.2300e-003**	**0.3910**	**0.1042**	**3.9900e-003**	**0.1082**	**0.0000**	**426.6449**	**426.6449**	**6.4800e-003**	**0.0328**	**436.5844**

3.6 Paving - 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	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	55.0730	55.0730	0.0178	0.0000	55.5183
Paving	8.2500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0354**	**0.2619**	**0.4022**	**6.3000e-004**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**55.0730**	**55.0730**	**0.0178**	**0.0000**	**55.5183**

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	1.5600e-003	1.0800e-003	0.0135	4.0000e-005	5.1300e-003	2.0000e-005	5.1500e-003	1.3600e-003	2.0000e-005	1.3900e-003	0.0000	3.9291	3.9291	9.0000e-005	1.0000e-004	3.9609
Total	**1.5600e-003**	**1.0800e-003**	**0.0135**	**4.0000e-005**	**5.1300e-003**	**2.0000e-005**	**5.1500e-003**	**1.3600e-003**	**2.0000e-005**	**1.3900e-003**	**0.0000**	**3.9291**	**3.9291**	**9.0000e-005**	**1.0000e-004**	**3.9609**

3.6 Paving - 2024

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	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	55.0729	55.0729	0.0178	0.0000	55.5182
Paving	8.2500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0354**	**0.2619**	**0.4022**	**6.3000e-004**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**55.0729**	**55.0729**	**0.0178**	**0.0000**	**55.5182**

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	1.5600e-003	1.0800e-003	0.0135	4.0000e-005	5.1300e-003	2.0000e-005	5.1500e-003	1.3600e-003	2.0000e-005	1.3900e-003	0.0000	3.9291	3.9291	9.0000e-005	1.0000e-004	3.9609
Total	**1.5600e-003**	**1.0800e-003**	**0.0135**	**4.0000e-005**	**5.1300e-003**	**2.0000e-005**	**5.1500e-003**	**1.3600e-003**	**2.0000e-005**	**1.3900e-003**	**0.0000**	**3.9291**	**3.9291**	**9.0000e-005**	**1.0000e-004**	**3.9609**

3.7 Architectural Coating - 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					
Archit. Coating	3.5347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9700e-003	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	7.0215	7.0215	4.0000e-004	0.0000	7.0313
Total	**3.5396**	**0.0335**	**0.0498**	**8.0000e-005**		**1.6800e-003**	**1.6800e-003**		**1.6800e-003**	**1.6800e-003**	**0.0000**	**7.0215**	**7.0215**	**4.0000e-004**	**0.0000**	**7.0313**

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	0.0156	0.0108	0.1351	4.3000e-004	0.0513	2.5000e-004	0.0515	0.0136	2.3000e-004	0.0139	0.0000	39.2910	39.2910	9.0000e-004	9.9000e-004	39.6087
Total	**0.0156**	**0.0108**	**0.1351**	**4.3000e-004**	**0.0513**	**2.5000e-004**	**0.0515**	**0.0136**	**2.3000e-004**	**0.0139**	**0.0000**	**39.2910**	**39.2910**	**9.0000e-004**	**9.9000e-004**	**39.6087**

3.7 Architectural Coating - 2024

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	3.5347					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9700e-003	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	7.0214	7.0214	4.0000e-004	0.0000	7.0313
Total	**3.5396**	**0.0335**	**0.0498**	**8.0000e-005**		**1.6800e-003**	**1.6800e-003**		**1.6800e-003**	**1.6800e-003**	**0.0000**	**7.0214**	**7.0214**	**4.0000e-004**	**0.0000**	**7.0313**

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	0.0156	0.0108	0.1351	4.3000e-004	0.0513	2.5000e-004	0.0515	0.0136	2.3000e-004	0.0139	0.0000	39.2910	39.2910	9.0000e-004	9.9000e-004	39.6087
Total	**0.0156**	**0.0108**	**0.1351**	**4.3000e-004**	**0.0513**	**2.5000e-004**	**0.0515**	**0.0136**	**2.3000e-004**	**0.0139**	**0.0000**	**39.2910**	**39.2910**	**9.0000e-004**	**9.9000e-004**	**39.6087**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.8778	7.6196	39.9932	0.1003	9.6811	0.0889	9.7699	2.5911	0.0835	2.6746	0.0000	9,279.7239	9,279.7239	0.4502	0.5047	9,441.3911
Unmitigated	3.8778	7.6196	39.9932	0.1003	9.6811	0.0889	9.7699	2.5911	0.0835	2.6746	0.0000	9,279.7239	9,279.7239	0.4502	0.5047	9,441.3911

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	5,895.00	9,630.00	7635.00	25,796,914	25,796,914
Parking Lot	0.00	0.00	0.00		
Total	5,895.00	9,630.00	7,635.00	25,796,914	25,796,914

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
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Parking Lot	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	634.5424	634.5424	0.0536	6.4900e-003	637.8159
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	634.5424	634.5424	0.0536	6.4900e-003	637.8159
NaturalGas Mitigated	0.1345	1.2228	1.0272	7.3400e-003		0.0929	0.0929		0.0929	0.0929	0.0000	1,331.1602	1,331.1602	0.0255	0.0244	1,339.0706
NaturalGas Unmitigated	0.1345	1.2228	1.0272	7.3400e-003		0.0929	0.0929		0.0929	0.0929	0.0000	1,331.1602	1,331.1602	0.0255	0.0244	1,339.0706

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					
General Heavy Industry	2.4945e +007	0.1345	1.2228	1.0272	7.3400e-003		0.0929	0.0929		0.0929	0.0929	0.0000	1,331.1602	1,331.1602	0.0255	0.0244	1,339.0706
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1345**	**1.2228**	**1.0272**	**7.3400e-003**		**0.0929**	**0.0929**		**0.0929**	**0.0929**	**0.0000**	**1,331.1602**	**1,331.1602**	**0.0255**	**0.0244**	**1,339.0706**

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					
General Heavy Industry	2.4945e +007	0.1345	1.2228	1.0272	7.3400e-003		0.0929	0.0929		0.0929	0.0929	0.0000	1,331.1602	1,331.1602	0.0255	0.0244	1,339.0706
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1345**	**1.2228**	**1.0272**	**7.3400e-003**		**0.0929**	**0.0929**		**0.0929**	**0.0929**	**0.0000**	**1,331.1602**	**1,331.1602**	**0.0255**	**0.0244**	**1,339.0706**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	3.48e +006	617.1625	0.0521	6.3100e-003	620.3463
Parking Lot	98000	17.3799	1.4700e-003	1.8000e-004	17.4695
Total		**634.5424**	**0.0536**	**6.4900e-003**	**637.8159**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	3.48e +006	617.1625	0.0521	6.3100e-003	620.3463
Parking Lot	98000	17.3799	1.4700e-003	1.8000e-004	17.4695
Total		**634.5424**	**0.0536**	**6.4900e-003**	**637.8159**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.7898	1.8000e-004	0.0202	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0393	0.0393	1.0000e-004	0.0000	0.0419
Unmitigated	6.9269	1.8000e-004	0.0202	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0393	0.0393	1.0000e-004	0.0000	0.0419

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	1.0487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8600e-003	1.8000e-004	0.0202	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0393	0.0393	1.0000e-004	0.0000	0.0419
Total	**6.9269**	**1.8000e-004**	**0.0202**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0393**	**0.0393**	**1.0000e-004**	**0.0000**	**0.0419**

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	0.3496					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.4384					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8600e-003	1.8000e-004	0.0202	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0393	0.0393	1.0000e-004	0.0000	0.0419
Total	**5.7898**	**1.8000e-004**	**0.0202**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0393**	**0.0393**	**1.0000e-004**	**0.0000**	**0.0419**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	442.9145	11.3310	0.2703	806.7371
Unmitigated	442.9145	11.3310	0.2703	806.7371

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	346.875 / 0	442.9145	11.3310	0.2703	806.7371
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**442.9145**	**11.3310**	**0.2703**	**806.7371**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	346.875 / 0	442.9145	11.3310	0.2703	806.7371
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**442.9145**	**11.3310**	**0.2703**	**806.7371**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	377.5632	22.3134	0.0000	935.3968
Unmitigated	377.5632	22.3134	0.0000	935.3968

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	1860	377.5632	22.3134	0.0000	935.3968
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**377.5632**	**22.3134**	**0.0000**	**935.3968**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	1860	377.5632	22.3134	0.0000	935.3968
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**377.5632**	**22.3134**	**0.0000**	**935.3968**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Kopitar Cannabis Project - Revised v2

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

San Joaquin Valley Unified APCD Air District, Mitigation Report

Construction Mitigation Summary

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

OFFROAD Equipment Mitigation

Kopitar Cannabis Project - Revised v2

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

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

Kopitar Cannabis Project - Revised v2

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	4.97000E-003	3.35200E-002	4.97800E-002	8.00000E-005	1.68000E-003	1.68000E-003	0.00000E+000	7.02145E+000	7.02145E+000	4.00000E-004	0.00000E+000	7.03133E+000
Concrete/Industrial Saws	8.87000E-003	6.93800E-002	9.15900E-002	1.60000E-004	3.69000E-003	3.69000E-003	0.00000E+000	1.34414E+001	1.34414E+001	7.20000E-004	0.00000E+000	1.34595E+001
Cranes	3.30700E-002	3.56040E-001	1.73930E-001	5.50000E-004	1.48500E-002	1.36600E-002	0.00000E+000	4.85720E+001	4.85720E+001	1.57100E-002	0.00000E+000	4.89648E+001
Excavators	2.92100E-002	2.47360E-001	4.88490E-001	7.80000E-004	1.20400E-002	1.10700E-002	0.00000E+000	6.80478E+001	6.80478E+001	2.20100E-002	0.00000E+000	6.85980E+001
Forklifts	3.28100E-002	3.07260E-001	3.75490E-001	5.00000E-004	1.86100E-002	1.71200E-002	0.00000E+000	4.41147E+001	4.41147E+001	1.42700E-002	0.00000E+000	4.44714E+001
Generator Sets	3.27600E-002	2.91370E-001	4.01600E-001	7.20000E-004	1.34300E-002	1.34300E-002	0.00000E+000	6.18902E+001	6.18902E+001	2.65000E-003	0.00000E+000	6.19565E+001
Graders	1.43800E-002	1.74490E-001	6.34700E-002	2.50000E-004	5.65000E-003	5.20000E-003	0.00000E+000	2.18015E+001	2.18015E+001	7.05000E-003	0.00000E+000	2.19778E+001
Pavers	1.01000E-002	9.58000E-002	1.59110E-001	2.60000E-004	4.47000E-003	4.12000E-003	0.00000E+000	2.27104E+001	2.27104E+001	7.35000E-003	0.00000E+000	2.28940E+001
Paving Equipment	9.06000E-003	8.22900E-002	1.41340E-001	2.20000E-004	3.97000E-003	3.66000E-003	0.00000E+000	1.96819E+001	1.96819E+001	6.37000E-003	0.00000E+000	1.98411E+001
Rollers	8.01000E-003	8.38400E-002	1.01750E-001	1.40000E-004	4.44000E-003	4.08000E-003	0.00000E+000	1.26806E+001	1.26806E+001	4.10000E-003	0.00000E+000	1.27832E+001
Rubber Tired Dozers	9.74300E-002	1.01767E+000	4.32520E-001	1.13000E-003	4.67700E-002	4.30200E-002	0.00000E+000	9.94085E+001	9.94085E+001	3.21500E-002	0.00000E+000	1.00212E+002
Scrapers	5.90100E-002	6.21260E-001	4.60280E-001	1.14000E-003	2.43600E-002	2.24100E-002	0.00000E+000	1.00026E+002	1.00026E+002	3.23500E-002	0.00000E+000	1.00835E+002
Tractors/Loaders/Backhoes	6.32600E-002	6.40700E-001	9.42990E-001	1.32000E-003	3.11700E-002	2.86700E-002	0.00000E+000	1.15589E+002	1.15589E+002	3.73800E-002	0.00000E+000	1.16523E+002
Welders	2.72100E-002	1.54160E-001	1.83240E-001	2.80000E-004	5.77000E-003	5.77000E-003	0.00000E+000	2.06102E+001	2.06102E+001	2.20000E-003	0.00000E+000	2.06652E+001

Kopitar Cannabis Project - Revised v2

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	4.97000E-003	3.35200E-002	4.97800E-002	8.00000E-005	1.68000E-003	1.68000E-003	0.00000E+000	7.02144E+000	7.02144E+000	4.00000E-004	0.00000E+000	7.03132E+000
Concrete/Industrial Saws	8.87000E-003	6.93800E-002	9.15900E-002	1.60000E-004	3.69000E-003	3.69000E-003	0.00000E+000	1.34414E+001	1.34414E+001	7.20000E-004	0.00000E+000	1.34595E+001
Cranes	3.30700E-002	3.56040E-001	1.73930E-001	5.50000E-004	1.48500E-002	1.36600E-002	0.00000E+000	4.85720E+001	4.85720E+001	1.57100E-002	0.00000E+000	4.89647E+001
Excavators	2.92100E-002	2.47360E-001	4.88490E-001	7.80000E-004	1.20400E-002	1.10700E-002	0.00000E+000	6.80477E+001	6.80477E+001	2.20100E-002	0.00000E+000	6.85979E+001
Forklifts	3.28100E-002	3.07260E-001	3.75490E-001	5.00000E-004	1.86100E-002	1.71200E-002	0.00000E+000	4.41146E+001	4.41146E+001	1.42700E-002	0.00000E+000	4.44713E+001
Generator Sets	3.27600E-002	2.91370E-001	4.01600E-001	7.20000E-004	1.34300E-002	1.34300E-002	0.00000E+000	6.18901E+001	6.18901E+001	2.65000E-003	0.00000E+000	6.19565E+001
Graders	1.43800E-002	1.74490E-001	6.34700E-002	2.50000E-004	5.65000E-003	5.20000E-003	0.00000E+000	2.18015E+001	2.18015E+001	7.05000E-003	0.00000E+000	2.19778E+001
Pavers	1.01000E-002	9.58000E-002	1.59110E-001	2.60000E-004	4.47000E-003	4.12000E-003	0.00000E+000	2.27104E+001	2.27104E+001	7.34000E-003	0.00000E+000	2.28940E+001
Paving Equipment	9.06000E-003	8.22900E-002	1.41340E-001	2.20000E-004	3.97000E-003	3.66000E-003	0.00000E+000	1.96819E+001	1.96819E+001	6.37000E-003	0.00000E+000	1.98410E+001
Rollers	8.01000E-003	8.38400E-002	1.01750E-001	1.40000E-004	4.44000E-003	4.08000E-003	0.00000E+000	1.26806E+001	1.26806E+001	4.10000E-003	0.00000E+000	1.27832E+001
Rubber Tired Dozers	9.74300E-002	1.01767E+000	4.32520E-001	1.13000E-003	4.67700E-002	4.30200E-002	0.00000E+000	9.94084E+001	9.94084E+001	3.21500E-002	0.00000E+000	1.00212E+002
Scrapers	5.90100E-002	6.21250E-001	4.60280E-001	1.14000E-003	2.43600E-002	2.24100E-002	0.00000E+000	1.00026E+002	1.00026E+002	3.23500E-002	0.00000E+000	1.00835E+002
Tractors/Loaders/Backhoes	6.32600E-002	6.40700E-001	9.42990E-001	1.32000E-003	3.11700E-002	2.86700E-002	0.00000E+000	1.15589E+002	1.15589E+002	3.73800E-002	0.00000E+000	1.16523E+002
Welders	2.72100E-002	1.54160E-001	1.83240E-001	2.80000E-004	5.77000E-003	5.77000E-003	0.00000E+000	2.06101E+001	2.06101E+001	2.20000E-003	0.00000E+000	2.06652E+001

Kopitar Cannabis Project - Revised v2

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.42421E-006	1.42421E-006	0.00000E+000	0.00000E+000	1.42221E-006
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.48794E-006	1.48794E-006	0.00000E+000	0.00000E+000	1.48594E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23528E-006	1.23528E-006	0.00000E+000	0.00000E+000	1.22537E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17564E-006	1.17564E-006	0.00000E+000	0.00000E+000	1.16621E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.36009E-006	1.36009E-006	0.00000E+000	0.00000E+000	1.34918E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.29261E-006	1.29261E-006	0.00000E+000	0.00000E+000	1.12982E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.37605E-006	1.37605E-006	0.00000E+000	0.00000E+000	9.10009E-007
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.32098E-006	1.32098E-006	1.36054E-003	0.00000E+000	1.31039E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.01616E-006	1.01616E-006	0.00000E+000	0.00000E+000	1.51202E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	7.88604E-007	7.88604E-007	0.00000E+000	0.00000E+000	7.82279E-007
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10655E-006	1.10655E-006	0.00000E+000	0.00000E+000	1.19746E-006
Scrapers	0.00000E+000	1.60963E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19969E-006	1.19969E-006	0.00000E+000	0.00000E+000	1.19007E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21119E-006	1.21119E-006	0.00000E+000	0.00000E+000	1.20148E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.45559E-006	1.45559E-006	0.00000E+000	0.00000E+000	9.67810E-007

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input

Kopitar Cannabis Project - Revised v2

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

Yes	Soil Stabilizer for unpaved Roads	PM10 Reduction	15.00	PM2.5 Reduction	15.00		
Yes	Replace Ground Cover of Area Disturbed	PM10 Reduction	10.00	PM2.5 Reduction	10.00		
Yes	Water Exposed Area	PM10 Reduction	61.00	PM2.5 Reduction	61.00	Frequency (per day)	3.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.05	0.01	0.05	0.01	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	1.21	0.33	1.21	0.33	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.35	0.14	0.12	0.05	0.65	0.65
Grading	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.29	0.15	0.10	0.05	0.65	0.65
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Kopitar Cannabis Project - Revised v2

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

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Architectural Coating	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	7.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation Selected	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.04	0.21		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			

Kopitar Cannabis Project - Revised v2

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

No	Land Use	Integrate Below Market Rate Housing	0.00				
	Land Use	Land Use SubTotal	0.00				
No	Neighborhood Enhancements	Improve Pedestrian Network					
No	Neighborhood Enhancements	Provide Traffic Calming Measures					
No	Neighborhood Enhancements	Implement NEV Network	0.00				
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00				
No	Parking Policy Pricing	Limit Parking Supply	0.00				
No	Parking Policy Pricing	Unbundle Parking Costs	0.00				
No	Parking Policy Pricing	On-street Market Pricing	0.00				
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00				
No	Transit Improvements	Provide BRT System	0.00				
No	Transit Improvements	Expand Transit Network	0.00				
No	Transit Improvements	Increase Transit Frequency	0.00				
	Transit Improvements	Transit Improvements Subtotal	0.00				
		Land Use and Site Enhancement Subtotal	0.00				
No	Commute	Implement Trip Reduction Program					
No	Commute	Transit Subsidy					
No	Commute	Implement Employee Parking "Cash Out"					
No	Commute	Workplace Parking Charge					
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00				

Kopitar Cannabis Project - Revised v2

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

No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
Yes	No Hearth	
Yes	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	150.00
No	Use Low VOC Paint (Residential Exterior)	150.00
Yes	Use Low VOC Paint (Non-residential Interior)	50.00
Yes	Use Low VOC Paint (Non-residential Exterior)	50.00
Yes	Use Low VOC Paint (Parking)	50.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Kopitar Cannabis Project - Revised v2

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

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

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

Water Mitigation Measures

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

No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Appendix - B

ISR FEE Estimate

Emissions Estimator Worksheet 4/8/2022

Applicant/Business Name:	**Woodlake Cannabis project**
Project Name:	**Kopitar Cannabis Facility**
Project Location:	**City of Woodlake, Tulare**
District Project ID No.:	

Project Construction Emissions

If applicant selected Construction Clean Fleet Mitigation Measure - Please select "Yes" from dropdown menu: **No**

			NOx					PM10				
Project Phase Name	**ISR Phase**	**Construction Start Date**	**Unmitigated Baseline[1] (TPY)**	**Mitigated Baseline[2] (TPY)**	**Achieved On-site Reductions[3] (tons)**	**Required Off-site Reductions[4] (tons)**	**Emission Reductions Required by Rule[5]**	**Unmitigated Baseline[1] (TPY)**	**Mitigated Baseline[2] (TPY)**	**Achieved On-site Reductions[3] (tons)**	**Required Off-site Reductions[4] (tons)**	**Emission Reductions Required by Rule[5]**
Phase 1	1	2/1/2026	3.2750	3.2750	0.0000	0.6550	0.6550	0.8700	0.8700	0.0000	0.3915	0.3915
	2				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
	3				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
	4				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
	5				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
	6				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
	7				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
	8				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
	9				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
	10				0.0000	0.0000	0.0000			0.0000	0.0000	0.0000
		Total	**3.2750**	**3.2750**	**0.0000**	**0.6550**	0.6550	**0.8700**	**0.8700**	**0.0000**	**0.3915**	0.3915

Total Achieved On-Site Reductions (tons)

ISR Phase	**NOx**	**PM10**
1	0.0000	0.0000
2	0.0000	0.0000
3	0.0000	0.0000
4	0.0000	0.0000
5	0.0000	0.0000
6	0.0000	0.0000
7	0.0000	0.0000
8	0.0000	0.0000
9	0.0000	0.0000
10	0.0000	0.0000
Total	**0.0000**	**0.0000**

Project Operations Emissions (Area + Mobile)

			NOx						PM10					
Project Phase Name	**ISR Phase**	**Operation Start Date**	**Unmitigated Baseline[1] (TPY)**	**Mitigated Baseline[2] (TPY)**	**Achieved On-site Reductions[3] (tons)**	**Required Off-site Reductions[4] (tons)**	**Total Emission Reductions Required by Rule[6]**	**Average Annual Emission Reductions Required by Rule[7]**	**Unmitigated Baseline[1] (TPY)**	**Mitigated Baseline[2] (TPY)**	**Achieved On-site Reductions[3] (tons)**	**Required Off-site Reductions[4] (tons)**	**Total Emission Reductions Required by Rule[6]**	**Average Annual Emission Reductions Required by Rule[7]**
	1	2/1/2026	5.9250	5.9250	0.0000	14.8125	14.8125	1.4813	6.6170	6.6170	0.0000	33.0850	33.0850	3.3085
	2				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
	3				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
	4				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
	5				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
	6				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
	7				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
	8				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
	9				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
	10				0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
		Total	**5.9250**	**5.9250**	**0.0000**	**14.8125**	**14.8125**	**1.4813**	**6.6170**	**6.6170**	**0.0000**	**33.0850**	**33.0850**	**3.3085**

Total Required Off-Site Reductions (tons)

ISR Phase	**NOx**	**PM10**
1	15.4675	33.4765
2	0.0000	0.0000
3	0.0000	0.0000
4	0.0000	0.0000
5	0.0000	0.0000
6	0.0000	0.0000
7	0.0000	0.0000
8	0.0000	0.0000
9	0.0000	0.0000
10	0.0000	0.0000
Total	**15.4675**	**33.4765**

Notes:

TPY: Tons Per Year

(1) **Unmitigated Baseline:** The project's baseline emissions generated with no on-site emission reduction measures.

(2) **Mitigated Baseline:** The project's baseline emissions generated after on-site emisison reduction measures have been applied.

(3) **Achieved On-site Reductions:** The project's emission reductions achieved after on-site emission reduction measures have been applied.

(4) **Required Off-site Reductions:** The project's remaining emission reductions required by Rule 9510 if on-site emission reduction measures did not achieive the required rule reductions.

(5) **Emission Reductions Required by Rule:** The project's emission reductions required (20% NOx and 45% PM10) for construction from the unmitigated baseline.

(6) **Total Emission Reductions Required by Rule:** The project's emission reductions required (33.3% NOx and 50% PM10) for operations from the unmitigated baseline over a 10-year period.

(7) **Average Annual Emission Reductions Required by Rule:** The project's total emission reduction for operations required by Rule 9510 divided by 10 years.

Fee Estimator Worksheet

4/8/2022

Applicant/Business Name:	**Woodlake Cannabis project**
Project Name:	**Kopitar Cannabis Facility**
Project Location:	**City of Woodlake, Tulare**
District Project ID No.:	

NOTES:

(1) The start date for each ISR phase is shown in TABLE 1.
(2) If you have chosen a **ONE-TIME** payment for the project, then the total amount due for ALL PHASES is shown under TABLE 2.
(3) If you have chosen a **DEFERRED** payment schedule or would like to propose a **DEFERRED** payment schedule for the project, the total amount due for a specific year is shown in TABLE 3 according to the schedule in TABLE 1.
***** If you have not provided a proposed payment date, the District sets a default invoice date of 60 days prior to start of the ISR phase.

If applicant selected Fee Deferral Schedule - Please select "Yes" from dropdown menu	Yes

TABLE 1 - PROJECT INFORMATION

Project Phase Name	ISR Phase	Start Date per Phase	Scheduled Payment Date*
Phase 1	1	2/1/26	1/31/2026
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
TOTAL (tons)			

TABLE 2 - No Fee Deferral Schedule (FDS) / **TABLE 2 - NO FDS**

ISR Phase	Pollutant	Required Offsite Reductions (tons)	2022
1	NOx	15.4675	15.4675
1	PM10	33.4765	33.4765
2	NOx	0.0000	0.0000
2	PM10	0.0000	0.0000
3	NOx	0.0000	0.0000
3	PM10	0.0000	0.0000
4	NOx	0.0000	0.0000
4	PM10	0.0000	0.0000
5	NOx	0.0000	0.0000
5	PM10	0.0000	0.0000
6	NOx	0.0000	0.0000
6	PM10	0.0000	0.0000
7	NOx	0.0000	0.0000
7	PM10	0.0000	0.0000
8	NOx	0.0000	0.0000
8	PM10	0.0000	0.0000
9	NOx	0.0000	0.0000
9	PM10	0.0000	0.0000
10	NOx	0.0000	0.0000
10	PM10	0.0000	0.0000
TOTAL (tons)	NOx	15.4675	15.4675
TOTAL (tons)	PM10	33.4765	33.4765

Offsite Fee by Pollutant ($)	NOx	$144,621
	PM10	$301,656
Administrative Fee ($)		$17,851.08
Offsite Fee ($)		$446,277.00
Total Project Offsite Fee ($)		$464,128.08

TABLE 3 - APPROVED FEE DEFERRAL SCHEDULE (FDS) BY PAYMENT YEAR

ISR Phase	Pollutant	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	NOx					15.4675				
1	PM10					33.4765				
2	NOx									
2	PM10									
3	NOx									
3	PM10									
4	NOx									
4	PM10									
5	NOx									
5	PM10									
6	NOx									
6	PM10									
7	NOx									
7	PM10									
8	NOx									
8	PM10									
9	NOx									
9	PM10									
10	NOx									
10	PM10									
TOTAL (tons)	NOx	0.0000	0.0000	0.0000	0.0000	15.4675	0.0000	0.0000	0.0000	0.0000
TOTAL (tons)	PM10	0.0000	0.0000	0.0000	0.0000	33.4765	0.0000	0.0000	0.0000	0.0000
Offsite Fee by Pollutant ($)	NOx	$0	$0	$0	$0	$144,621	$0	$0	$0	$0
Offsite Fee by Pollutant ($)	PM10	$0	$0	$0	$0	$301,656	$0	$0	$0	$0
Administrative Fee ($)		$0.00	$0.00	$0.00	$0.00	$17,851.08	$0.00	$0.00	$0.00	$0.00
Offsite Fee ($)		$0.00	$0.00	$0.00	$0.00	$464,128.08	$0.00	$0.00	$0.00	$0.00
Total Project Offsite Fee ($)					$464,128.08					

Rule 9510 Fee Schedule ($/ton)

Year	Nox	PM10
2022 and Beyond	$9,350	$9,011

This page intentionally left blank.

Appendix C

Ambient Air Quality Analysis Screening and Health Risk Screening Analysis

To: Crawford and Bowen Planning, Inc.
Attn: Emily Bowen
113 N. Church Street, Suite 302
Visalia, CA 93291
emily@candbplanning.com

From: Johnson Johnson and Miller Air Quality Consulting Services
Contact: Richard Miller, Managing Air Quality Specialist
rmiller.jjm.environmental@gmail.com
Kimber Johnson, Air Quality Specialist
kjohnson.jjm.environmental@gmail.com

Subject: Ambient Air Quality Analysis Screening and Health Risk Screening Analysis for the Woodlake Cannabis Project in Woodlake, CA

Date: August 21, 2022

Project Location and Description

The project applicant is proposing to develop a 1,500,000 square foot indoor cannabis cultivation and distribution facility and associated parking (project) in the City of Woodlake, California. The project includes remodeling and conversion of an existing distribution center into a cannabis grow facility, as well as new construction. Electricity will be used for lighting, cooling, and dehumidification.

The project address is 1099 W Ropes Avenue, located southeast of W Ropes Avenue and S Blair Road in the City of Woodlake, CA, in Tulare County. Within half of a mile north of the project there are 15 residences and 6 businesses in a rural setting with more than half of the land used for agriculture, primarily oranges and almonds. West of the project is all agricultural within half of a mile and primarily agricultural for many miles. South of the project there are seven (7) residences within approximately half of a mile of the project boundary, with the vast majority of this area agricultural. In addition, there is an existing residence that will remain, south of the northern and western quartile of the project site. There are no residences within half a mile east of the project site, but there over 150 homes and a 60-unit apartment complex within 1 mile of the project site to the east. The majority of the land use directly east of the project site is agricultural, primarily oranges.

The site plan for the proposed project is overlaid at the project location in Figure 1.

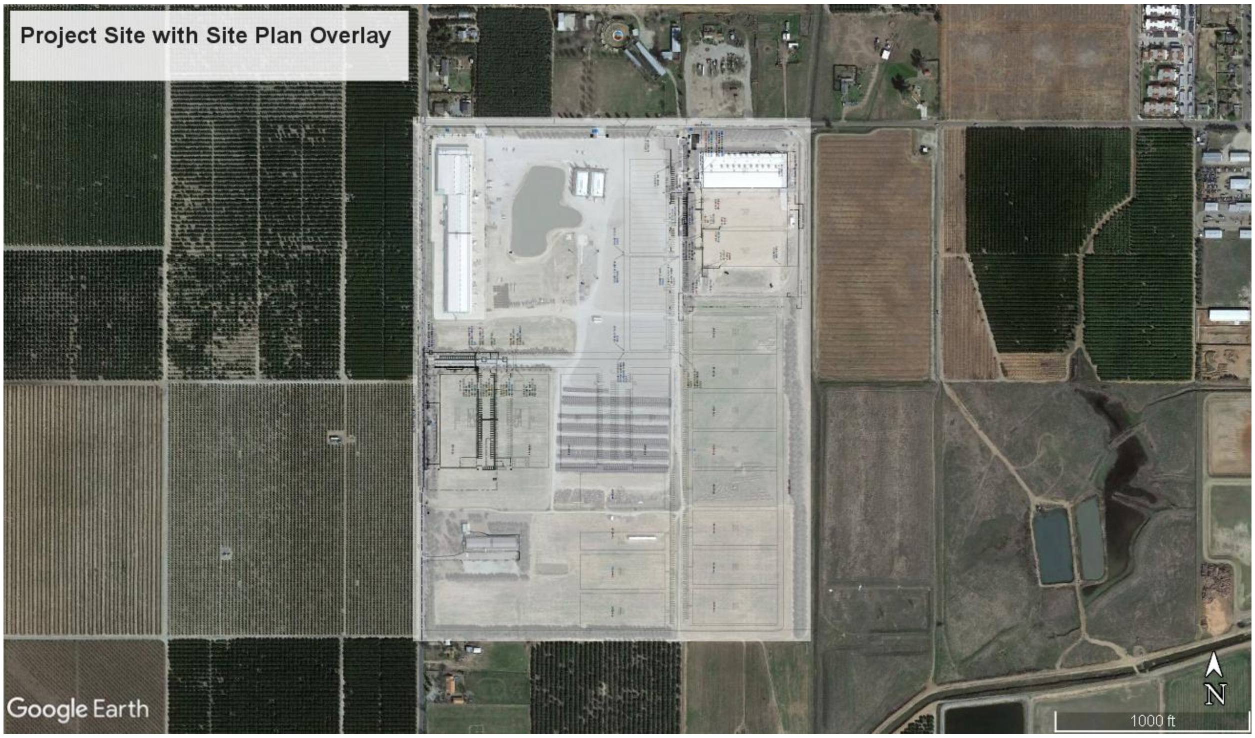


Figure 1 – Proposed Project Site Plan Overlay

Figure 2 shows the project site and an aerial view of the project's vicinity.

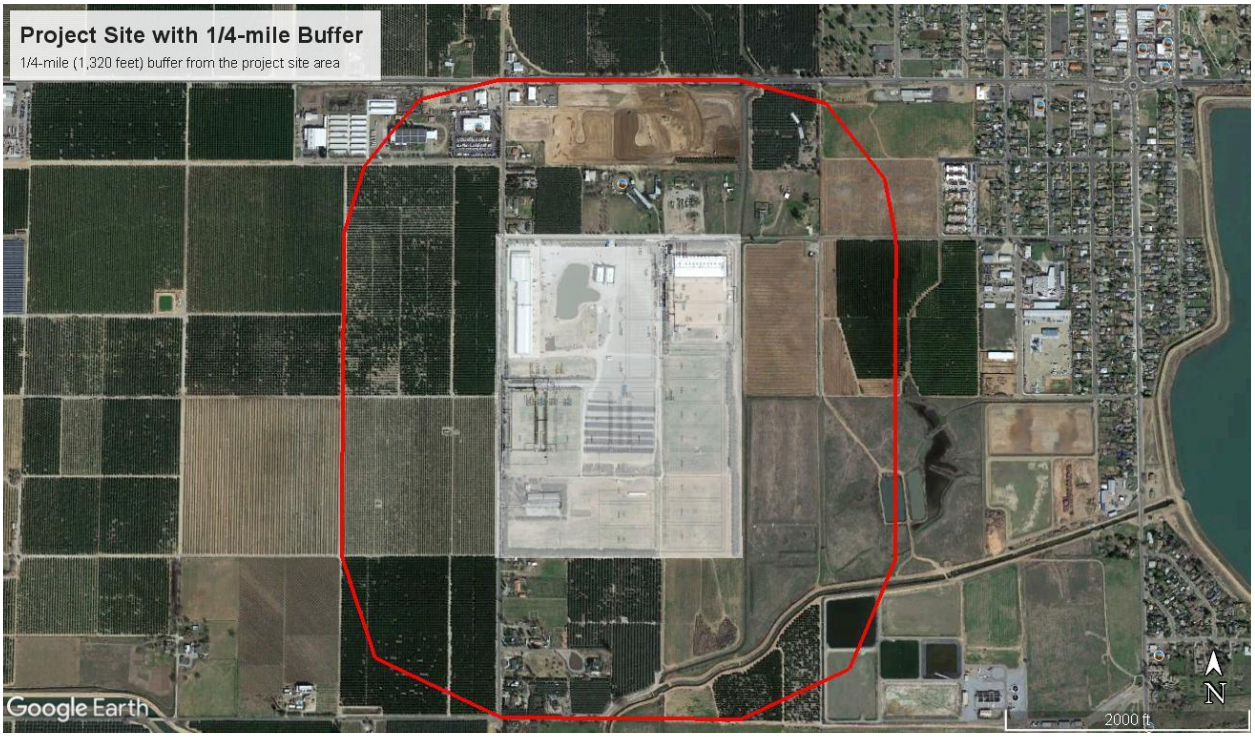


Figure 2 – Project Location and Vicinity Map

Purpose and Analysis

An ambient air quality screening analysis and a health risk screening analysis were prepared to evaluate potential localized air quality impacts and health risk impacts associated with the proposed project.

The Health Risk Assessments (HRAs) were prepared to evaluate potential air quality impacts related to the generation of toxic air contaminants (TACs) from construction and operations of the proposed Woodlake Cannabis Project located southeast of W Ropes Avenue and S Blair Road in Woodlake, CA.

The purpose of the HRAs are to assess potential elevated TAC concentrations and associated health impacts that could result from the proposed project, consistent with guidelines and methodologies from San Joaquin Valley Air Pollution Control District (SJVAPCD), California Air Resources Board (CARB), Office of Environmental Health Hazard Assessment (OEHHA), and the U.S. Environmental Protection Agency (U.S. EPA).

Ambient Air Quality Analysis: When assessing the significance of project-related impacts on air quality, the impacts may be significant when on-site emission increases from construction activities or operational activities exceed the 100-pounds-per-day screening level of any criteria pollutant after implementation of all enforceable mitigation measures. Projects that exceed the screening threshold would require an ambient air quality analysis using dispersion modeling to determine if projects would result in or contribute to a violation of the ambient air quality standard.

Toxic Air Contaminants: A Toxic Air Contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

The California Almanac of Emissions and Air Quality—2009 Edition presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data.[1] The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk.[2] In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Carcinogenic (cancer) risk is expressed as cancer cases per one million. Noncarcinogenic (acute and chronic) hazard indices (HI) are expressed as a ratio of expected exposure levels to acceptable exposure levels. The significance of the impacts of TAC emissions from both permitted and non-permitted equipment and activities is evaluated under a single threshold (currently 20 in one million).

The non-carcinogenic effects can be further divided into long-term (chronic) health effects such as birth defects, neurological damage, or genetic damage; and short-term (acute) effects such as eye irritation, respiratory irritation, and nausea. Projects with acute or chronic risk that exceed a HI score of 1 would result in a significant non-cancer impact.

Summary of Results

On the basis of the assessment provided herein:

- **Ambient Air Quality Analysis:** The project's construction and operational emissions would not exceed the applicable 100-pound-per-day screening thresholds for any criteria pollutant. Based on the SJVAPCD's guidance, the project's emissions would not cause an ambient air quality standard violation. Therefore, the project's localized criteria pollutant impacts from construction and long-term operations would be **less than significant.**

- **Health Risk Assessment:** TACs generated during construction and long-term operations of the project would not cause an exceed the applicable health risk thresholds for cancer risk, acute risk, or chronic risk. As such, the impact related to the project's potential to expose sensitive receptors to substantial pollutant concentrations would be **less than significant.**

The analysis addresses localized criteria pollutant, and toxic air contaminant emissions during project construction and operation using the CalEEMod 2020.4.0 emission model and EMFAC2021.

---

[1] California Air Resources Board (CARB). 2009. The California Almanac of Emissions and Air Quality—2009 Edition. Website: https://www.arb.ca.gov/aqd/almanac/almanac09/almanac2009 all.pdf.

[2] California Air Resources Board (CARB). 1998. The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines. Website: www.arb.ca.gov/toxics/dieseltac/factsht1.pdf.

Model Selection and Parameters

Project modeling quantifies emissions that will occur during construction and operation of the proposed project. The modeling is based on the size of the project, the timing of construction and operation, the type of land use, trip generation, energy consumption, and other factors.

- Basic Project Information
    - Region: Tulare County (the project is located in the Woodlake, CA)
    - Construction Schedule: September 1, 2022 – August 31, 2023 (based on Air Quality Report)
    - Start of Project Operations: 2024 (based on Air Quality Report)
- CalEEMod Assumptions used in the Ambient Air Quality Screening Analysis
    - Consistent with those presented in the Woodlake Cannabis Project Air Quality & Greenhouse Gas and Energy Impact Assessment prepared by VRPA Technologies Inc., dated June 2022.
- Operational Assumptions Used in the Operational HRA
    - Trip generation based on the most recent Transportation Impact Analysis (see Attachment B of this memorandum)
    - On-site vehicle speeds: 5 miles per hour
    - Off-site vehicle speeds: weighted average of 5-25 miles per hour

The analysis addresses localized criteria pollutant and toxic air contaminant emissions during project construction and operation using the CalEEMod 2020.4.0 emission model and EMFAC 2021.

The following criteria air pollutants were assessed in this analysis: reactive organic gases (ROG),[3] oxides of nitrogen (NO_X), carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). Note that the proposed project would emit ozone precursors ROG and NO_X. However, the proposed project would not directly emit ozone since it is formed in the atmosphere during the photochemical reaction of ozone precursors.

The health risk screening uses PM_{10} exhaust as a surrogate for DPM per SJVAPCD guidance.

Dispersion modeling

An air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. The air dispersion model applied in this assessment was the United States Environmental Protection Agency (U.S. EPA) AERMOD (version 21112) air dispersion model. Specifically, AERMOD was used to estimate levels of air emissions at sensitive receptor locations from potential sources of project-generated TACs. The use of AERMOD provides a refined methodology for estimating construction impacts by utilizing long-term, measured representative meteorological data for the project site and a representative construction schedule.

[3] Note: Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. VOC = volatile organic compounds

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. Direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. Terrain elevations were obtained for the project site using the AERMAP model, the AERMOD terrain data pre-processor. The air dispersion model assessment used meteorological data from the Visalia 93144 Station. The meteorological data used was preprocessed for use with AERMOD by the SJVAPCD and included data for the years 2007 to 2010; all years were used in the assessment. To evaluate the proposed project's localized impacts at the point of maximum impact, all receptors were placed within the breathing zone at 1.5 meters above ground level.

Air Toxics Generated during Operations—DPM

The project would generate passenger vehicle and truck trips from visitors traveling to and from the project site. The main source of DPM from the long-term operations of the proposed project would be from combustion of diesel fuel in diesel-powered engines in on-road trucks. On-site motor vehicle emissions refer to DPM exhaust emissions from the motor vehicle traffic that would travel and idle within the project site each day.

Emission factors are assigned to the expected vehicle mix as a function of vehicle age, vehicle class, speed, and fuel type. The operational fleet mix and daily diesel truck trips used to assess emissions from the proposed project are included as part of Attachment B.

Each operational emission source to be evaluated requires geometrical and emission release specifications for use in the air dispersion model. The emission source configurations applied in this assessment of operational DPM emissions are shown in Attachment B.

Operational emissions for the proposed project were assessed assuming the first year of operations would occur in 2024. Exhaust emissions of DPM (as PM_{10} exhaust) were estimated using EMFAC2021. The emission factors, AERMOD data, and emission estimation spreadsheets used to estimate motor vehicle DPM emissions during project operations are provided in Attachment B.

Cancer Risk

The model was run to obtain annual average concentration in micrograms per cubic meter [µg/m3] at future on-site sensitive residential receptors. Consistent with SJVAPCD guidance, a health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year exposure scenario. Cancer risk calculations were completed using HARP2. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA Human Health Evaluation Manual (1991) and the Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual (2015).[4,5] A summary of the methodology is provided below.

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations are calculated in HARP2 by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home (for residents only), and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body

---

[4] U.S. Environmental Protection Agency (EPA). 1991. Human Health Evaluation Manual. Website: https://www.epa.gov/sites/default/files/2015-11/documents/defaultExposureParams.pdf. Accessed May 20, 2022.

[5] California Office of Environmental Health Hazards Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. February. Website: http://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed May 20, 2022.

weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function of the breathing rate, the exposure frequency, and the concentration of a substance in the air. For residential exposure, the breathing rates are determined for specific age groups. Consistent with SJVAPCD guidance, risks were determined starting in the third trimester.

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. The following FAH values were used in this assessment:

- From the third trimester to age <2 years: 100 percent (the OEHHA-recommended value is 85 percent of time is spent at home; however, 100 percent was assumed in order to present a conservative analysis);
- From age 2 through <16 years: 100 percent (the OEHHA-recommended value is 72 percent of time is spent at home; however, 100 percent was assumed in order to present a conservative analysis); and
- From age 16 years and greater: 100 percent (the OEHHA-recommended value is 73 percent of time is spent at home; however, 100 percent was assumed in order to present a conservative analysis).

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$Risk_{inh\text{-}res}$ = ($Dose_{air}$ * CPH * ASF * ED/AT * FAH)

Where:

$Risk_{inh\text{-}res}$	=	residential inhalation cancer risk (potential chances per million)
$Dose_{air}$	=	daily dose through inhalation (mg/kg-day)
CPF	=	inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	age sensitivity factor for a specified age group (unitless)
ED	=	exposure duration (in years) for a specified age group
AT	=	averaging time of lifetime cancer risk (years)
FAH	=	fraction of time spent at home (unitless)

Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation can be used to determine the non-cancer risk:

Hazard Quotient = C_i/REL_i

Where:

C_i	=	Concentration in the air of substance i (annual average concentration in µg/m^3)
REL_i	=	Chronic noncancer Reference Exposure Level for substance i (µg/m^3)

The non-cancer chronic hazard index was calculated in HARP2. The primary source of the emissions responsible for chronic risk are from diesel trucks. DPM does not have an acute risk factor; however, HARP2 was run to obtain the following for each receptor: cancer risk, chronic hazard index, and acuate hazard index. As DPM does not have an acute risk factor, the acuate hazard index for all modeled receptors was found to be zero.

IMPACT ANALYSIS—CRITERIA POLLUTANT AMBIENT AIR QUALITY ANALYSIS

Significance Threshold

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures would require additional analysis to determine if the preparation of an ambient air quality analysis is needed. The criteria pollutants of concern for localized impact in the Air Basin are PM_{10}, $PM_{2.5}$, NO_X, and CO. There is no localized emission standard for ROG and most types of ROG are not toxic and have no health-based standard; however, ROG was included for informational purposes only.

Sensitive Receptors

Health risks were estimated for sensitive receptors located within approximately ¼-mile of the project boundary and extended to the nearest sensitive receptors in each direction. Sensitive receptors are facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of sensitive receptors include schools, hospitals, and residential areas.

Criteria Pollutant Air Quality Impact Screening Analysis

Emissions occurring at or near the project have the potential to create a localized impact, also referred to as an air pollutant hotspot. Localized emissions are considered significant if when combined with background emissions, they would result in exceedance of any health-based air quality standard. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard.

An analysis of maximum daily emissions during construction and operation was conducted using CalEEMod to determine if emissions would exceed 100 pounds per day for any pollutant of concern. The maximum daily operational emissions would occur at project buildout, which modeled in earliest year of operations (2024). Operational emissions include those generated on-site by area sources such as consumer products, and landscape maintenance, energy use from natural gas combustion, and motor vehicles operation at the project site. Motor vehicle emissions are estimated for on-site operations and travel within one (1) mile of the site.

The results of the construction screening analysis are presented in Table 1. The highest daily NO_X, PM_{10}, and $PM_{2.5}$, emissions occur during grading activities. The highest ROG emissions occur during application of architectural coatings.

Table 1: Localized Concentrations of ROG, PM_{10}, $PM_{2.5}$, CO, and NO_X for Construction

Source	On-site Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily 2022	3.21	33.10	20.72	10.47	6.03
Maximum Daily 2023	3.36	34.53	28.22	10.13	5.71
Maximum Daily 2024	3.08	18.96	25.04	1.49	0.83
Maximum Daily 2025	2.87	17.92	24.62	1.40	0.75
Maximum Daily 2026	128.94	17.86	24.33	1.40	0.75
Maximum Daily On-site Emissions	**128.94**	**34.53**	**28.22**	**10.47**	**6.03**
Significance Thresholds	—	100	100	100	100
Exceed Significance Thresholds?	—	No	No	No	No

Note: Overlap of construction activities is based on the construction schedule shown in Attachment A; overlap of construction activities is not anticipated to occur.

Source of Emissions: Modeling Assumptions and Results (Attachment A).

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed August 1, 2022.

As shown in Table 1, construction emissions are below the applicable screening thresholds and, therefore, are less than significant on a project basis.

The maximum daily operational emissions are shown by source in Table 2.

Table 2: Localized Concentrations of ROG, PM_{10}, $PM_{2.5}$, CO, and NO_X for Operations

Source	Localized Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	34.16	0.00	0.22	0.00	0.00
Energy	0.74	6.70	5.63	0.51	0.51
Mobile (Vehicles)	21.54	15.78	90.65	7.53	2.08
Total	**56.44**	**22.48**	**96.50**	**8.04**	**2.59**
Significance Thresholds	—	100	100	100	100
Exceed Significance Thresholds?	—	No	No	No	No

Source of Emissions: Modeling Assumptions and Results (Attachment A). Maximum daily emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ were highest in the Winter scenario, while maximum daily emissions of ROG were highest in the Summer scenario.

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed August 1, 2022.

As shown in Table 2, operational emissions are below the significance thresholds and, therefore, are less than significant on a project basis.

IMPACT ANALYSIS—HEALTH RISK IMPACTS FROM TOXIC AIR POLLUTANT EMISSIONS

For reasons previously discussed, an analysis of TACs (including DPM) was performed using the EPA-approved AERMOD model. AERMOD version 21112 was used for this analysis. Health risk calculations were completed using HARP2. The full operational HRA is included as Attachment B of this memorandum.

<u>Significance Thresholds</u>

The SJVAPCD thresholds of significance for cancer and non-cancer risk are listed in Table 3.

Table 3: Health Risk Assessment Thresholds

Health Risk Metric	Applicable Threshold of Significance
Maximum Cancer Risk (Risk per Million)	Maximally exposed individual receptor equals or exceeds 20 in one million
Non-Cancer Hazard Index	Maximally exposed individual receptor equals or exceeds 1.0

Source of Thresholds: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. February 19. Website: https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed August 21, 2022.

<u>Summary of Results (Health Risk Impacts)</u>

Results of the health risk analysis are summarized in Table 4 and Table 5. The complete construction and operational HRAs prepared for the proposed project, including HARP2 calculations and AERMOD output data, are included in Attachment B of this memorandum. SJVAPCD considers impacts from construction and operations separately. Because breathing rates and age sensitivity factors are highest in the zero (0) to two (2) years age of life, the combined health risk of construction and operations would be less than the sum of the health risks for construction and operations calculated separately (which both assume the third trimester as the start of exposure). Consistent with SJVAPCD guidance, the health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year exposure scenario for project operations.

Table 4: Summary of the Health Impacts from Construction of Proposed Project

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acuate Non-Cancer Hazard Index
Exposure at the MER During Construction (from DPM Emissions)	6.58	0.00316	0.00000
Applicable Threshold of Significance	**20**	**1**	**1**
Threshold Exceeded?	**No**	**No**	**No**
Notes: MER = Maximally Exposed Receptor DPM = Diesel Particulate Matter Woodlake Cannabis Project – Construction DPM MER UTM: (310260.20, 4031543.83) Source: Attachment B.			

As shown in Table 4, project construction would not exceed the cancer risk, chronic hazard, or acute hazard threshold levels. The primary source of the emissions responsible for chronic risk are from diesel-powered off-road construction equipment and diesel trucks. DPM does not have an acute risk factor. Since the project does not exceed the applicable SJVAPCD thresholds for cancer risk, acute risk, or chronic risk, the impact related to the project's potential to expose sensitive receptors to substantial pollutant concentrations from the project's generation of TACs during project construction would be less than significant.

Table 5: Summary of the Health Impacts from Operations of the Proposed Project (70-year Scenario)

Exposure Scenario	Maximum Cancer Risk (Risk per Million)	Chronic Non-Cancer Hazard Index	Acuate Non-Cancer Hazard Index
70-Year Exposure at the MER (DPM Emissions during Operations)	13.58	0.00259	0.00000
Applicable Threshold of Significance	**20**	**1**	**1**
Threshold Exceeded?	**No**	**No**	**No**
Notes: MER = Maximally Exposed Receptor DPM = Diesel Particulate Matter Woodlake Cannabis Project – Operations DPM MER UTM: (310219.12, 4031545.11) Source: Attachment B.			

As shown in Table 5, operations of the proposed project would not exceed the cancer risk, chronic risk, or acute risk threshold levels. Therefore, the project's potential to expose sensitive receptors to substantial pollutant concentrations from the project's generation of TACs during project operations would be less than significant.

Attachments

Attachment A – Ambient Air Quality Analysis Screening Analysis Modeling Files

Attachment B – Construction and Operational Health Risk Assessments

ATTACHMENT A

Ambient Air Quality Analysis Screening Analysis Modeling Files

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

Kopitar Cannabis Project - Localized Screening Analysis

San Joaquin Valley Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1,500.00	1000sqft	34.44	1,500,000.00	0
Parking Lot	700.00	Space	6.30	280,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	7			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assumptions Consitent with the AQ Report Prepared by VRPA Technologies, Inc., dated June 2022

Land Use -

Trips and VMT - Trip lengths updated to 0.75 mile to account for on-site and localized emissions

Architectural Coating - SJVAPCD Rule 4601 Architectural Coatings

Vehicle Trips - Trip lengths updated to 1 mile to account for on-site and localized emissions

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - SJVAPCD Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation - Compliance with SJVAPCD Regulation VIII

Area Mitigation -

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

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblVehicleTrips	CC_TL	6.60	1.00

tblVehicleTrips	CNW_TL	6.60	1.00
tblVehicleTrips	CW_TL	14.70	1.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2102	33.0961	20.7024	0.0390	19.6709	1.6127	21.2836	10.1062	1.4837	11.5899	0.0000	3,760.5764	3,760.5764	1.1946	1.4000e-003	3,787.2853
2023	3.3625	34.5283	28.1870	0.0623	19.6709	1.4247	20.9370	10.1062	1.3107	11.2710	0.0000	6,029.2774	6,029.2774	1.9467	0.2502	6,078.3815
2024	3.0845	18.5502	23.8541	0.0453	0.8535	0.6324	1.4859	0.2343	0.5949	0.8292	0.0000	4,460.4404	4,460.4404	0.7029	0.2438	4,550.6558
2025	2.8675	17.5178	23.4732	0.0448	0.8535	0.5463	1.3998	0.2343	0.5140	0.7483	0.0000	4,415.0221	4,415.0221	0.6919	0.2372	4,502.9966
2026	128.9424	17.4625	23.2210	0.0444	0.8535	0.5460	1.3995	0.2343	0.5137	0.7480	0.0000	4,371.1158	4,371.1158	0.7152	0.2309	4,457.0550
Maximum	**128.9424**	**34.5283**	**28.1870**	**0.0623**	**19.6709**	**1.6127**	**21.2836**	**10.1062**	**1.4837**	**11.5899**	**0.0000**	**6,029.2774**	**6,029.2774**	**1.9467**	**0.2502**	**6,078.3815**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2102	33.0961	20.7024	0.0390	8.8595	1.6127	10.4722	4.5498	1.4837	6.0335	0.0000	3,760.576 4	3,760.576 4	1.1946	1.4000e-003	3,787.285 3
2023	3.3625	34.5283	28.1870	0.0623	8.8595	1.4247	10.1257	4.5498	1.3107	5.7147	0.0000	6,029.277 4	6,029.277 4	1.9467	0.2502	6,078.381 5
2024	3.0845	18.5502	23.8541	0.0453	0.8535	0.6324	1.4859	0.2343	0.5949	0.8292	0.0000	4,460.440 4	4,460.440 4	0.7029	0.2438	4,550.655 8
2025	2.8675	17.5178	23.4732	0.0448	0.8535	0.5463	1.3998	0.2343	0.5140	0.7483	0.0000	4,415.022 1	4,415.022 1	0.6919	0.2372	4,502.996 6
2026	128.9424	17.4625	23.2210	0.0444	0.8535	0.5460	1.3995	0.2343	0.5137	0.7480	0.0000	4,371.115 8	4,371.115 8	0.7152	0.2309	4,457.055 0
Maximum	**128.9424**	**34.5283**	**28.1870**	**0.0623**	**8.8595**	**1.6127**	**10.4722**	**4.5498**	**1.4837**	**6.0335**	**0.0000**	**6,029.277 4**	**6,029.277 4**	**1.9467**	**0.2502**	**6,078.381 5**

	ROG	**NOx**	**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**	**51.60**	**0.00**	**46.49**	**53.13**	**0.00**	**44.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	34.1567	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Energy	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.2901	8,040.2901	0.1541	0.1474	8,088.0695
Mobile	21.5420	14.0919	75.0346	0.0962	7.4241	0.1009	7.5250	1.9827	0.0942	2.0769		9,817.0344	9,817.0344	1.3115	0.9768	10,140.9005
Total	**56.4357**	**20.7941**	**80.8871**	**0.1364**	**7.4241**	**0.6109**	**8.0350**	**1.9827**	**0.6042**	**2.5869**		**17,857.8060**	**17,857.8060**	**1.4668**	**1.1242**	**18,229.4829**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	34.1567	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Energy	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.2901	8,040.2901	0.1541	0.1474	8,088.0695
Mobile	21.5420	14.0919	75.0346	0.0962	7.4241	0.1009	7.5250	1.9827	0.0942	2.0769		9,817.0344	9,817.0344	1.3115	0.9768	10,140.9005
Total	**56.4357**	**20.7941**	**80.8871**	**0.1364**	**7.4241**	**0.6109**	**8.0350**	**1.9827**	**0.6042**	**2.5869**		**17,857.8060**	**17,857.8060**	**1.4668**	**1.1242**	**18,229.4829**

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

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	10/1/2022	12/9/2022	5	50	
2	Site Preparation	Site Preparation	12/10/2022	1/20/2023	5	30	
3	Grading	Grading	1/21/2023	5/5/2023	5	75	
4	Building Construction	Building Construction	5/6/2023	3/6/2026	5	740	
5	Paving	Paving	3/7/2026	5/22/2026	5	55	
6	Architectural Coating	Architectural Coating	5/23/2026	8/7/2026	5	55	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 6.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,250,000; Non-Residential Outdoor: 750,000; Striped Parking Area: 16,800 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Grading	Excavators		2	8.00	158	0.38
Grading	Graders		1	8.00	187	0.41
Grading	Rubber Tired Dozers		1	8.00	247	0.40
Grading	Scrapers		2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Building Construction	Cranes		1	7.00	231	0.29
Building Construction	Forklifts		3	8.00	89	0.20
Building Construction	Generator Sets		1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes		3	7.00	97	0.37
Building Construction	Welders		1	8.00	46	0.45
Paving	Pavers		2	8.00	130	0.42
Paving	Paving Equipment		2	8.00	132	0.36
Paving	Rollers		2	8.00	80	0.38
Architectural Coating	Air Compressors		1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	748.00	292.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	150.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0334	0.0105	0.1084	1.4000e-004	0.0115	1.3000e-004	0.0117	3.0800e-003	1.2000e-004	3.2000e-003		13.7952	13.7952	2.0500e-003	1.1600e-003	14.1932
Total	**0.0334**	**0.0105**	**0.1084**	**1.4000e-004**	**0.0115**	**1.3000e-004**	**0.0117**	**3.0800e-003**	**1.2000e-004**	**3.2000e-003**		**13.7952**	**13.7952**	**2.0500e-003**	**1.1600e-003**	**14.1932**

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0334	0.0105	0.1084	1.4000e-004	0.0115	1.3000e-004	0.0117	3.0800e-003	1.2000e-004	3.2000e-003		13.7952	13.7952	2.0500e-003	1.1600e-003	14.1932
Total	**0.0334**	**0.0105**	**0.1084**	**1.4000e-004**	**0.0115**	**1.3000e-004**	**0.0117**	**3.0800e-003**	**1.2000e-004**	**3.2000e-003**		**13.7952**	**13.7952**	**2.0500e-003**	**1.1600e-003**	**14.1932**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0401	0.0126	0.1300	1.6000e-004	0.0139	1.6000e-004	0.0140	3.7000e-003	1.5000e-004	3.8400e-003		16.5543	16.5543	2.4600e-003	1.4000e-003	17.0319
Total	**0.0401**	**0.0126**	**0.1300**	**1.6000e-004**	**0.0139**	**1.6000e-004**	**0.0140**	**3.7000e-003**	**1.5000e-004**	**3.8400e-003**		**16.5543**	**16.5543**	**2.4600e-003**	**1.4000e-003**	**17.0319**

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**8.8457**	**1.6126**	**10.4582**	**4.5461**	**1.4836**	**6.0297**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0401	0.0126	0.1300	1.6000e-004	0.0139	1.6000e-004	0.0140	3.7000e-003	1.5000e-004	3.8400e-003		16.5543	16.5543	2.4600e-003	1.4000e-003	17.0319
Total	**0.0401**	**0.0126**	**0.1300**	**1.6000e-004**	**0.0139**	**1.6000e-004**	**0.0140**	**3.7000e-003**	**1.5000e-004**	**3.8400e-003**		**16.5543**	**16.5543**	**2.4600e-003**	**1.4000e-003**	**17.0319**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0367	0.0114	0.1222	1.6000e-004	0.0139	1.5000e-004	0.0140	3.7000e-003	1.4000e-004	3.8300e-003		16.0197	16.0197	2.2500e-003	1.3200e-003	16.4681
Total	**0.0367**	**0.0114**	**0.1222**	**1.6000e-004**	**0.0139**	**1.5000e-004**	**0.0140**	**3.7000e-003**	**1.4000e-004**	**3.8300e-003**		**16.0197**	**16.0197**	**2.2500e-003**	**1.3200e-003**	**16.4681**

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0367	0.0114	0.1222	1.6000e-004	0.0139	1.5000e-004	0.0140	3.7000e-003	1.4000e-004	3.8300e-003		16.0197	16.0197	2.2500e-003	1.3200e-003	16.4681
Total	**0.0367**	**0.0114**	**0.1222**	**1.6000e-004**	**0.0139**	**1.5000e-004**	**0.0140**	**3.7000e-003**	**1.4000e-004**	**3.8300e-003**		**16.0197**	**16.0197**	**2.2500e-003**	**1.3200e-003**	**16.4681**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0407	0.0127	0.1358	1.8000e-004	0.0154	1.7000e-004	0.0156	4.1100e-003	1.5000e-004	4.2600e-003		17.7997	17.7997	2.5000e-003	1.4600e-003	18.2979
Total	**0.0407**	**0.0127**	**0.1358**	**1.8000e-004**	**0.0154**	**1.7000e-004**	**0.0156**	**4.1100e-003**	**1.5000e-004**	**4.2600e-003**		**17.7997**	**17.7997**	**2.5000e-003**	**1.4600e-003**	**18.2979**

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1416**	**1.4245**	**5.5661**	**1.6442**	**1.3105**	**2.9547**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0407	0.0127	0.1358	1.8000e-004	0.0154	1.7000e-004	0.0156	4.1100e-003	1.5000e-004	4.2600e-003		17.7997	17.7997	2.5000e-003	1.4600e-003	18.2979
Total	**0.0407**	**0.0127**	**0.1358**	**1.8000e-004**	**0.0154**	**1.7000e-004**	**0.0156**	**4.1100e-003**	**1.5000e-004**	**4.2600e-003**		**17.7997**	**17.7997**	**2.5000e-003**	**1.4600e-003**	**18.2979**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2195	4.6880	2.9293	0.0121	0.2779	0.0131	0.2910	0.0807	0.0125	0.0933		1,282.8369	1,282.8369	0.0136	0.1955	1,341.4325
Worker	1.5234	0.4742	5.0782	6.5900e-003	0.5756	6.2100e-003	0.5819	0.1536	5.7100e-003	0.1593		665.7078	665.7078	0.0933	0.0547	684.3410
Total	**1.7428**	**5.1622**	**8.0075**	**0.0187**	**0.8535**	**0.0193**	**0.8728**	**0.2343**	**0.0183**	**0.2525**		**1,948.5447**	**1,948.5447**	**0.1069**	**0.2502**	**2,025.7736**

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2195	4.6880	2.9293	0.0121	0.2779	0.0131	0.2910	0.0807	0.0125	0.0933		1,282.8369	1,282.8369	0.0136	0.1955	1,341.4325
Worker	1.5234	0.4742	5.0782	6.5900e-003	0.5756	6.2100e-003	0.5819	0.1536	5.7100e-003	0.1593		665.7078	665.7078	0.0933	0.0547	684.3410
Total	**1.7428**	**5.1622**	**8.0075**	**0.0187**	**0.8535**	**0.0193**	**0.8728**	**0.2343**	**0.0183**	**0.2525**		**1,948.5447**	**1,948.5447**	**0.1069**	**0.2502**	**2,025.7736**

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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.698 9**	**2,555.698 9**	**0.6044**		**2,570.807 7**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2156	4.6751	2.8849	0.0119	0.2779	0.0132	0.2910	0.0807	0.0126	0.0933		1,260.962 6	1,260.962 6	0.0133	0.1921	1,318.539 6
Worker	1.3973	0.4313	4.8024	6.3700e-003	0.5756	5.8800e-003	0.5815	0.1536	5.4100e-003	0.1590		643.7789	643.7789	0.0853	0.0517	661.3085
Total	**1.6129**	**5.1064**	**7.6873**	**0.0183**	**0.8535**	**0.0191**	**0.8726**	**0.2343**	**0.0180**	**0.2523**		**1,904.741 5**	**1,904.741 5**	**0.0985**	**0.2438**	**1,979.848 1**

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2156	4.6751	2.8849	0.0119	0.2779	0.0132	0.2910	0.0807	0.0126	0.0933		1,260.9626	1,260.9626	0.0133	0.1921	1,318.5396
Worker	1.3973	0.4313	4.8024	6.3700e-003	0.5756	5.8800e-003	0.5815	0.1536	5.4100e-003	0.1590		643.7789	643.7789	0.0853	0.0517	661.3085
Total	**1.6129**	**5.1064**	**7.6873**	**0.0183**	**0.8535**	**0.0191**	**0.8726**	**0.2343**	**0.0180**	**0.2523**		**1,904.7415**	**1,904.7415**	**0.0985**	**0.2438**	**1,979.8481**

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2123	4.6539	2.8456	0.0117	0.2779	0.0132	0.2910	0.0807	0.0126	0.0933		1,236.6332	1,236.6332	0.0130	0.1883	1,293.0687
Worker	1.2878	0.3942	4.5430	6.1500e-003	0.5756	5.6000e-003	0.5813	0.1536	5.1600e-003	0.1587		621.9145	621.9145	0.0780	0.0489	638.4299
Total	**1.5001**	**5.0481**	**7.3886**	**0.0179**	**0.8535**	**0.0188**	**0.8723**	**0.2343**	**0.0178**	**0.2520**		**1,858.5477**	**1,858.5477**	**0.0909**	**0.2372**	**1,931.4985**

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2123	4.6539	2.8456	0.0117	0.2779	0.0132	0.2910	0.0807	0.0126	0.0933		1,236.6332	1,236.6332	0.0130	0.1883	1,293.0687
Worker	1.2878	0.3942	4.5430	6.1500e-003	0.5756	5.6000e-003	0.5813	0.1536	5.1600e-003	0.1587		621.9145	621.9145	0.0780	0.0489	638.4299
Total	**1.5001**	**5.0481**	**7.3886**	**0.0179**	**0.8535**	**0.0188**	**0.8723**	**0.2343**	**0.0178**	**0.2520**		**1,858.5477**	**1,858.5477**	**0.0909**	**0.2372**	**1,931.4985**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2094	4.6298	2.8119	0.0115	0.2779	0.0131	0.2909	0.0807	0.0125	0.0932		1,211.9995	1,211.9995	0.0127	0.1844	1,267.2786
Worker	1.1906	0.3630	4.3244	5.9600e-003	0.5756	5.3500e-003	0.5810	0.1536	4.9200e-003	0.1585		602.6419	602.6419	0.0716	0.0465	618.2783
Total	**1.4000**	**4.9928**	**7.1363**	**0.0174**	**0.8535**	**0.0184**	**0.8719**	**0.2343**	**0.0174**	**0.2517**		**1,814.6415**	**1,814.6415**	**0.0843**	**0.2309**	**1,885.5569**

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2094	4.6298	2.8119	0.0115	0.2779	0.0131	0.2909	0.0807	0.0125	0.0932		1,211.9995	1,211.9995	0.0127	0.1844	1,267.2786
Worker	1.1906	0.3630	4.3244	5.9600e-003	0.5756	5.3500e-003	0.5810	0.1536	4.9200e-003	0.1585		602.6419	602.6419	0.0716	0.0465	618.2783
Total	**1.4000**	**4.9928**	**7.1363**	**0.0174**	**0.8535**	**0.0184**	**0.8719**	**0.2343**	**0.0174**	**0.2517**		**1,814.6415**	**1,814.6415**	**0.0843**	**0.2309**	**1,885.5569**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.3001					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2153**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0239	7.2800e-003	0.0867	1.2000e-004	0.0115	1.1000e-004	0.0117	3.0800e-003	1.0000e-004	3.1800e-003		12.0851	12.0851	1.4400e-003	9.3000e-004	12.3986
Total	**0.0239**	**7.2800e-003**	**0.0867**	**1.2000e-004**	**0.0115**	**1.1000e-004**	**0.0117**	**3.0800e-003**	**1.0000e-004**	**3.1800e-003**		**12.0851**	**12.0851**	**1.4400e-003**	**9.3000e-004**	**12.3986**

3.6 Paving - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.3001					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2153**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0239	7.2800e-003	0.0867	1.2000e-004	0.0115	1.1000e-004	0.0117	3.0800e-003	1.0000e-004	3.1800e-003		12.0851	12.0851	1.4400e-003	9.3000e-004	12.3986
Total	**0.0239**	**7.2800e-003**	**0.0867**	**1.2000e-004**	**0.0115**	**1.1000e-004**	**0.0117**	**3.0800e-003**	**1.0000e-004**	**3.1800e-003**		**12.0851**	**12.0851**	**1.4400e-003**	**9.3000e-004**	**12.3986**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	128.5328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**128.7036**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.2388	0.0728	0.8672	1.2000e-003	0.1154	1.0700e-003	0.1165	0.0308	9.9000e-004	0.0318		120.8507	120.8507	0.0144	9.3200e-003	123.9863
Total	**0.2388**	**0.0728**	**0.8672**	**1.2000e-003**	**0.1154**	**1.0700e-003**	**0.1165**	**0.0308**	**9.9000e-004**	**0.0318**		**120.8507**	**120.8507**	**0.0144**	**9.3200e-003**	**123.9863**

3.7 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	128.5328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**128.7036**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.2388	0.0728	0.8672	1.2000e-003	0.1154	1.0700e-003	0.1165	0.0308	9.9000e-004	0.0318		120.8507	120.8507	0.0144	9.3200e-003	123.9863
Total	**0.2388**	**0.0728**	**0.8672**	**1.2000e-003**	**0.1154**	**1.0700e-003**	**0.1165**	**0.0308**	**9.9000e-004**	**0.0318**		**120.8507**	**120.8507**	**0.0144**	**9.3200e-003**	**123.9863**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	21.5420	14.0919	75.0346	0.0962	7.4241	0.1009	7.5250	1.9827	0.0942	2.0769		9,817.0344	9,817.0344	1.3115	0.9768	10,140.9005
Unmitigated	21.5420	14.0919	75.0346	0.0962	7.4241	0.1009	7.5250	1.9827	0.0942	2.0769		9,817.0344	9,817.0344	1.3115	0.9768	10,140.9005

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	5,895.00	9,630.00	7635.00	2,430,480	2,430,480
Parking Lot	0.00	0.00	0.00		
Total	5,895.00	9,630.00	7,635.00	2,430,480	2,430,480

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
General Heavy Industry	1.00	1.00	1.00	59.00	28.00	13.00	100	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Parking Lot	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.290 1	8,040.290 1	0.1541	0.1474	8,088.069 5
NaturalGas Unmitigated	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.290 1	8,040.290 1	0.1541	0.1474	8,088.069 5

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	68342.5	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.2901	8,040.2901	0.1541	0.1474	8,088.0695
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.7370**	**6.7002**	**5.6282**	**0.0402**		**0.5092**	**0.5092**		**0.5092**	**0.5092**		**8,040.2901**	**8,040.2901**	**0.1541**	**0.1474**	**8,088.0695**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	68.3425	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.2901	8,040.2901	0.1541	0.1474	8,088.0695
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.7370**	**6.7002**	**5.6282**	**0.0402**		**0.5092**	**0.5092**		**0.5092**	**0.5092**		**8,040.2901**	**8,040.2901**	**0.1541**	**0.1474**	**8,088.0695**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	34.1567	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Unmitigated	34.1567	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9368					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0207	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Total	**34.1567**	**2.0400e-003**	**0.2243**	**2.0000e-005**		**8.0000e-004**	**8.0000e-004**		**8.0000e-004**	**8.0000e-004**		**0.4815**	**0.4815**	**1.2600e-003**		**0.5129**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9368					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0207	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Total	**34.1567**	**2.0400e-003**	**0.2243**	**2.0000e-005**		**8.0000e-004**	**8.0000e-004**		**8.0000e-004**	**8.0000e-004**		**0.4815**	**0.4815**	**1.2600e-003**		**0.5129**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Kopitar Cannabis Project - Localized Screening Analysis

San Joaquin Valley Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1,500.00	1000sqft	34.44	1,500,000.00	0
Parking Lot	700.00	Space	6.30	280,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	7			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assumptions Consitent with the AQ Report Prepared by VRPA Technologies, Inc., dated June 2022

Land Use -

Trips and VMT - Trip lengths updated to 0.75 mile to account for on-site and localized emissions

Architectural Coating - SJVAPCD Rule 4601 Architectural Coatings

Vehicle Trips - Trip lengths updated to 1 mile to account for on-site and localized emissions

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - SJVAPCD Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation - Compliance with SJVAPCD Regulation VIII

Area Mitigation -

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

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	VendorTripLength	6.60	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblTripsAndVMT	WorkerTripLength	16.80	1.00
tblVehicleTrips	CC_TL	6.60	1.00

tblVehicleTrips	CNW_TL	6.60	1.00
tblVehicleTrips	CW_TL	14.70	1.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.1985	33.0984	20.7240	0.0389	19.6709	1.6127	21.2836	10.1062	1.4837	11.5899	0.0000	3,759.308 1	3,759.308 1	1.1954	1.5700e-003	3,786.076 8
2023	3.3504	34.5306	28.2153	0.0623	19.6709	1.4247	20.9370	10.1062	1.3107	11.2710	0.0000	6,027.644 7	6,027.644 7	1.9476	0.2591	6,076.823 3
2024	2.6464	18.9610	25.0363	0.0448	0.8535	0.6326	1.4861	0.2343	0.5952	0.8295	0.0000	4,413.569 2	4,413.569 2	0.7305	0.2523	4,507.004 4
2025	2.4580	17.9206	24.6222	0.0444	0.8535	0.5466	1.4001	0.2343	0.5142	0.7485	0.0000	4,370.084 6	4,370.084 6	0.7171	0.2453	4,461.102 6
2026	128.8700	17.8582	24.3320	0.0440	0.8535	0.5462	1.3997	0.2343	0.5139	0.7482	0.0000	4,327.801 9	4,327.801 9	0.7156	0.2387	4,416.629 2
Maximum	**128.8700**	**34.5306**	**28.2153**	**0.0623**	**19.6709**	**1.6127**	**21.2836**	**10.1062**	**1.4837**	**11.5899**	**0.0000**	**6,027.644 7**	**6,027.644 7**	**1.9476**	**0.2591**	**6,076.823 3**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.1985	33.0984	20.7240	0.0389	8.8595	1.6127	10.4722	4.5498	1.4837	6.0335	0.0000	3,759.3081	3,759.3081	1.1954	1.5700e-003	3,786.0768
2023	3.3504	34.5306	28.2153	0.0623	8.8595	1.4247	10.1257	4.5498	1.3107	5.7147	0.0000	6,027.6447	6,027.6447	1.9476	0.2591	6,076.8233
2024	2.6464	18.9610	25.0363	0.0448	0.8535	0.6326	1.4861	0.2343	0.5952	0.8295	0.0000	4,413.5692	4,413.5692	0.7305	0.2523	4,507.0044
2025	2.4580	17.9206	24.6222	0.0444	0.8535	0.5466	1.4001	0.2343	0.5142	0.7485	0.0000	4,370.0846	4,370.0846	0.7171	0.2453	4,461.1026
2026	128.8700	17.8582	24.3320	0.0440	0.8535	0.5462	1.3997	0.2343	0.5139	0.7482	0.0000	4,327.8019	4,327.8019	0.7156	0.2387	4,416.6292
Maximum	**128.8700**	**34.5306**	**28.2153**	**0.0623**	**8.8595**	**1.6127**	**10.4722**	**4.5498**	**1.4837**	**6.0335**	**0.0000**	**6,027.6447**	**6,027.6447**	**1.9476**	**0.2591**	**6,076.8233**

	ROG	NOx	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**	**51.60**	**0.00**	**46.49**	**53.13**	**0.00**	**44.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	34.1567	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Energy	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.2901	8,040.2901	0.1541	0.1474	8,088.0695
Mobile	14.7754	15.7823	90.6460	0.0903	7.4241	0.1013	7.5254	1.9827	0.0946	2.0773		9,224.8129	9,224.8129	1.6897	1.0615	9,583.3759
Total	**49.6691**	**22.4846**	**96.4985**	**0.1305**	**7.4241**	**0.6114**	**8.0355**	**1.9827**	**0.6047**	**2.5874**		**17,265.5845**	**17,265.5845**	**1.8451**	**1.2089**	**17,671.9583**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	34.1567	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Energy	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.2901	8,040.2901	0.1541	0.1474	8,088.0695
Mobile	14.7754	15.7823	90.6460	0.0903	7.4241	0.1013	7.5254	1.9827	0.0946	2.0773		9,224.8129	9,224.8129	1.6897	1.0615	9,583.3759
Total	**49.6691**	**22.4846**	**96.4985**	**0.1305**	**7.4241**	**0.6114**	**8.0355**	**1.9827**	**0.6047**	**2.5874**		**17,265.5845**	**17,265.5845**	**1.8451**	**1.2089**	**17,671.9583**

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

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	10/1/2022	12/9/2022	5	50	
2	Site Preparation	Site Preparation	12/10/2022	1/20/2023	5	30	
3	Grading	Grading	1/21/2023	5/5/2023	5	75	
4	Building Construction	Building Construction	5/6/2023	3/6/2026	5	740	
5	Paving	Paving	3/7/2026	5/22/2026	5	55	
6	Architectural Coating	Architectural Coating	5/23/2026	8/7/2026	5	55	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 6.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,250,000; Non-Residential Outdoor: 750,000; Striped Parking Area: 16,800 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Grading	Excavators		2	8.00	158	0.38
Grading	Graders		1	8.00	187	0.41
Grading	Rubber Tired Dozers		1	8.00	247	0.40
Grading	Scrapers		2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Building Construction	Cranes		1	7.00	231	0.29
Building Construction	Forklifts		3	8.00	89	0.20
Building Construction	Generator Sets		1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes		3	7.00	97	0.37
Building Construction	Welders		1	8.00	46	0.45
Paving	Pavers		2	8.00	130	0.42
Paving	Paving Equipment		2	8.00	132	0.36
Paving	Rollers		2	8.00	80	0.38
Architectural Coating	Air Compressors		1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	748.00	292.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	150.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0236	0.0124	0.1300	1.2000e-004	0.0115	1.3000e-004	0.0117	3.0800e-003	1.2000e-004	3.2000e-003		12.5269	12.5269	2.7300e-003	1.3100e-003	12.9848
Total	**0.0236**	**0.0124**	**0.1300**	**1.2000e-004**	**0.0115**	**1.3000e-004**	**0.0117**	**3.0800e-003**	**1.2000e-004**	**3.2000e-003**		**12.5269**	**12.5269**	**2.7300e-003**	**1.3100e-003**	**12.9848**

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0236	0.0124	0.1300	1.2000e-004	0.0115	1.3000e-004	0.0117	3.0800e-003	1.2000e-004	3.2000e-003		12.5269	12.5269	2.7300e-003	1.3100e-003	12.9848
Total	**0.0236**	**0.0124**	**0.1300**	**1.2000e-004**	**0.0115**	**1.3000e-004**	**0.0117**	**3.0800e-003**	**1.2000e-004**	**3.2000e-003**		**12.5269**	**12.5269**	**2.7300e-003**	**1.3100e-003**	**12.9848**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0283	0.0149	0.1560	1.5000e-004	0.0139	1.6000e-004	0.0140	3.7000e-003	1.5000e-004	3.8400e-003		15.0323	15.0323	3.2800e-003	1.5700e-003	15.5817
Total	**0.0283**	**0.0149**	**0.1560**	**1.5000e-004**	**0.0139**	**1.6000e-004**	**0.0140**	**3.7000e-003**	**1.5000e-004**	**3.8400e-003**		**15.0323**	**15.0323**	**3.2800e-003**	**1.5700e-003**	**15.5817**

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**8.8457**	**1.6126**	**10.4582**	**4.5461**	**1.4836**	**6.0297**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0283	0.0149	0.1560	1.5000e-004	0.0139	1.6000e-004	0.0140	3.7000e-003	1.5000e-004	3.8400e-003		15.0323	15.0323	3.2800e-003	1.5700e-003	15.5817
Total	**0.0283**	**0.0149**	**0.1560**	**1.5000e-004**	**0.0139**	**1.6000e-004**	**0.0140**	**3.7000e-003**	**1.5000e-004**	**3.8400e-003**		**15.0323**	**15.0323**	**3.2800e-003**	**1.5700e-003**	**15.5817**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.308 1**	**3,687.308 1**	**1.1926**		**3,717.121 9**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0258	0.0135	0.1477	1.4000e-004	0.0139	1.5000e-004	0.0140	3.7000e-003	1.4000e-004	3.8300e-003		14.5503	14.5503	2.9900e-003	1.4800e-003	15.0657
Total	**0.0258**	**0.0135**	**0.1477**	**1.4000e-004**	**0.0139**	**1.5000e-004**	**0.0140**	**3.7000e-003**	**1.4000e-004**	**3.8300e-003**		**14.5503**	**14.5503**	**2.9900e-003**	**1.4800e-003**	**15.0657**

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**8.8457**	**1.2660**	**10.1117**	**4.5461**	**1.1647**	**5.7108**	**0.0000**	**3,687.308 1**	**3,687.308 1**	**1.1926**		**3,717.121 9**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0258	0.0135	0.1477	1.4000e-004	0.0139	1.5000e-004	0.0140	3.7000e-003	1.4000e-004	3.8300e-003		14.5503	14.5503	2.9900e-003	1.4800e-003	15.0657
Total	**0.0258**	**0.0135**	**0.1477**	**1.4000e-004**	**0.0139**	**1.5000e-004**	**0.0140**	**3.7000e-003**	**1.4000e-004**	**3.8300e-003**		**14.5503**	**14.5503**	**2.9900e-003**	**1.4800e-003**	**15.0657**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0287	0.0150	0.1641	1.6000e-004	0.0154	1.7000e-004	0.0156	4.1100e-003	1.5000e-004	4.2600e-003		16.1670	16.1670	3.3300e-003	1.6400e-003	16.7397
Total	**0.0287**	**0.0150**	**0.1641**	**1.6000e-004**	**0.0154**	**1.7000e-004**	**0.0156**	**4.1100e-003**	**1.5000e-004**	**4.2600e-003**		**16.1670**	**16.1670**	**3.3300e-003**	**1.6400e-003**	**16.7397**

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.477 7	6,011.477 7	1.9442		6,060.083 6
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**4.1416**	**1.4245**	**5.5661**	**1.6442**	**1.3105**	**2.9547**	**0.0000**	**6,011.477 7**	**6,011.477 7**	**1.9442**		**6,060.083 6**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0287	0.0150	0.1641	1.6000e-004	0.0154	1.7000e-004	0.0156	4.1100e-003	1.5000e-004	4.2600e-003		16.1670	16.1670	3.3300e-003	1.6400e-003	16.7397
Total	**0.0287**	**0.0150**	**0.1641**	**1.6000e-004**	**0.0154**	**1.7000e-004**	**0.0156**	**4.1100e-003**	**1.5000e-004**	**4.2600e-003**		**16.1670**	**16.1670**	**3.3300e-003**	**1.6400e-003**	**16.7397**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1965	5.0209	3.0792	0.0123	0.2779	0.0134	0.2912	0.0807	0.0128	0.0935		1,295.0312	1,295.0312	0.0128	0.1976	1,354.2500
Worker	1.0738	0.5605	6.1386	5.9800e-003	0.5756	6.2100e-003	0.5819	0.1536	5.7100e-003	0.1593		604.6438	604.6438	0.1244	0.0615	626.0648
Total	**1.2702**	**5.5815**	**9.2178**	**0.0182**	**0.8535**	**0.0196**	**0.8731**	**0.2343**	**0.0185**	**0.2528**		**1,899.6750**	**1,899.6750**	**0.1372**	**0.2591**	**1,980.3148**

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1965	5.0209	3.0792	0.0123	0.2779	0.0134	0.2912	0.0807	0.0128	0.0935		1,295.0312	1,295.0312	0.0128	0.1976	1,354.2500
Worker	1.0738	0.5605	6.1386	5.9800e-003	0.5756	6.2100e-003	0.5819	0.1536	5.7100e-003	0.1593		604.6438	604.6438	0.1244	0.0615	626.0648
Total	**1.2702**	**5.5815**	**9.2178**	**0.0182**	**0.8535**	**0.0196**	**0.8731**	**0.2343**	**0.0185**	**0.2528**		**1,899.6750**	**1,899.6750**	**0.1372**	**0.2591**	**1,980.3148**

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	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1929	5.0074	3.0304	0.0120	0.2779	0.0134	0.2913	0.0807	0.0129	0.0936		1,273.0183	1,273.0183	0.0125	0.1942	1,331.2078
Worker	0.9820	0.5098	5.8391	5.7900e-003	0.5756	5.8800e-003	0.5815	0.1536	5.4100e-003	0.1590		584.8521	584.8521	0.1136	0.0580	604.9890
Total	**1.1749**	**5.5172**	**8.8695**	**0.0178**	**0.8535**	**0.0193**	**0.8728**	**0.2343**	**0.0183**	**0.2526**		**1,857.8703**	**1,857.8703**	**0.1261**	**0.2523**	**1,936.1967**

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.698 9**	**2,555.698 9**	**0.6044**		**2,570.807 7**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1929	5.0074	3.0304	0.0120	0.2779	0.0134	0.2913	0.0807	0.0129	0.0936		1,273.018 3	1,273.018 3	0.0125	0.1942	1,331.207 8
Worker	0.9820	0.5098	5.8391	5.7900e-003	0.5756	5.8800e-003	0.5815	0.1536	5.4100e-003	0.1590		584.8521	584.8521	0.1136	0.0580	604.9890
Total	**1.1749**	**5.5172**	**8.8695**	**0.0178**	**0.8535**	**0.0193**	**0.8728**	**0.2343**	**0.0183**	**0.2526**		**1,857.870 3**	**1,857.870 3**	**0.1261**	**0.2523**	**1,936.196 7**

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	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1897	4.9850	2.9873	0.0118	0.2779	0.0134	0.2913	0.0807	0.0128	0.0935		1,248.5106	1,248.5106	0.0122	0.1904	1,305.5469
Worker	0.9009	0.4659	5.5502	5.5900e-003	0.5756	5.6000e-003	0.5813	0.1536	5.1600e-003	0.1587		565.0997	565.0997	0.1039	0.0549	584.0576
Total	**1.0906**	**5.4509**	**8.5376**	**0.0174**	**0.8535**	**0.0190**	**0.8725**	**0.2343**	**0.0180**	**0.2523**		**1,813.6103**	**1,813.6103**	**0.1161**	**0.2453**	**1,889.6045**

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1897	4.9850	2.9873	0.0118	0.2779	0.0134	0.2913	0.0807	0.0128	0.0935		1,248.5106	1,248.5106	0.0122	0.1904	1,305.5469
Worker	0.9009	0.4659	5.5502	5.5900e-003	0.5756	5.6000e-003	0.5813	0.1536	5.1600e-003	0.1587		565.0997	565.0997	0.1039	0.0549	584.0576
Total	**1.0906**	**5.4509**	**8.5376**	**0.0174**	**0.8535**	**0.0190**	**0.8725**	**0.2343**	**0.0180**	**0.2523**		**1,813.6103**	**1,813.6103**	**0.1161**	**0.2453**	**1,889.6045**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1870	4.9595	2.9506	0.0116	0.2779	0.0133	0.2912	0.0807	0.0127	0.0934		1,223.6827	1,223.6827	0.0119	0.1865	1,279.5512
Worker	0.8296	0.4290	5.2968	5.4200e-003	0.5756	5.3500e-003	0.5810	0.1536	4.9200e-003	0.1585		547.6449	547.6449	0.0953	0.0522	565.5800
Total	**1.0166**	**5.3885**	**8.2474**	**0.0170**	**0.8535**	**0.0187**	**0.8722**	**0.2343**	**0.0177**	**0.2519**		**1,771.3276**	**1,771.3276**	**0.1073**	**0.2387**	**1,845.1312**

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1870	4.9595	2.9506	0.0116	0.2779	0.0133	0.2912	0.0807	0.0127	0.0934		1,223.6827	1,223.6827	0.0119	0.1865	1,279.5512
Worker	0.8296	0.4290	5.2968	5.4200e-003	0.5756	5.3500e-003	0.5810	0.1536	4.9200e-003	0.1585		547.6449	547.6449	0.0953	0.0522	565.5800
Total	**1.0166**	**5.3885**	**8.2474**	**0.0170**	**0.8535**	**0.0187**	**0.8722**	**0.2343**	**0.0177**	**0.2519**		**1,771.3276**	**1,771.3276**	**0.1073**	**0.2387**	**1,845.1312**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.3001					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2153**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.745 2**	**2,206.745 2**	**0.7137**		**2,224.587 8**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0166	8.6000e-003	0.1062	1.1000e-004	0.0115	1.1000e-004	0.0117	3.0800e-003	1.0000e-004	3.1800e-003		10.9822	10.9822	1.9100e-003	1.0500e-003	11.3418
Total	**0.0166**	**8.6000e-003**	**0.1062**	**1.1000e-004**	**0.0115**	**1.1000e-004**	**0.0117**	**3.0800e-003**	**1.0000e-004**	**3.1800e-003**		**10.9822**	**10.9822**	**1.9100e-003**	**1.0500e-003**	**11.3418**

3.6 Paving - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.3001					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2153**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.745 2**	**2,206.745 2**	**0.7137**		**2,224.587 8**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.0166	8.6000e-003	0.1062	1.1000e-004	0.0115	1.1000e-004	0.0117	3.0800e-003	1.0000e-004	3.1800e-003		10.9822	10.9822	1.9100e-003	1.0500e-003	11.3418
Total	**0.0166**	**8.6000e-003**	**0.1062**	**1.1000e-004**	**0.0115**	**1.1000e-004**	**0.0117**	**3.0800e-003**	**1.0000e-004**	**3.1800e-003**		**10.9822**	**10.9822**	**1.9100e-003**	**1.0500e-003**	**11.3418**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	128.5328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**128.7036**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.1664	0.0860	1.0622	1.0900e-003	0.1154	1.0700e-003	0.1165	0.0308	9.9000e-004	0.0318		109.8218	109.8218	0.0191	0.0105	113.4184
Total	**0.1664**	**0.0860**	**1.0622**	**1.0900e-003**	**0.1154**	**1.0700e-003**	**0.1165**	**0.0308**	**9.9000e-004**	**0.0318**		**109.8218**	**109.8218**	**0.0191**	**0.0105**	**113.4184**

3.7 Architectural Coating - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Archit. Coating	128.5328					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**128.7036**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	0.1664	0.0860	1.0622	1.0900e-003	0.1154	1.0700e-003	0.1165	0.0308	9.9000e-004	0.0318		109.8218	109.8218	0.0191	0.0105	113.4184
Total	**0.1664**	**0.0860**	**1.0622**	**1.0900e-003**	**0.1154**	**1.0700e-003**	**0.1165**	**0.0308**	**9.9000e-004**	**0.0318**		**109.8218**	**109.8218**	**0.0191**	**0.0105**	**113.4184**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.7754	15.7823	90.6460	0.0903	7.4241	0.1013	7.5254	1.9827	0.0946	2.0773		9,224.812 9	9,224.812 9	1.6897	1.0615	9,583.375 9
Unmitigated	14.7754	15.7823	90.6460	0.0903	7.4241	0.1013	7.5254	1.9827	0.0946	2.0773		9,224.812 9	9,224.812 9	1.6897	1.0615	9,583.375 9

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	5,895.00	9,630.00	7635.00	2,430,480	2,430,480
Parking Lot	0.00	0.00	0.00		
Total	5,895.00	9,630.00	7,635.00	2,430,480	2,430,480

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
General Heavy Industry	1.00	1.00	1.00	59.00	28.00	13.00	100	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Parking Lot	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.290 1	8,040.290 1	0.1541	0.1474	8,088.069 5
NaturalGas Unmitigated	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.290 1	8,040.290 1	0.1541	0.1474	8,088.069 5

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	68342.5	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.290 1	8,040.290 1	0.1541	0.1474	8,088.069 5
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.7370**	**6.7002**	**5.6282**	**0.0402**		**0.5092**	**0.5092**		**0.5092**	**0.5092**		**8,040.290 1**	**8,040.290 1**	**0.1541**	**0.1474**	**8,088.069 5**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	68.3425	0.7370	6.7002	5.6282	0.0402		0.5092	0.5092		0.5092	0.5092		8,040.290 1	8,040.290 1	0.1541	0.1474	8,088.069 5
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.7370**	**6.7002**	**5.6282**	**0.0402**		**0.5092**	**0.5092**		**0.5092**	**0.5092**		**8,040.290 1**	**8,040.290 1**	**0.1541**	**0.1474**	**8,088.069 5**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	34.1567	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Unmitigated	34.1567	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9368					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0207	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Total	**34.1567**	**2.0400e-003**	**0.2243**	**2.0000e-005**		**8.0000e-004**	**8.0000e-004**		**8.0000e-004**	**8.0000e-004**		**0.4815**	**0.4815**	**1.2600e-003**		**0.5129**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9368					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	32.1992					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0207	2.0400e-003	0.2243	2.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004		0.4815	0.4815	1.2600e-003		0.5129
Total	**34.1567**	**2.0400e-003**	**0.2243**	**2.0000e-005**		**8.0000e-004**	**8.0000e-004**		**8.0000e-004**	**8.0000e-004**		**0.4815**	**0.4815**	**1.2600e-003**		**0.5129**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT B

Construction and Operational Health Risk Assessments

Construction and Operational Health Risk Assessments

Table of Contents

Health Risk Assessments

General Parameters

Woodlake Cannabis Project Construction Assumptions

Asusmptions from the Project-specific Air Quality Report
VRPA Technologies, Inc. 2022. Woodlake Cannabis Project Air Quality, Greenhouse Gas & Energy Impact Assessment. June.
CalEEMod
Kopitar Cannabis Project - Revised - San Joaquin Valley Unified APCD Air District, Annual
CalEEMod Date: 6/24/2022 1:25 PM

Construction Phase

Phase Name	Start Date	End Date	Num Days Week	Num Days
Demolition	10/1/2022	12/9/2022	5	50
Site Preparation	12/10/2022	1/20/2023	5	30
Grading	1/21/2023	5/5/2023	5	75
Building Construction	5/6/2023	3/6/2026	5	740
Paving	3/7/2026	5/22/2026	5	55
Architectural Coating	5/23/2026	8/7/2026	5	55

Construction Trips and VMT

Phase Name	Worker Trip Number	Vendor Trip Number	Hauling Trip Number*	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Demolition	15	0	0	16.8	6.6	20
Site Preparation	18	0	0	16.8	6.6	20
Grading	20	0	0	16.8	6.6	20
Building Construction	748	292	0	16.8	6.6	20
Paving	15	0	0	16.8	6.6	20
Architectural Coating	150	0	0	16.8	6.6	20

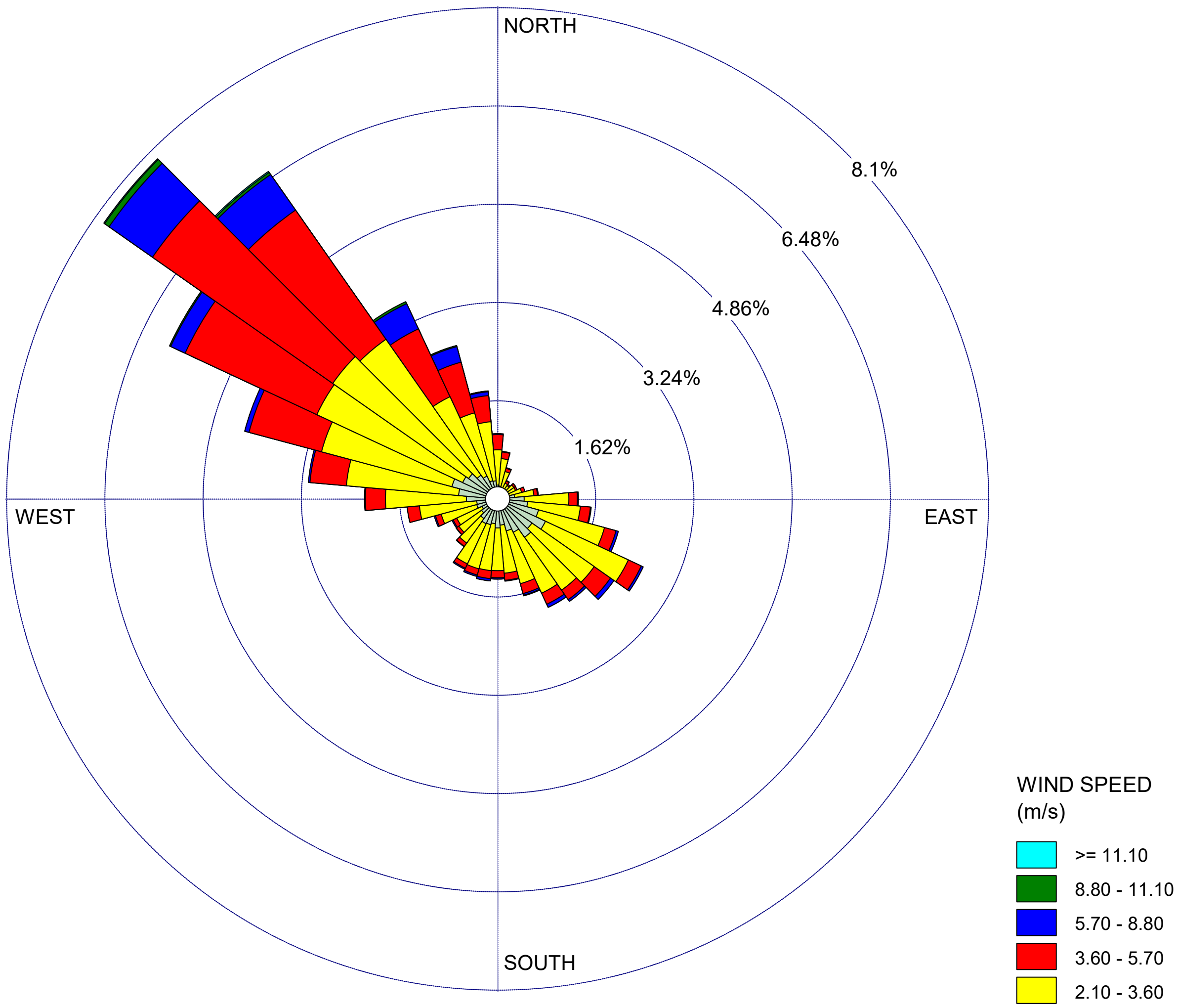
*Based on the assumptions provided in the Air Quality Report prepared by VRPA Technologies, there would be no hauling trips associated with the proposed project. See the report for justification for the construction assumptions.

WIND ROSE PLOT:

Wind Rose - Visalia Station (#93144) – Blowing From

DISPLAY:

Wind Speed
Direction (blowing from)



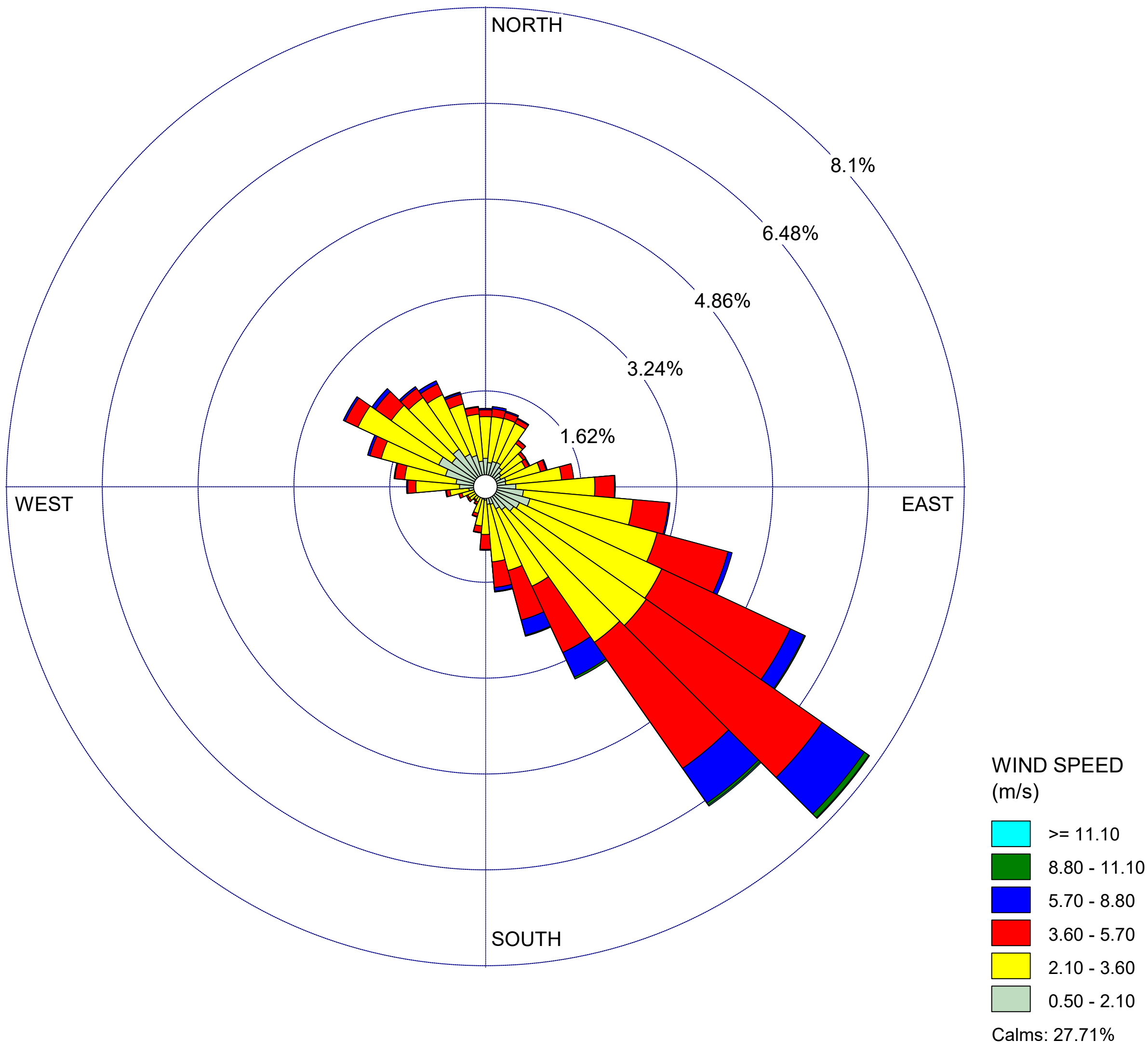
COMMENTS:	DATA PERIOD: **Start Date: 1/1/2007 - 00:00** **End Date: 12/31/2010 - 23:59**		
	CALM WINDS: **27.71%**	TOTAL COUNT: **34417 hrs.**	
	AVG. WIND SPEED: **2.26 m/s**	DATE: **8/21/2022**	PROJECT NO.:

WIND ROSE PLOT:

Wind Rose - Visalia Station (#93144) – Blowing To

DISPLAY:

Wind Speed
Flow Vector (blowing to)



COMMENTS:

DATA PERIOD:

Start Date: 1/1/2007 - 00:00
End Date: 12/31/2010 - 23:59

CALM WINDS:

27.71%

TOTAL COUNT:

34417 hrs.

AVG. WIND SPEED:

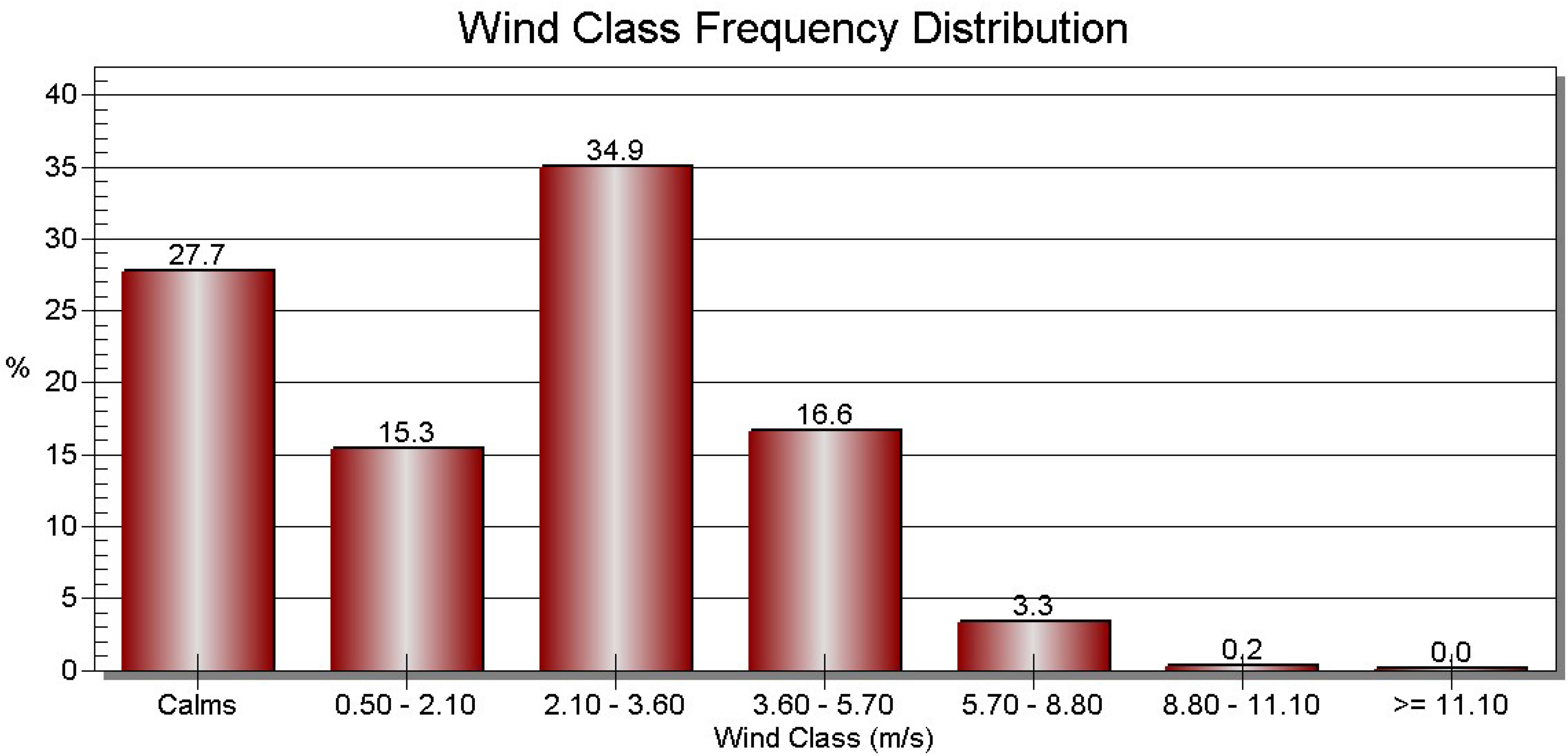
2.26 m/s

DATE:

8/21/2022

PROJECT NO.:

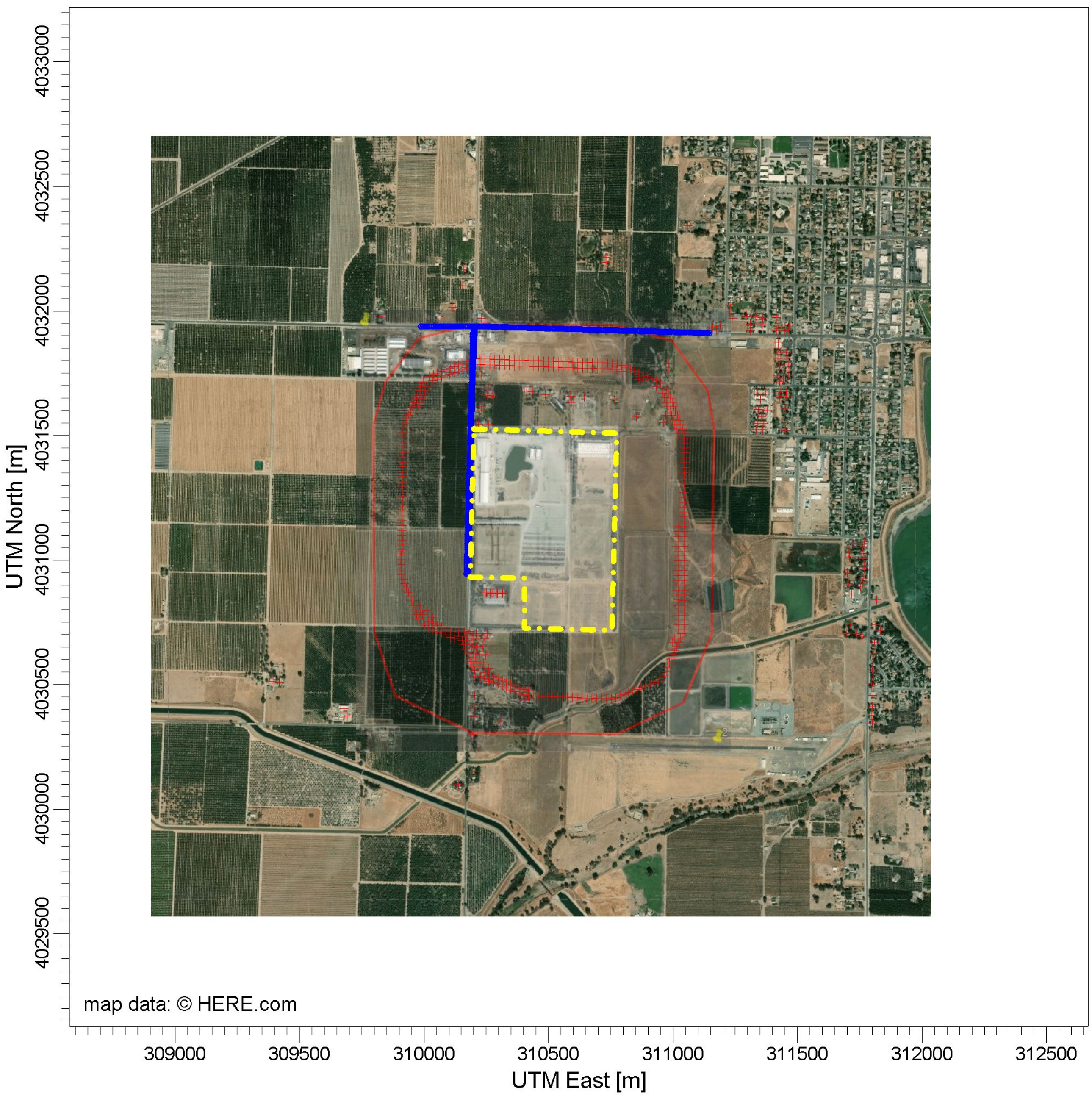
WRPLOT View - Lakes Environmental Software



Wind Class Frequency Distribution
%
40
35
30
25
20
15
10
5
0
27.7
15.3
34.9
16.6
3.3
0.2
0.0
Calms
0.50 - 2.10
2.10 - 3.60
3.60 - 5.70
5.70 - 8.80
8.80 - 11.10
>= 11.10
Wind Class (m/s)

PROJECT TITLE:

Graphical Representation of AERMOD Inputs – Construction



COMMENTS:

SOURCES:

3

RECEPTORS:

485

SCALE: 1:25,728

0 1 km

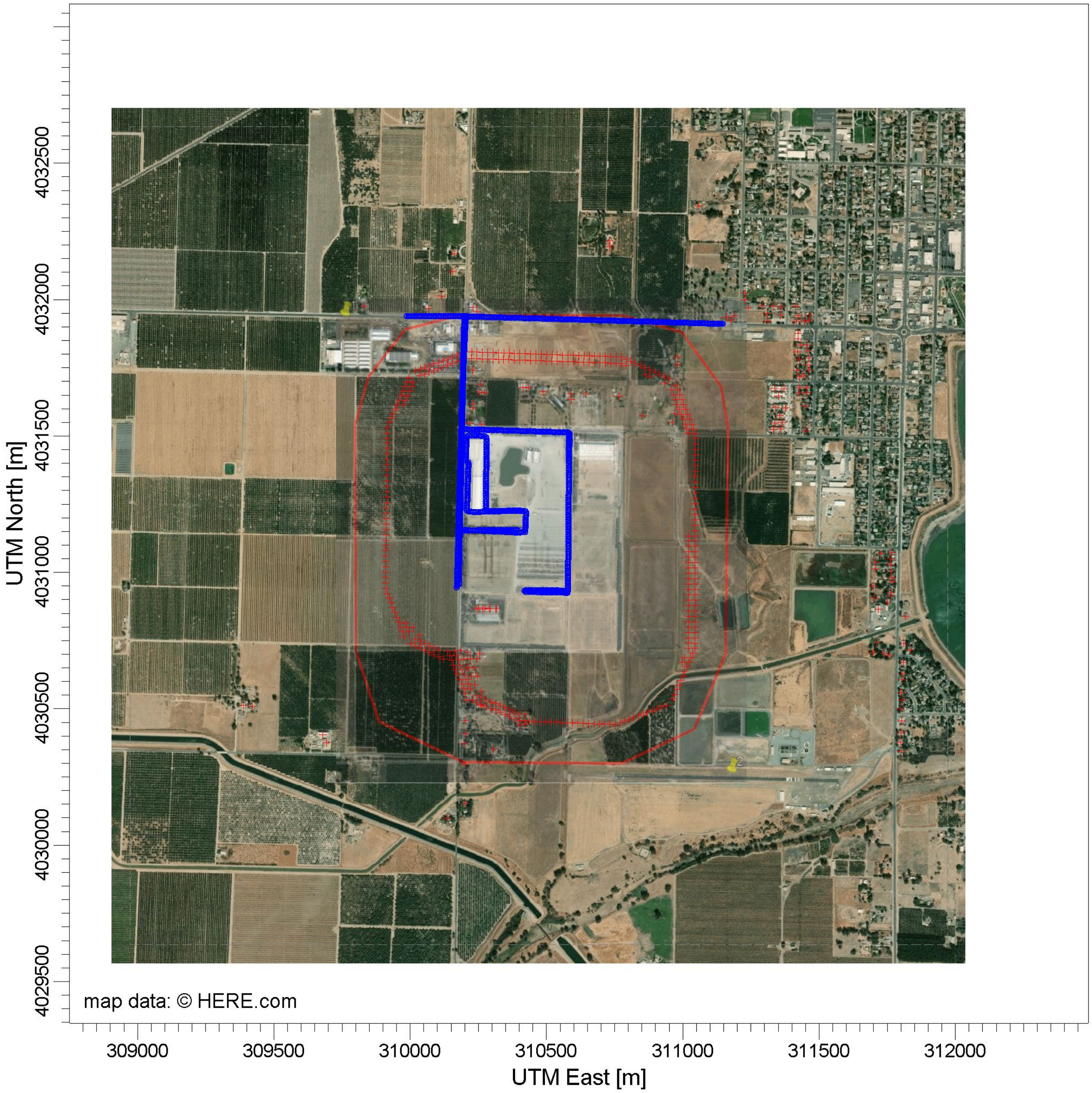
DATE:

8/21/2022

PROJECT NO.:

PROJECT TITLE:

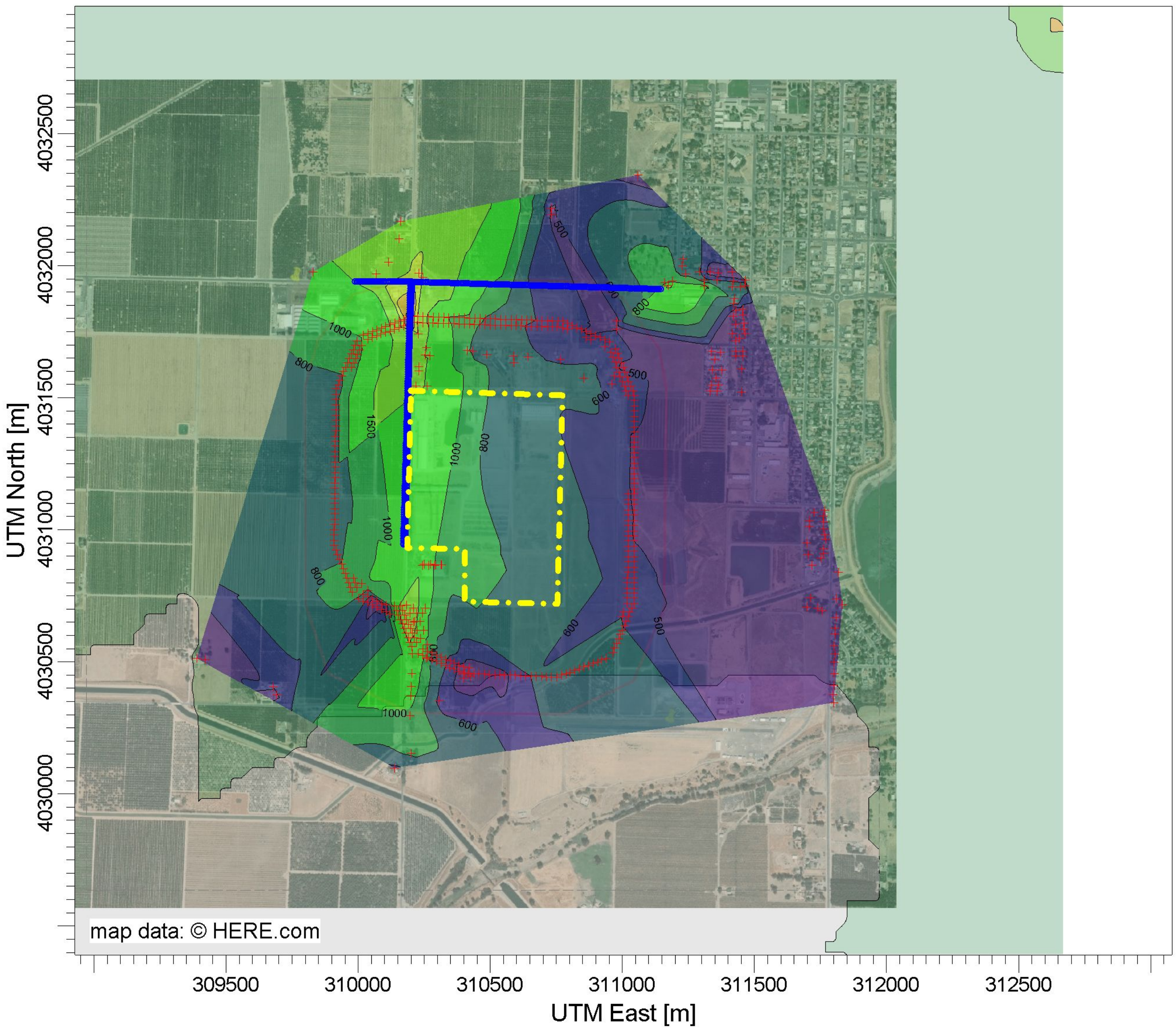
Graphical Representation of AERMOD Inputs– Operations



COMMENTS:	SOURCES: **6**		
	RECEPTORS: **485**		
		SCALE: 1:23,503 0 ▬ 0.5 km	
		DATE: **8/21/2022**	PROJECT NO.:

PROJECT TITLE:

Air Dispersion Trend – Construction - Unit Emissions



PLOT FILE OF HIGH 1ST HIGH 1-HR VALUES FOR SOURCE GROUP: ALL

ug/m^3

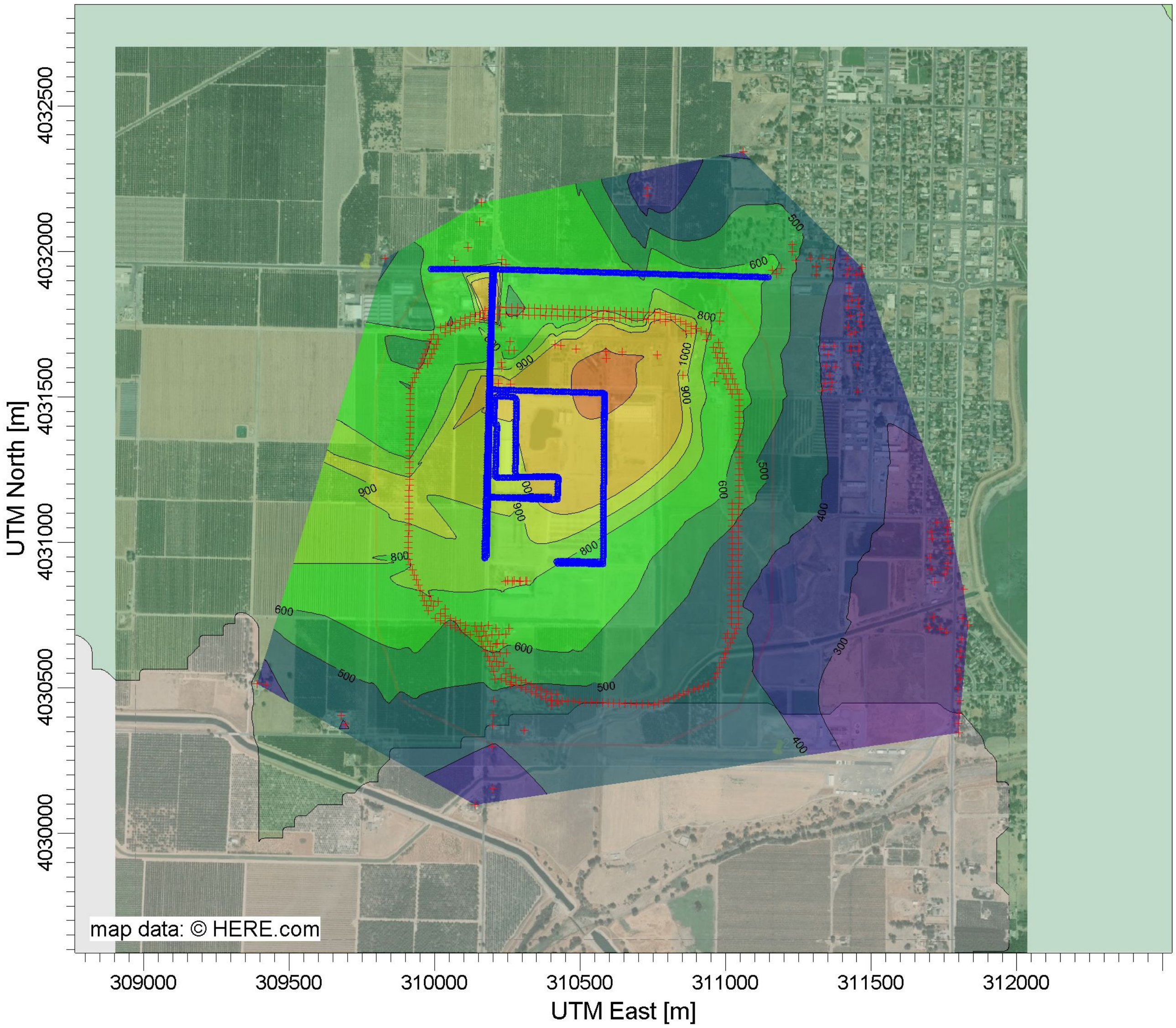
Max: 4804 [ug/m^3] at (310188.37, 4031778.82)

283 500 600 800 1000 1500 2500 3500 4500 4804

COMMENTS:	SOURCES: **3**		
	RECEPTORS: **485**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:26,121 0 — 1 km	
	MAX: **4804 ug/m^3**	DATE: **8/21/2022**	PROJECT NO.:

PROJECT TITLE:

Air Dispersion Trend – Operations - Unit Emissions



PLOT FILE OF HIGH 1ST HIGH 1-HR VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 1828 [ug/m^3] at (310590.96, 4031632.57)

197 300 400 500 600 800 900 1000 1500 1828

COMMENTS:	SOURCES: **6**		
	RECEPTORS: **485**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:23,709 0 — 0.5 km	
	MAX: **1828 ug/m^3**	DATE: **8/21/2022**	PROJECT NO.:

Construction
Health Risk Assessment

Construction Health Risk Calculations
Unmitigated Scenario

Woodlake Cannabis Project in Woodlake, CA

Project Site

Estimation of Annual Onsite Construction Emissions

Start of Construction	10/1/2022	
End of Construction	8/7/2026	**Total**
Number of Days	1,406	1406
Number of Hours	33,744	33,744
Number of Years	3.85	

Size of the construction area source: **4,414,217.1 sq-meters**

Year	On-site Construction Activity	Unmitigated On-site DPM (tons)
2022	Demolition	0.03110
2022	Site Preparation	0.01210
2023	Site Preparation	0.00950
2023	Grading	0.05340
2023	Building Construction	0.05950
2024	Building Construction	0.08030
2025	Building Construction	0.06890
2026	Building Construction	0.01240
2026	Paving	0.01150
2026	Architectural Coating	0.00142

Total Unmitigated DPM (On-site) 3.401E-01 tons

Average Emission	3.088E+05	grams
	2.542E-03	grams/sec
	5.759E-10	grams/m2-sec

Tons/Construction Period	0.3401
Pounds/Construction Period	680.2400
Pounds/Day	0.4838
Pounds/Hour (lbs/hr)	0.0202
Average Pounds per Year (lbs/yr)	125.7912

Woodlake Cannabis Project in Woodlake, CA

Estimation of Annual Offsite Construction DPM Emissions (Unmitigated)

Start of Construction	10/1/2022	
End of Construction	8/7/2026	**Total**
Number of Days	1,406	1406
Number of Hours	33,744	33,744

	2022	2022	2023	2023	2023
Construction Trip Type	Demolition	Site Preparation	Site Preparation	Grading	Building Construction
Haul Truck	0.00000	0.00000	0.00000	0.00000	0.00000
Vendor Truck	0.00000	0.00000	0.00000	0.00000	0.00643
Worker	0.00003	0.00001	0.00001	0.00005	0.00401
Total	0.00003	0.00001	0.00001	0.00005	0.01044

	Building Construction	Building Construction	Building Construction	Paving	Architectural Coating
Haul Truck	0.00000	0.00000	0.00000	0.00000	0.00000
Vendor Truck	0.00999	0.00995	0.00178	0.00000	0.00000
Worker	0.00585	0.00553	0.00095	0.00002	0.00022
Total	0.01584	0.01548	0.00273	0.00002	0.00022

	Haul Truck (tons)	**Vendor Truck (tons)**	**Worker (tons)**	**Total (tons)**
Total DPM	0.000E+00	2.815E-02	1.668E-02	4.483E-02
Average Emissions				
Grams	0.000E+00	2.556E+04	1.515E+04	
Grams/sec	0.000E+00	2.104E-04	1.247E-04	
Default Distance	20	6.6	16.8	Default Vehicle Travel Distance in CalEEMod

Vehicle Travel Distances in the Construction HRA (miles)

Road Segment 1 (mi)	0.75	0.75	0.75	miles
Road Segment 2 (mi)	1.20	1.20	1.20	miles

Trip Distribution (percent)

Off-site Road Segment 1	50.0%	50.0%	50.0%	off-site
Off-site Road Segment 2	50.0%	50.0%	50.0%	off-site

Total Average Offsite Vehicle Emissions Along Travel Distance (g/sec)				**Total**
Road Segment 1	0.000E+00	1.201E-05	2.796E-06	1.480E-05
Road Segment 2	0.000E+00	1.920E-05	4.469E-06	2.367E-05

	Grams/sec	Pounds/Hour	Pounds/Day	Pounds/year	Tons/year
Road Segment 1	1.480E-05	1.175E-04	2.820E-03	1.029E+00	5.146E-04
Road Segment 2	2.367E-05	1.878E-04	4.508E-03	1.645E+00	8.227E-04

Health Risk Summary - Unmitigated Construction (Summary of HARP2 Results)

Woodlake Cannabis Project - Construction

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	6.58E-06	6.58	3.16E-03	0.00E+00

	X	Y
MEI UTM	310260.20	4031543.83
Receptor # 479		

*HARP - HRACalc v22118 8/21/2022 11:40:08 AM - Cancer Risk - Input File: F:\0014-018\HARP\WOODLAKE_CON\hra\Wdl_ConHRAInput.hra
*HARP - HRACalc v22118 8/21/2022 11:40:08 AM - Acute Risk - Input File: F:\0014-018\HARP\WOODLAKE_CON\hra\Wdl_ConHRAInput.hra
*HARP - HRACalc

REC	GRP	X	Y	RISK_SUM	SCENARIO	MAXHI NonCancerChronic	MAXHI Acute
1	ALL	310250.67	4030868.71	2.11E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.02E-03	0.00E+00
2	ALL	310273.55	4030869.10	2.51E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.20E-03	0.00E+00
3	ALL	310294.52	4030866.81	2.81E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.35E-03	0.00E+00
4	ALL	310317.02	4030867.57	3.27E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.57E-03	0.00E+00
5	ALL	310210.81	4030704.83	4.82E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.32E-04	0.00E+00
6	ALL	310253.88	4030704.39	5.80E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.79E-04	0.00E+00
7	ALL	310214.40	4030652.79	3.75E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.80E-04	0.00E+00
8	ALL	310206.32	4030530.76	2.26E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.09E-04	0.00E+00
9	ALL	310259.26	4030512.81	2.50E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.20E-04	0.00E+00
10	ALL	310203.19	4030456.53	1.78E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.53E-05	0.00E+00
11	ALL	310401.50	4030457.88	3.30E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.59E-04	0.00E+00
12	ALL	310401.05	4030439.48	3.09E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.48E-04	0.00E+00
13	ALL	310424.38	4030445.76	3.43E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.65E-04	0.00E+00
14	ALL	310200.94	4030408.52	1.54E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.40E-05	0.00E+00
15	ALL	310199.15	4030371.73	1.39E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.68E-05	0.00E+00
16	ALL	310306.83	4030352.44	1.77E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.52E-05	0.00E+00
17	ALL	310197.01	4030296.75	1.15E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.53E-05	0.00E+00
18	ALL	310201.23	4030152.12	8.63E-08	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.15E-05	0.00E+00
19	ALL	310137.89	4030098.28	6.76E-08	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.25E-05	0.00E+00
20	ALL	311800.39	4030344.95	2.32E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.12E-04	0.00E+00
21	ALL	311797.82	4030376.75	2.37E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.14E-04	0.00E+00
22	ALL	311800.39	4030411.13	2.40E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.15E-04	0.00E+00
23	ALL	311802.11	4030455.83	2.44E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.17E-04	0.00E+00
24	ALL	311798.91	4030498.57	2.49E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.20E-04	0.00E+00
25	ALL	311803.84	4030529.98	2.49E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.20E-04	0.00E+00
26	ALL	311800.25	4030560.94	2.52E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.21E-04	0.00E+00
27	ALL	311805.19	4030606.72	2.53E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.22E-04	0.00E+00
28	ALL	311803.84	4030626.91	2.55E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.22E-04	0.00E+00
29	ALL	311758.07	4030692.87	2.74E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.32E-04	0.00E+00
30	ALL	311738.33	4030704.09	2.82E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.36E-04	0.00E+00
31	ALL	311811.47	4030739.54	2.55E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.22E-04	0.00E+00
32	ALL	311808.33	4030669.09	2.55E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.22E-04	0.00E+00
33	ALL	311833.01	4030716.21	2.47E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.19E-04	0.00E+00
34	ALL	311697.94	4030705.89	3.00E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.44E-04	0.00E+00
35	ALL	311711.40	4030741.79	2.94E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.41E-04	0.00E+00
36	ALL	311817.30	4030839.16	2.48E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.19E-04	0.00E+00
37	ALL	311717.68	4030864.29	2.85E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.37E-04	0.00E+00
38	ALL	311751.34	4030891.67	2.68E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.29E-04	0.00E+00
39	ALL	311703.77	4030906.47	2.86E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.38E-04	0.00E+00
40	ALL	311762.11	4030927.56	2.59E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.24E-04	0.00E+00
41	ALL	311768.39	4030964.81	2.51E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.21E-04	0.00E+00
42	ALL	311763.01	4030911.86	2.61E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.25E-04	0.00E+00
43	ALL	311699.29	4030950.00	2.82E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.35E-04	0.00E+00
44	ALL	311767.49	4030980.07	2.49E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.20E-04	0.00E+00
45	ALL	311762.56	4031005.20	2.46E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.18E-04	0.00E+00
46	ALL	311707.81	4031012.83	2.67E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.28E-04	0.00E+00
47	ALL	311706.91	4031035.26	2.63E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.26E-04	0.00E+00
48	ALL	311763.01	4031028.08	2.42E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.16E-04	0.00E+00
49	ALL	311726.66	4031067.12	2.48E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.19E-04	0.00E+00
50	ALL	311767.49	4031072.96	2.31E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.11E-04	0.00E+00
51	ALL	311759.87	4031050.97	2.39E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.15E-04	0.00E+00
52	ALL	309679.38	4030404.90	8.11E-08	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.90E-05	0.00E+00
53	ALL	309692.46	4030374.88	7.67E-08	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.69E-05	0.00E+00
54	ALL	309420.01	4030509.57	8.22E-08	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.95E-05	0.00E+00
55	ALL	309389.23	4030513.41	8.08E-08	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.89E-05	0.00E+00
56	ALL	309829.96	4031975.46	8.69E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.18E-04	0.00E+00
57	ALL	310115.20	4032014.06	9.09E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.37E-04	0.00E+00
58	ALL	310067.44	4031968.27	1.14E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.48E-04	0.00E+00
59	ALL	310230.34	4031970.88	1.10E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.30E-04	0.00E+00
60	ALL	310245.39	4031955.84	1.23E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.91E-04	0.00E+00
61	ALL	310154.45	4032102.38	6.56E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.15E-04	0.00E+00
62	ALL	310160.34	4032167.80	5.46E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.63E-04	0.00E+00
63	ALL	311337.23	4031674.02	2.19E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.05E-04	0.00E+00
64	ALL	311355.78	4031575.44	2.39E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.15E-04	0.00E+00
65	ALL	311452.22	4031519.43	2.18E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.05E-04	0.00E+00
66	ALL	311451.09	4031609.42	1.92E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.22E-05	0.00E+00

67	ALL	311350.96	4031646.96	2.20E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.06E-04	0.00E+00
68	ALL	311341.80	4031605.08	2.36E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.13E-04	0.00E+00
69	ALL	311377.13	4031603.12	2.21E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.06E-04	0.00E+00
70	ALL	311337.87	4031548.16	2.59E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.24E-04	0.00E+00
71	ALL	311364.04	4031548.81	2.45E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.18E-04	0.00E+00
72	ALL	311333.29	4031524.27	2.72E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.31E-04	0.00E+00
73	ALL	311359.46	4031524.93	2.57E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.24E-04	0.00E+00
74	ALL	311428.82	4031676.08	1.85E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.88E-05	0.00E+00
75	ALL	311455.00	4031676.73	1.77E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.49E-05	0.00E+00
76	ALL	311428.17	4031658.41	1.88E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.06E-05	0.00E+00
77	ALL	311454.34	4031659.07	1.80E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.66E-05	0.00E+00
78	ALL	311370.03	4031673.48	2.06E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.90E-05	0.00E+00
79	ALL	311428.65	4031716.04	1.77E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.52E-05	0.00E+00
80	ALL	311443.78	4031722.65	1.72E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.25E-05	0.00E+00
81	ALL	311418.25	4031740.15	1.76E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.47E-05	0.00E+00
82	ALL	311420.62	4031807.76	1.64E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.86E-05	0.00E+00
83	ALL	311457.97	4031811.54	1.53E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.37E-05	0.00E+00
84	ALL	311423.45	4031875.37	1.52E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.29E-05	0.00E+00
85	ALL	311422.51	4031855.98	1.55E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.45E-05	0.00E+00
86	ALL	311431.02	4031832.82	1.57E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.53E-05	0.00E+00
87	ALL	311454.19	4031834.23	1.51E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.24E-05	0.00E+00
88	ALL	311462.22	4031783.64	1.57E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.53E-05	0.00E+00
89	ALL	311458.44	4031760.48	1.61E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.76E-05	0.00E+00
90	ALL	311465.06	4031741.57	1.63E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.82E-05	0.00E+00
91	ALL	311428.18	4031779.39	1.66E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.00E-05	0.00E+00
92	ALL	311416.83	4031920.28	1.46E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.03E-05	0.00E+00
93	ALL	311446.15	4031920.75	1.39E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.70E-05	0.00E+00
94	ALL	311464.11	4031924.06	1.35E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.49E-05	0.00E+00
95	ALL	311466.95	4031944.39	1.32E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.34E-05	0.00E+00
96	ALL	311422.04	4031941.56	1.42E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.83E-05	0.00E+00
97	ALL	311358.21	4031944.39	1.58E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.62E-05	0.00E+00
98	ALL	311310.46	4031921.70	1.78E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.58E-05	0.00E+00
99	ALL	311309.98	4031946.76	1.74E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.35E-05	0.00E+00
100	ALL	311239.54	4031969.93	1.98E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.50E-05	0.00E+00
101	ALL	311330.79	4031974.65	1.62E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.80E-05	0.00E+00
102	ALL	311361.05	4031972.29	1.54E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.39E-05	0.00E+00
103	ALL	311414.94	4031975.13	1.40E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.71E-05	0.00E+00
104	ALL	311227.72	4031999.71	1.96E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.40E-05	0.00E+00
105	ALL	311291.54	4031977.02	1.75E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.41E-05	0.00E+00
106	ALL	311229.14	4032024.30	1.90E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.12E-05	0.00E+00
107	ALL	311190.37	4031941.56	2.42E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.17E-04	0.00E+00
108	ALL	311174.77	4031924.06	2.85E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.37E-04	0.00E+00
109	ALL	311160.11	4031935.88	3.02E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.45E-04	0.00E+00
110	ALL	311059.13	4032343.44	1.70E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.16E-05	0.00E+00
111	ALL	310729.62	4032215.63	2.98E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.43E-04	0.00E+00
112	ALL	310731.16	4032194.85	3.10E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.49E-04	0.00E+00
113	ALL	310961.09	4031552.29	7.31E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.51E-04	0.00E+00
114	ALL	310853.56	4031573.79	1.11E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.33E-04	0.00E+00
115	ALL	310970.13	4031581.10	6.49E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.12E-04	0.00E+00
116	ALL	310413.36	4031679.84	2.34E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.13E-03	0.00E+00
117	ALL	310765.31	4031644.13	1.23E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.93E-04	0.00E+00
118	ALL	310644.29	4031653.93	1.78E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.55E-04	0.00E+00
119	ALL	310980.39	4031759.57	4.44E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.13E-04	0.00E+00
120	ALL	311015.31	4031526.64	6.41E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.08E-04	0.00E+00
121	ALL	311008.12	4031544.53	6.26E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.01E-04	0.00E+00
122	ALL	311000.94	4031562.42	6.11E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.94E-04	0.00E+00
123	ALL	310993.75	4031580.31	5.99E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.88E-04	0.00E+00
124	ALL	310986.56	4031598.20	5.86E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.82E-04	0.00E+00
125	ALL	310979.38	4031616.09	5.75E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.76E-04	0.00E+00
126	ALL	310972.19	4031633.98	5.65E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.72E-04	0.00E+00
127	ALL	310965.00	4031651.87	5.59E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.69E-04	0.00E+00
128	ALL	310957.82	4031669.76	5.51E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.65E-04	0.00E+00
129	ALL	310933.02	4031695.49	5.64E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.71E-04	0.00E+00
130	ALL	310880.17	4031719.01	6.30E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.03E-04	0.00E+00
131	ALL	310862.56	4031726.85	6.52E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.13E-04	0.00E+00
132	ALL	310792.11	4031758.21	7.36E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.54E-04	0.00E+00
133	ALL	311022.50	4031508.75	6.58E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.16E-04	0.00E+00
134	ALL	311021.36	4031134.55	1.41E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.76E-04	0.00E+00
135	ALL	311021.30	4031114.86	1.43E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.85E-04	0.00E+00
136	ALL	311021.24	4031095.16	1.44E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.94E-04	0.00E+00
137	ALL	311021.18	4031075.47	1.46E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.02E-04	0.00E+00
138	ALL	311021.12	4031055.77	1.47E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.08E-04	0.00E+00
139	ALL	311021.06	4031036.08	1.48E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.14E-04	0.00E+00
140	ALL	311021.00	4031016.39	1.49E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.18E-04	0.00E+00
141	ALL	311020.94	4030996.69	1.50E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.22E-04	0.00E+00
142	ALL	311020.88	4030977.00	1.51E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.24E-04	0.00E+00
143	ALL	311020.82	4030957.30	1.51E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.25E-04	0.00E+00
144	ALL	311020.76	4030937.61	1.51E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.25E-04	0.00E+00
145	ALL	311020.70	4030917.91	1.51E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.24E-04	0.00E+00
146	ALL	311020.64	4030898.22	1.50E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.22E-04	0.00E+00
147	ALL	311020.58	4030878.52	1.49E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.18E-04	0.00E+00
148	ALL	311020.52	4030858.83	1.48E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.13E-04	0.00E+00
149	ALL	311020.46	4030839.14	1.47E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.07E-04	0.00E+00
150	ALL	311020.40	4030819.44	1.46E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.00E-04	0.00E+00

151	ALL	311020.34	4030799.75	1.44E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.91E-04	0.00E+00
152	ALL	311020.28	4030780.05	1.42E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.81E-04	0.00E+00
153	ALL	311020.22	4030760.36	1.39E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.70E-04	0.00E+00
154	ALL	311020.16	4030740.66	1.37E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.56E-04	0.00E+00
155	ALL	311020.10	4030720.97	1.33E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.41E-04	0.00E+00
156	ALL	311038.70	4031526.42	5.90E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.84E-04	0.00E+00
157	ALL	311031.57	4031544.16	5.77E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.77E-04	0.00E+00
158	ALL	311024.45	4031561.90	5.65E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.71E-04	0.00E+00
159	ALL	311017.32	4031579.65	5.54E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.66E-04	0.00E+00
160	ALL	311010.19	4031597.39	5.43E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.61E-04	0.00E+00
161	ALL	311003.07	4031615.13	5.34E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.57E-04	0.00E+00
162	ALL	310995.94	4031632.87	5.25E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.53E-04	0.00E+00
163	ALL	310988.81	4031650.62	5.20E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.50E-04	0.00E+00
164	ALL	310981.68	4031668.36	5.13E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.47E-04	0.00E+00
165	ALL	310974.56	4031686.10	5.07E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.44E-04	0.00E+00
166	ALL	310949.96	4031711.62	5.19E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.50E-04	0.00E+00
167	ALL	310932.49	4031719.39	5.38E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.59E-04	0.00E+00
168	ALL	310915.02	4031727.17	5.58E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.68E-04	0.00E+00
169	ALL	310897.56	4031734.94	5.78E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.78E-04	0.00E+00
170	ALL	310880.09	4031742.72	5.97E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.87E-04	0.00E+00
171	ALL	310862.62	4031750.49	6.17E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.96E-04	0.00E+00
172	ALL	310845.15	4031758.27	6.36E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.06E-04	0.00E+00
173	ALL	310827.68	4031766.05	6.55E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.15E-04	0.00E+00
174	ALL	310810.22	4031773.82	6.74E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.24E-04	0.00E+00
175	ALL	310792.75	4031781.60	6.92E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.33E-04	0.00E+00
176	ALL	311045.83	4031508.68	6.05E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.91E-04	0.00E+00
177	ALL	311045.77	4031488.98	6.40E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.08E-04	0.00E+00
178	ALL	311045.71	4031469.29	6.77E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.26E-04	0.00E+00
179	ALL	311045.65	4031449.59	7.16E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.44E-04	0.00E+00
180	ALL	311045.59	4031429.90	7.57E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.64E-04	0.00E+00
181	ALL	311045.53	4031410.20	8.00E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.85E-04	0.00E+00
182	ALL	311045.47	4031390.51	8.46E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.07E-04	0.00E+00
183	ALL	311045.41	4031370.82	8.89E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.27E-04	0.00E+00
184	ALL	311045.35	4031351.12	9.29E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.47E-04	0.00E+00
185	ALL	311045.29	4031331.43	9.69E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.66E-04	0.00E+00
186	ALL	311045.23	4031311.73	1.01E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.84E-04	0.00E+00
187	ALL	311045.17	4031292.04	1.04E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.02E-04	0.00E+00
188	ALL	311045.11	4031272.34	1.08E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.21E-04	0.00E+00
189	ALL	311045.05	4031252.65	1.12E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.38E-04	0.00E+00
190	ALL	311044.99	4031232.95	1.15E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.52E-04	0.00E+00
191	ALL	311044.93	4031213.26	1.18E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.66E-04	0.00E+00
192	ALL	311044.87	4031193.56	1.20E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.79E-04	0.00E+00
193	ALL	311044.81	4031173.87	1.23E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.91E-04	0.00E+00
194	ALL	311044.75	4031154.18	1.25E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.02E-04	0.00E+00
195	ALL	311044.69	4031134.48	1.27E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.12E-04	0.00E+00
196	ALL	311044.63	4031114.79	1.29E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.21E-04	0.00E+00
197	ALL	311044.57	4031095.09	1.31E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.30E-04	0.00E+00
198	ALL	311044.51	4031075.40	1.33E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.37E-04	0.00E+00
199	ALL	311044.45	4031055.70	1.34E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.44E-04	0.00E+00
200	ALL	311044.39	4031036.01	1.35E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.50E-04	0.00E+00
201	ALL	311044.33	4031016.31	1.36E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.54E-04	0.00E+00
202	ALL	311044.27	4030996.62	1.37E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.58E-04	0.00E+00
203	ALL	311044.21	4030976.93	1.38E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.61E-04	0.00E+00
204	ALL	311044.15	4030957.23	1.38E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.63E-04	0.00E+00
205	ALL	311044.09	4030937.54	1.38E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.64E-04	0.00E+00
206	ALL	311044.03	4030917.84	1.38E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.63E-04	0.00E+00
207	ALL	311043.97	4030898.15	1.38E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.62E-04	0.00E+00
208	ALL	311043.91	4030878.45	1.37E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.59E-04	0.00E+00
209	ALL	311043.85	4030858.76	1.36E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.55E-04	0.00E+00
210	ALL	311043.79	4030839.06	1.35E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.51E-04	0.00E+00
211	ALL	311043.73	4030819.37	1.34E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.45E-04	0.00E+00
212	ALL	311043.67	4030799.67	1.33E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.38E-04	0.00E+00
213	ALL	311043.61	4030779.98	1.31E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.29E-04	0.00E+00
214	ALL	311043.55	4030760.29	1.29E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.20E-04	0.00E+00
215	ALL	311043.49	4030740.59	1.27E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.09E-04	0.00E+00
216	ALL	311043.43	4030720.90	1.24E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.96E-04	0.00E+00
217	ALL	310998.50	4030670.61	1.32E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.33E-04	0.00E+00
218	ALL	311005.70	4030687.40	1.33E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.38E-04	0.00E+00
219	ALL	310419.52	4030478.91	3.82E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.84E-04	0.00E+00
220	ALL	310399.90	4030479.71	3.56E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.71E-04	0.00E+00
221	ALL	310769.10	4030448.44	8.34E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.01E-04	0.00E+00
222	ALL	310786.18	4030454.90	8.67E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.17E-04	0.00E+00
223	ALL	310803.27	4030461.35	8.98E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.32E-04	0.00E+00
224	ALL	310820.35	4030467.81	9.25E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.45E-04	0.00E+00
225	ALL	310837.44	4030474.27	9.50E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.57E-04	0.00E+00
226	ALL	310854.52	4030480.73	9.71E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.67E-04	0.00E+00
227	ALL	310871.61	4030487.18	9.88E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.75E-04	0.00E+00
228	ALL	310888.69	4030493.64	1.00E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.81E-04	0.00E+00
229	ALL	310905.78	4030500.10	1.01E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.84E-04	0.00E+00
230	ALL	310922.86	4030506.55	1.01E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.85E-04	0.00E+00
231	ALL	310939.95	4030513.01	1.01E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.84E-04	0.00E+00
232	ALL	310964.23	4030536.25	1.04E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.99E-04	0.00E+00
233	ALL	310971.43	4030553.04	1.07E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.15E-04	0.00E+00
234	ALL	310978.63	4030569.83	1.10E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.30E-04	0.00E+00

235	ALL	310985.83	4030586.61	1.13E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.44E-04	0.00E+00
236	ALL	310993.03	4030603.40	1.16E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.57E-04	0.00E+00
237	ALL	311000.23	4030620.18	1.18E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.68E-04	0.00E+00
238	ALL	311007.43	4030636.97	1.20E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.78E-04	0.00E+00
239	ALL	311014.63	4030653.75	1.22E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.85E-04	0.00E+00
240	ALL	311021.83	4030670.54	1.23E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.91E-04	0.00E+00
241	ALL	311029.03	4030687.33	1.24E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.95E-04	0.00E+00
242	ALL	311036.23	4030704.11	1.24E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.96E-04	0.00E+00
243	ALL	310752.01	4030441.98	7.99E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.84E-04	0.00E+00
244	ALL	310732.40	4030442.78	7.85E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.77E-04	0.00E+00
245	ALL	310712.78	4030443.58	7.67E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.69E-04	0.00E+00
246	ALL	310693.17	4030444.38	7.46E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.59E-04	0.00E+00
247	ALL	310673.55	4030445.19	7.22E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.47E-04	0.00E+00
248	ALL	310653.94	4030445.99	6.96E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.34E-04	0.00E+00
249	ALL	310634.32	4030446.79	6.67E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.21E-04	0.00E+00
250	ALL	310614.71	4030447.59	6.37E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.06E-04	0.00E+00
251	ALL	310595.10	4030448.39	6.06E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.91E-04	0.00E+00
252	ALL	310575.48	4030449.19	5.74E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.76E-04	0.00E+00
253	ALL	310555.87	4030449.99	5.43E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.61E-04	0.00E+00
254	ALL	310536.25	4030450.79	5.12E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.46E-04	0.00E+00
255	ALL	310516.64	4030451.59	4.82E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.32E-04	0.00E+00
256	ALL	310497.02	4030452.39	4.53E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.18E-04	0.00E+00
257	ALL	310477.41	4030453.19	4.25E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.04E-04	0.00E+00
258	ALL	310457.79	4030453.99	3.98E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.91E-04	0.00E+00
259	ALL	310438.18	4030454.79	3.72E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.79E-04	0.00E+00
260	ALL	310418.57	4030455.59	3.48E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.67E-04	0.00E+00
261	ALL	310398.95	4030456.39	3.25E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.56E-04	0.00E+00
262	ALL	310313.71	4030866.62	3.18E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.53E-03	0.00E+00
263	ALL	310290.38	4030866.03	2.72E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.31E-03	0.00E+00
264	ALL	310267.05	4030865.44	2.31E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.11E-03	0.00E+00
265	ALL	310243.73	4030864.85	1.93E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.27E-04	0.00E+00
266	ALL	310243.86	4030684.10	4.94E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.37E-04	0.00E+00
267	ALL	310220.54	4030683.51	4.47E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.15E-04	0.00E+00
268	ALL	310233.93	4030651.95	4.02E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.93E-04	0.00E+00
269	ALL	310247.33	4030620.38	3.66E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.76E-04	0.00E+00
270	ALL	310183.81	4030714.48	4.53E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.18E-04	0.00E+00
271	ALL	310197.21	4030682.92	4.06E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.95E-04	0.00E+00
272	ALL	310210.61	4030651.36	3.68E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.77E-04	0.00E+00
273	ALL	310224.01	4030619.79	3.36E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.61E-04	0.00E+00
274	ALL	310237.41	4030588.23	3.09E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.48E-04	0.00E+00
275	ALL	310259.78	4030565.51	3.04E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.46E-04	0.00E+00
276	ALL	310161.15	4030712.31	4.08E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.96E-04	0.00E+00
277	ALL	310168.52	4030694.95	3.85E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.85E-04	0.00E+00
278	ALL	310175.89	4030677.59	3.64E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.75E-04	0.00E+00
279	ALL	310183.26	4030660.23	3.46E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.66E-04	0.00E+00
280	ALL	310190.63	4030642.88	3.29E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.58E-04	0.00E+00
281	ALL	310198.00	4030625.52	3.14E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.51E-04	0.00E+00
282	ALL	310205.37	4030608.16	3.00E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.44E-04	0.00E+00
283	ALL	310212.74	4030590.80	2.87E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.38E-04	0.00E+00
284	ALL	310220.11	4030573.44	2.75E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.32E-04	0.00E+00
285	ALL	310244.72	4030548.44	2.71E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.30E-04	0.00E+00
286	ALL	310261.96	4030540.81	2.78E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.34E-04	0.00E+00
287	ALL	310279.21	4030533.17	2.86E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.37E-04	0.00E+00
288	ALL	310296.45	4030525.53	2.93E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.41E-04	0.00E+00
289	ALL	310313.69	4030517.89	3.01E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.45E-04	0.00E+00
290	ALL	310330.93	4030510.26	3.11E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.49E-04	0.00E+00
291	ALL	310348.18	4030502.62	3.21E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.54E-04	0.00E+00
292	ALL	310365.42	4030494.98	3.32E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.59E-04	0.00E+00
293	ALL	310382.66	4030487.34	3.44E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.65E-04	0.00E+00
294	ALL	310137.77	4030711.86	3.73E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.79E-04	0.00E+00
295	ALL	310145.08	4030694.65	3.52E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.69E-04	0.00E+00
296	ALL	310152.38	4030677.43	3.34E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.61E-04	0.00E+00
297	ALL	310159.69	4030660.22	3.18E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.53E-04	0.00E+00
298	ALL	310167.00	4030643.00	3.03E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.46E-04	0.00E+00
299	ALL	310174.31	4030625.79	2.89E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.39E-04	0.00E+00
300	ALL	310181.62	4030608.57	2.77E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.33E-04	0.00E+00
301	ALL	310188.93	4030591.36	2.66E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.28E-04	0.00E+00
302	ALL	310196.23	4030574.14	2.55E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.23E-04	0.00E+00
303	ALL	310203.54	4030556.93	2.46E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.18E-04	0.00E+00
304	ALL	310227.95	4030532.14	2.43E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.17E-04	0.00E+00
305	ALL	310245.05	4030524.56	2.49E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.20E-04	0.00E+00
306	ALL	310262.15	4030516.99	2.56E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.23E-04	0.00E+00
307	ALL	310279.25	4030509.41	2.62E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.26E-04	0.00E+00
308	ALL	310296.35	4030501.84	2.69E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.29E-04	0.00E+00
309	ALL	310313.45	4030494.26	2.77E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.33E-04	0.00E+00
310	ALL	310330.55	4030486.69	2.85E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.37E-04	0.00E+00
311	ALL	310347.65	4030479.12	2.94E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.42E-04	0.00E+00
312	ALL	310364.75	4030471.54	3.04E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.46E-04	0.00E+00
313	ALL	310381.85	4030463.97	3.14E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.51E-04	0.00E+00
314	ALL	310011.95	4030796.61	3.86E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.86E-04	0.00E+00
315	ALL	310036.43	4030770.41	3.65E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.75E-04	0.00E+00
316	ALL	309981.15	4030816.18	3.90E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.87E-04	0.00E+00
317	ALL	309988.06	4030798.34	3.67E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.76E-04	0.00E+00
318	ALL	309994.97	4030780.50	3.45E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.66E-04	0.00E+00

319	ALL	310019.21	4030754.56	3.26E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.57E-04	0.00E+00
320	ALL	310036.54	4030746.46	3.27E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.57E-04	0.00E+00
321	ALL	310053.87	4030738.36	3.29E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.58E-04	0.00E+00
322	ALL	310071.20	4030730.25	3.32E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.59E-04	0.00E+00
323	ALL	310088.53	4030722.15	3.35E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.61E-04	0.00E+00
324	ALL	310105.86	4030714.05	3.39E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.63E-04	0.00E+00
325	ALL	309916.29	4030923.63	5.30E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.55E-04	0.00E+00
326	ALL	309923.14	4030905.94	4.99E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.40E-04	0.00E+00
327	ALL	309930.00	4030888.25	4.70E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.26E-04	0.00E+00
328	ALL	309936.85	4030870.56	4.43E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.13E-04	0.00E+00
329	ALL	309943.70	4030852.87	4.17E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.01E-04	0.00E+00
330	ALL	309950.56	4030835.18	3.93E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.89E-04	0.00E+00
331	ALL	309957.41	4030817.49	3.70E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.78E-04	0.00E+00
332	ALL	309964.27	4030799.80	3.49E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.68E-04	0.00E+00
333	ALL	309971.12	4030782.11	3.29E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.58E-04	0.00E+00
334	ALL	309977.98	4030764.42	3.11E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.49E-04	0.00E+00
335	ALL	310002.02	4030738.70	2.93E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.41E-04	0.00E+00
336	ALL	310019.21	4030730.66	2.93E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.41E-04	0.00E+00
337	ALL	310036.39	4030722.63	2.94E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.41E-04	0.00E+00
338	ALL	310053.58	4030714.59	2.95E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.42E-04	0.00E+00
339	ALL	310070.76	4030706.55	2.97E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.43E-04	0.00E+00
340	ALL	310087.95	4030698.52	3.00E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.44E-04	0.00E+00
341	ALL	310105.13	4030690.48	3.04E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.46E-04	0.00E+00
342	ALL	310122.32	4030682.45	3.09E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.49E-04	0.00E+00
343	ALL	309909.43	4030941.32	5.63E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.71E-04	0.00E+00
344	ALL	309909.67	4030961.02	6.14E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.95E-04	0.00E+00
345	ALL	309909.91	4030980.71	6.69E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.22E-04	0.00E+00
346	ALL	309910.15	4031000.41	7.28E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.50E-04	0.00E+00
347	ALL	309910.39	4031020.10	7.91E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.80E-04	0.00E+00
348	ALL	309910.63	4031039.80	8.58E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.12E-04	0.00E+00
349	ALL	309910.87	4031059.49	9.26E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.45E-04	0.00E+00
350	ALL	309911.11	4031079.18	9.95E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.78E-04	0.00E+00
351	ALL	309911.35	4031098.88	1.06E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.11E-04	0.00E+00
352	ALL	309911.59	4031118.57	1.13E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.43E-04	0.00E+00
353	ALL	309911.83	4031138.27	1.19E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.73E-04	0.00E+00
354	ALL	309912.07	4031157.96	1.25E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.03E-04	0.00E+00
355	ALL	309912.31	4031177.66	1.31E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.31E-04	0.00E+00
356	ALL	309912.55	4031197.35	1.37E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.58E-04	0.00E+00
357	ALL	309912.79	4031217.05	1.42E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.84E-04	0.00E+00
358	ALL	309913.03	4031236.74	1.47E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.08E-04	0.00E+00
359	ALL	309913.27	4031256.44	1.52E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.31E-04	0.00E+00
360	ALL	309913.51	4031276.13	1.57E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.53E-04	0.00E+00
361	ALL	309913.75	4031295.83	1.61E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.73E-04	0.00E+00
362	ALL	309913.99	4031315.52	1.65E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.95E-04	0.00E+00
363	ALL	309914.23	4031335.22	1.69E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.12E-04	0.00E+00
364	ALL	309914.47	4031354.91	1.72E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.28E-04	0.00E+00
365	ALL	309914.71	4031374.60	1.75E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.41E-04	0.00E+00
366	ALL	309914.95	4031394.30	1.77E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.53E-04	0.00E+00
367	ALL	309915.19	4031413.99	1.80E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.64E-04	0.00E+00
368	ALL	309915.43	4031433.69	1.82E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.73E-04	0.00E+00
369	ALL	309915.67	4031453.38	1.83E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.80E-04	0.00E+00
370	ALL	309915.91	4031473.08	1.84E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.85E-04	0.00E+00
371	ALL	309916.15	4031492.77	1.84E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.86E-04	0.00E+00
372	ALL	309916.39	4031512.47	1.84E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.84E-04	0.00E+00
373	ALL	309916.63	4031532.16	1.83E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.81E-04	0.00E+00
374	ALL	310228.49	4031740.91	2.21E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.06E-03	0.00E+00
375	ALL	310588.50	4031655.98	2.03E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.78E-04	0.00E+00
376	ALL	310254.44	4031660.56	2.90E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.39E-03	0.00E+00
377	ALL	310258.93	4031690.83	2.50E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.20E-03	0.00E+00
378	ALL	310229.57	4031617.13	3.72E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.79E-03	0.00E+00
379	ALL	310188.37	4031778.82	2.18E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.05E-03	0.00E+00
380	ALL	310171.46	4031772.38	2.01E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.66E-04	0.00E+00
381	ALL	310154.56	4031765.93	1.90E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.15E-04	0.00E+00
382	ALL	310137.66	4031759.49	1.86E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.93E-04	0.00E+00
383	ALL	310120.76	4031753.04	1.84E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.83E-04	0.00E+00
384	ALL	310103.85	4031746.59	1.83E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.78E-04	0.00E+00
385	ALL	310086.95	4031740.15	1.82E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.75E-04	0.00E+00
386	ALL	310070.05	4031733.70	1.82E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.73E-04	0.00E+00
387	ALL	310053.14	4031727.25	1.81E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.69E-04	0.00E+00
388	ALL	310036.24	4031720.81	1.79E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.63E-04	0.00E+00
389	ALL	310012.12	4031697.77	1.83E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.80E-04	0.00E+00
390	ALL	310004.90	4031681.18	1.88E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.03E-04	0.00E+00
391	ALL	309997.69	4031664.59	1.92E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.23E-04	0.00E+00
392	ALL	309990.47	4031648.00	1.96E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.40E-04	0.00E+00
393	ALL	309983.26	4031631.41	1.98E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.53E-04	0.00E+00
394	ALL	309976.04	4031614.82	2.00E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.61E-04	0.00E+00
395	ALL	310205.27	4031785.27	2.26E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.09E-03	0.00E+00
396	ALL	310224.90	4031784.61	1.98E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.50E-04	0.00E+00
397	ALL	310244.53	4031783.94	1.82E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.73E-04	0.00E+00
398	ALL	310264.16	4031783.28	1.73E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.32E-04	0.00E+00
399	ALL	310283.78	4031782.62	1.68E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.06E-04	0.00E+00
400	ALL	310303.41	4031781.96	1.64E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.86E-04	0.00E+00
401	ALL	310323.04	4031781.29	1.60E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.70E-04	0.00E+00
402	ALL	310342.67	4031780.63	1.57E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.55E-04	0.00E+00

403	ALL	310362.30	4031779.97	1.54E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.41E-04	0.00E+00
404	ALL	310381.93	4031779.31	1.51E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.27E-04	0.00E+00
405	ALL	310401.55	4031778.64	1.48E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.12E-04	0.00E+00
406	ALL	310421.18	4031777.98	1.45E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.97E-04	0.00E+00
407	ALL	310440.81	4031777.32	1.42E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.82E-04	0.00E+00
408	ALL	310460.44	4031776.65	1.38E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.65E-04	0.00E+00
409	ALL	310480.07	4031775.99	1.35E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.48E-04	0.00E+00
410	ALL	310499.70	4031775.33	1.31E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.30E-04	0.00E+00
411	ALL	310519.32	4031774.67	1.27E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.12E-04	0.00E+00
412	ALL	310538.95	4031774.00	1.23E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.93E-04	0.00E+00
413	ALL	310558.58	4031773.34	1.19E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.73E-04	0.00E+00
414	ALL	310578.21	4031772.68	1.15E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.54E-04	0.00E+00
415	ALL	310597.84	4031772.02	1.11E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.34E-04	0.00E+00
416	ALL	310617.47	4031771.35	1.07E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.15E-04	0.00E+00
417	ALL	310637.09	4031770.69	1.03E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.95E-04	0.00E+00
418	ALL	310656.72	4031770.03	9.90E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.76E-04	0.00E+00
419	ALL	310676.35	4031769.36	9.50E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.57E-04	0.00E+00
420	ALL	310695.98	4031768.70	9.11E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.38E-04	0.00E+00
421	ALL	310715.61	4031768.04	8.71E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.19E-04	0.00E+00
422	ALL	310735.23	4031767.38	8.32E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.00E-04	0.00E+00
423	ALL	310754.86	4031766.71	7.94E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.81E-04	0.00E+00
424	ALL	310774.49	4031766.05	7.55E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.63E-04	0.00E+00
425	ALL	310189.16	4031802.14	2.01E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.66E-04	0.00E+00
426	ALL	310172.25	4031795.70	1.89E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.08E-04	0.00E+00
427	ALL	310155.35	4031789.25	1.78E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.55E-04	0.00E+00
428	ALL	310138.45	4031782.81	1.73E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.33E-04	0.00E+00
429	ALL	310121.54	4031776.36	1.71E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.24E-04	0.00E+00
430	ALL	310104.64	4031769.91	1.70E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.19E-04	0.00E+00
431	ALL	310087.74	4031763.47	1.70E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.18E-04	0.00E+00
432	ALL	310070.83	4031757.02	1.70E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.17E-04	0.00E+00
433	ALL	310053.93	4031750.57	1.70E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.15E-04	0.00E+00
434	ALL	310037.03	4031744.13	1.69E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.12E-04	0.00E+00
435	ALL	310020.12	4031737.68	1.68E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.08E-04	0.00E+00
436	ALL	309996.00	4031714.65	1.71E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.24E-04	0.00E+00
437	ALL	309988.79	4031698.06	1.76E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.45E-04	0.00E+00
438	ALL	309981.57	4031681.47	1.80E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.64E-04	0.00E+00
439	ALL	309974.36	4031664.88	1.83E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.80E-04	0.00E+00
440	ALL	309967.14	4031648.29	1.86E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.94E-04	0.00E+00
441	ALL	309959.93	4031631.70	1.88E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.04E-04	0.00E+00
442	ALL	309952.71	4031615.11	1.89E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.09E-04	0.00E+00
443	ALL	309945.49	4031598.52	1.89E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.09E-04	0.00E+00
444	ALL	309938.28	4031581.93	1.89E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.07E-04	0.00E+00
445	ALL	309931.06	4031565.34	1.87E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.01E-04	0.00E+00
446	ALL	309923.85	4031548.75	1.86E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.92E-04	0.00E+00
447	ALL	310206.06	4031808.59	2.07E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	9.95E-04	0.00E+00
448	ALL	310225.69	4031807.93	1.85E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.90E-04	0.00E+00
449	ALL	310245.32	4031807.27	1.69E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	8.11E-04	0.00E+00
450	ALL	310264.94	4031806.60	1.60E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.69E-04	0.00E+00
451	ALL	310284.57	4031805.94	1.54E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.42E-04	0.00E+00
452	ALL	310304.20	4031805.28	1.50E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.22E-04	0.00E+00
453	ALL	310323.83	4031804.61	1.47E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	7.05E-04	0.00E+00
454	ALL	310343.46	4031803.95	1.44E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.90E-04	0.00E+00
455	ALL	310363.09	4031803.29	1.41E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.76E-04	0.00E+00
456	ALL	310382.71	4031802.63	1.38E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.63E-04	0.00E+00
457	ALL	310402.34	4031801.96	1.35E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.49E-04	0.00E+00
458	ALL	310421.97	4031801.30	1.32E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.35E-04	0.00E+00
459	ALL	310441.60	4031800.64	1.29E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.20E-04	0.00E+00
460	ALL	310461.23	4031799.97	1.26E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	6.05E-04	0.00E+00
461	ALL	310480.85	4031799.31	1.23E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.90E-04	0.00E+00
462	ALL	310500.48	4031798.65	1.19E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.74E-04	0.00E+00
463	ALL	310520.11	4031797.99	1.16E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.57E-04	0.00E+00
464	ALL	310539.74	4031797.32	1.12E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.40E-04	0.00E+00
465	ALL	310559.37	4031796.66	1.09E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.23E-04	0.00E+00
466	ALL	310579.00	4031796.00	1.05E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	5.07E-04	0.00E+00
467	ALL	310598.62	4031795.34	1.02E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.90E-04	0.00E+00
468	ALL	310618.25	4031794.67	9.84E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.73E-04	0.00E+00
469	ALL	310637.88	4031794.01	9.49E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.56E-04	0.00E+00
470	ALL	310657.51	4031793.35	9.14E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.39E-04	0.00E+00
471	ALL	310677.14	4031792.68	8.80E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.23E-04	0.00E+00
472	ALL	310696.77	4031792.02	8.45E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	4.06E-04	0.00E+00
473	ALL	310716.39	4031791.36	8.11E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.90E-04	0.00E+00
474	ALL	310736.02	4031790.70	7.77E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.73E-04	0.00E+00
475	ALL	310755.65	4031790.03	7.43E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.57E-04	0.00E+00
476	ALL	310775.28	4031789.37	7.10E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.41E-04	0.00E+00
477	ALL	310254.44	4031660.56	2.90E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.39E-03	0.00E+00
478	ALL	310219.12	4031545.11	6.18E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.97E-03	0.00E+00
479	ALL	310260.20	4031543.83	6.58E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	3.16E-03	0.00E+00
480	ALL	310230.13	4031602.28	4.06E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.95E-03	0.00E+00
481	ALL	310433.83	4031676.38	2.33E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.12E-03	0.00E+00
482	ALL	310272.06	4031659.87	2.87E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.38E-03	0.00E+00
483	ALL	310980.46	4031788.63	4.31E-07	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	2.07E-04	0.00E+00
484	ALL	310590.96	4031632.57	2.37E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.14E-03	0.00E+00
485	ALL	310486.41	4031663.62	2.35E-06	3.9YrCancerHighEnd_InhSoilDermMMilkWaterCropsChickenEgg	1.13E-03	0.00E+00

HARP2 - HRACalc (dated 22118) 8/21/2022 11:40:08 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: HighEnd

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 3.9

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 1.9
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: True
Fish: False
Homegrown crops: True

Beef: False
Dairy: False
Pig: False
Chicken: True
Egg: True

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
WATER PATHWAY SETTINGS

Surface area (m^2): 0
Volume (kg): 0
Volume changes per year: 0
Fraction from contaminated source: 0

****
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137

Fraction protected: 0.137
Fraction root: 0.137

****
PIG, CHICKEN, & EGG PATHWAY SETTINGS

Surface area (m^2): 0
Volume (kg): 0
Volume changes per year: 0

Pig
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

Chicken
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

Egg
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to:
F:\0014-018\HARP\WOODLAKE_CON\hra\Wdl_ConCancerRisk.csv

```
Cancer risk total by receptor saved to: F:\0014-018\HARP\WOODLAKE_CON\hra\Wdl_ConCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to:
F:\0014-018\HARP\WOODLAKE_CON\hra\Wdl_ConNCChronicRisk.csv
Chronic risk total by receptor saved to: F:\0014-018\HARP\WOODLAKE_CON\hra\Wdl_ConNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to:
F:\0014-018\HARP\WOODLAKE_CON\hra\Wdl_ConNCAcuteRisk.csv
Acute risk total by receptor saved to: F:\0014-018\HARP\WOODLAKE_CON\hra\Wdl_ConNCAcuteRiskSumByRec.csv
HRA ran successfully
```

Operational
Health Risk Assessment

Operational Health Risk Assessment

Woodlake Cannabis Project **DPM - Project Operations**

Emission Assumptions

Emission Factors

1) Truck Emissions

(1) EMFAC2021 for emission rates

(a) Calculations for	Tulare County - 2024 Operational Year
(b) Truck Mix	Fleet mix consistent with the buildout year CalEEMod run (2024) and trips based on most recent TIA
(c) Truck Idle	One instance per trip
(d) Onsite Vehicle Travel Speed	5 mph for trucks
(e) Offsite Vehicle Travel Speed	5-25 mph aggregated for trucks (per SJVAPCD staff comment on modeling assumptions for a similar project)

Traffic Allocation

1) Traffic distribution based on site layout identified in the site plan
2) Project-specific trip generation
3) Onsite travel emissions generated from diesel vehicles
4) Onsite idling emissions generated only by trucks

Emission Source Configuration

1) Project onsite truck traffic represented by a line source
2) Project onsite truck idling represented as line sources (series of point sources)
3) Offsite vehicles represented by a line source

Onsite Vehicle Travel Segments

Segment	**Source ID**	**Segment Travel Distance (m)**
On-site Truck Route 1	On1	1290.6
On-site Truck Route 2	On2	1291.3
Onsite Truck Idling		
On-site Idling – Location 1	IDLE1	207.7
On-site Idling – Location 2	IDLE2	93.7

Offsite Vehicle Travel Segments

Segment		**Segment Travel Distance (m)**
Off-site Truck Route 1	OFF1	1212.2
Off-site Truck Route 2	OFF2	1937.7

Other Input Parameters

Facility Operations (hr/day): 24

It is expected that the facility would have limited truck trips and deliveries and pick-up would be completed by vans.

Woodlake Cannabis Project

Assumptions for Operational Trips

Trip Generation from the Most Recent Project-specific Traffic Study

Table 1
Project Trip Generation

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
110	General Light Industrial	432 1000 sq ft GFA	4.87	1675	0.74	88% 281	12% 38	0.65	14% 39	86% 241
150	Warehousing	1068 1000 sq ft GFA	1.71	1826	0.17	77% 140	23% 42	0.18	28% 54	72% 138
Total				3,501		421	80		93	380
					Total	501		Total	473	

Fleet Mix from the Woodlake Cannabis Project Air Quality Report prepared by VRPA Technologies Inc. (June 2022)

Operational year from the CalEEMod Run Included in the Air Quality Report: 2024

CalEEMod Version: CalEEMod.2020.4.0 Page 29 of 38 Date: 6/24/2022 1:25 PM

Kopitar Cannabis Project - Revised - San Joaquin Valley Unified APCD Air District, Annual

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Parking Lot	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	**Total**
General Heavy Industry	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552	
Daily Trips	1789.78472	182.412603	597.309111	562.418145	101.290932	26.779149	46.507284	90.731916	2.289654	1.102815	82.781145	5.153472	12.435552	3,501

Truck Fleet	LHD1	LHD2	MHD	HHD	Total
Overall	0.028932	0.007649	0.013284	0.025916	0.075781
Truck Only Fleet	0.38178435	0.10093559	0.1752946	0.34198546	1
Daily Truck Trips	101.290932	26.779149	46.507284	90.731916	265.309281

Woodlake Cannabis Project

Vehicle Fleet Mix

Total Daily Truck Trips		Trucks	Total Daily Truck Trips
(Trips/day)	Daily Trips	265.309	265.31
265	Fleet Mix	100.0%	100.0%
—			
265			

Vehicle Fleet

	Trucks Project Vehicle Mix	EMFAC % Diesel	Total Number of Daily Trips	Number of Daily Diesel Trips	Number of Daily Non-Trips	Total Number of Daily Trips	% Diesel Trips	% Non-Diesel Trips	Total Trips
LHDT1 (2-axle truck)	38.2%	53.0%	101	53.7	48	101	20.23%	17.95%	
LHDT2 (2-axle truck)	10.1%	72.5%	27	19.4	7	27	7.32%	2.77%	
MHDT (3 axle truck)	17.5%	100.0%	47	46.5	0	47	17.53%	0.00%	
HHDT (4+ axle truck)	34.2%	100.0%	91	90.7	0	91	34.20%	0.00%	
Truck Subtotal	100.0%		265	210.3	55	265	79.28%	20.72%	100.00%

Truck fleet mix consistent with the project CalEEMod runs used in the Air Quality Analysis.
Assumed 100% diesel for MHDT and HHDT; % Diesel taken from EMFAC2021 for LHDT1, and LHDT2.

Woodlake Cannabis Project

Trip Distribution

Vehicle Allocation - Number of Daily Diesel Trips

Allocation of On-site Truck Trips

Percent Allocation - On-site Travel

50% On-site Travel – Route 1 (DSL trucks)
50% On-site Travel – Route 2 (DSL trucks)
100% Total Diesel Truck Trips

Segment - On-site Travel	Source ID	LDA	LDT1	LDT2	MDT	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	SBUS	MH	Total
On-site Truck Route 1	On1	0.0	0.0	0.0	0.0	26.8	9.7	23.3	45.4	0.0	0.0	0.0	0.0	105.2
On-site Truck Route 2	On2	0.0	0.0	0.0	0.0	26.8	9.7	23.3	45.4	0.0	0.0	0.0	0.0	105.2
Total Diesel Trucks	—	0	0	0	0	54	19	47	91	0	0	0	0	210

Percent Allocation of Trips - On-site Diesel Truck Idling

50.0% On-site Idling – Location 1
50.0% On-site Idling – Location 2
100% Total Diesel Truck Trips (One occurrence per trip)

Segment - On-site Truck Idle	Source ID	LDA	LDT1	LDT2	MDT	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	SBUS	MH	Total
On-site Idling – Location 1	IDLE1	0.0	0.0	0.0	0.0	26.8	9.7	23.3	45.4	0.0	0.0	0.0	0.0	105.2
On-site Idling – Location 2	IDLE2	0.0	0.0	0.0	0.0	26.8	9.7	23.3	45.4	0.0	0.0	0.0	0.0	105.2
Total Idling (Diesel Trucks Idling)	—	0	0	0	0	54	19	47	91	0	0	0	0	210

Woodlake Cannabis Project

Diesel Vehicle Emissions

Processes Modeled

Diesel vehicle exhaust
Diesel vehicle idling

Facility Operations

24 hrs/day, 52 weeks/year

On-site Travel Links Modeled

Link	Truck Type	Average Speed (mph)	Emission Factor (g/mi)	Trips per Daily (in and out)	Link Length (m)	Link Length (mi)	Ave Emissions Over Link (g/day)	Ave Emissions (lbs/day)	Average Emissions (g/sec)	Emissions for all Vehicles (g/sec)
On1	**LHDT1**	5	0.126	26.8	1290.6	0.80	2.703E+00	5.95E-03	3.129E-05	
	LHDT2	5	0.109	9.7	1290.6	0.80	8.493E-01	1.87E-03	9.830E-06	
	MHDT	5	0.061	23.3	1290.6	0.80	1.142E+00	2.52E-03	1.322E-05	
	HHDT	5	0.142	45.4	1290.6	0.80	5.165E+00	1.14E-02	5.978E-05	**1.1412E-04**
On2	**LHDT1**	5	0.126	26.8	1291.3	0.80	2.70E+00	5.96E-03	3.13E-05	
	LHDT2	5	0.109	9.7	1291.3	0.80	8.50E-01	1.87E-03	9.83E-06	
	MHDT	5	0.061	23.3	1291.3	0.80	1.14E+00	2.52E-03	1.32E-05	
	HHDT	5	0.142	45.4	1291.3	0.80	5.17E+00	1.14E-02	5.98E-05	**1.1418E-04**

Woodlake Cannabis Project

Diesel Truck Idling Emissions

Onsite Vehicle Travel Segments	Truck Type	DPM Emission Factor (grams/trip)	Number Idling Vehicle Trips/day	Emissions (g/day)	Emissions (lb/day)	Average Emissions (g/sec)	Total Emissions for all Vehicles (g/sec)
IDLE1	**LHDT1**	0.001	26.8	2.75E-02	6.06E-05	3.18E-07	
	LHDT2	0.001	9.7	1.37E-02	3.01E-05	1.58E-07	
	MHDT	0.000	23.3	8.95E-03	1.97E-05	1.04E-07	
	HHDT	0.003	45.4	1.26E-01	2.77E-04	1.46E-06	**2.0383E-06**
IDLE2	**LHDT1**	0.001	26.8	2.75E-02	6.06E-05	3.18E-07	
	LHDT2	0.001	9.7	1.37E-02	3.01E-05	1.58E-07	
	MHDT	0.000	23.3	8.95E-03	1.97E-05	1.04E-07	
	HHDT	0.003	45.4	1.26E-01	2.77E-04	1.46E-06	**2.0383E-06**

Woodlake Cannabis Project

Project Operations **24 hours/day**

Emission Rates **Running Emissions 5-25 mph Averaged (EMFAC2021 for Tulare County by vehicle type and speed)**

Offsite DSL Truck Roadway Emissions

Segment ID	**Description**	**% total Trips**
SLINE1	Off-site Truck Route 1	50.0%
SLINE2	Off-site Truck Route 2	50.0%

Segment ID: SLINE1

Travel Distance: 1212.2 meters

Operations 24 hours/day

Vehicle Class	**Daily Trips (trips/day)**	**Emission Factor (g/mi)**	**Travel Distance (mi)**	**Emissions (g/day)**	**Emissions (g/sec)**
LHDT1-DSL	26.8	0.0875888	0.75	1.770	2.05E-05
LHDT2-DSL	9.7	0.0769076	0.75	0.563	6.51E-06
MHDT-DSL	23.3	0.0353177	0.75	0.618	7.16E-06
HHDT-DSL	45.4	0.0398225	0.75	1.360	1.57E-05
Total	105.2				**4.99E-05**

Segment ID: SLINE2

Travel Distance: 1937.7 meters

Operations 24 hours/day

Vehicle Class	Daily Trips (trips/day)	Emission Factor (g/mi)	Travel Distance (mi)	Emissions (g/day)	Emissions (g/sec)
LHDT1-DSL	26.8	0.0875888	1.20	2.829	3.27E-05
LHDT2-DSL	9.7	0.0769076	1.20	0.899	1.04E-05
MHDT-DSL	23.3	0.0353177	1.20	0.989	1.14E-05
HHDT-DSL	45.4	0.0398225	1.20	2.175	2.52E-05
Total	105.2				**7.98E-05**

DPM - Project Operations **2024**

EMFAC Running Diesel Exhaust Emissions
in units of grams/mile
Source: EMFAC2021 (v1.0.2) Emission Rates
Tulare County

		Emission Factor (g/mi)			
		5 mph	**10 mph**	**25 mph**	**35 mph**
LHDT1	DSL	0.126	—	0.057	—
LHDT2	DSL	0.109	—	0.051	—
MHDT	DSL	0.061	—	0.016	—
HHDT	DSL	0.142	—	0.009	—

Idling Emissions for Trucks (Emission Factors from CalEEMod)
in units of grams/trip
CalEEMod.2020.4.0

Vehicle Class	Fuel	Vehicle Speed (mph)	Idle DPM (grams/trip)	PM10 STREX
LHDT1	DSL	Idle	0.001025	0.000226
LHDT2	DSL	Idle	0.001408	0.000118
MHDT	DSL	Idle	0.000385	0.000084
HHDT	DSL	Idle	0.002777	0.000000

Off-site Truck Running Emissions for the Health Risk Screening Analysis—Woodlake Cannabis Project

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: County
Region: Tulare
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed, kWh/mile for Energy Consumption, gallon/mile for Fuel Consumption. PHEV calculated based on total VMT.

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX
Tulare	2024	HHDT	Aggregate	5	Diesel	468.4285514	21.17597463	0.13586553	0.142008766	3496.905457	0.029539877	0.550938879	0.635985455	0.724021028	1.380148017	0.033113604
Tulare	2024	HHDT	Aggregate	10	Diesel	5372.627085	9.839894229	0.026463682	0.027660253	3094.63276	0.006460053	0.487560652	0.139083171	0.158335603	0.757091629	0.029304322
Tulare	2024	HHDT	Aggregate	15	Diesel	11784.34764	5.974288551	0.011994524	0.012536863	2477.165163	0.002341856	0.39027838	0.050419523	0.057398789	0.405233079	0.023457273
Tulare	2024	HHDT	Aggregate	20	Diesel	23079.04758	4.025631949	0.007690304	0.008038025	2113.893539	0.00137324	0.333044788	0.029565488	0.033658057	0.287954704	0.020017308
Tulare	2024	HHDT	Aggregate	25	Diesel	13956.89518	3.617973968	0.008484829	0.008868475	1919.127622	0.001072103	0.302359338	0.023082091	0.026277204	0.219746656	0.018172991
						Total	44.63376333	0.190498869	0.199112382	13101.72454	0.04078713	2.064182037	0.878135729	0.999690682	3.050174086	0.124065497
Tulare	2024	LHDT1	Aggregate	5	Diesel	5022.777203	2.96296712	0.12024578	0.125682761	1210.968974	0.024931056	0.190788655	0.536750963	0.611055286	1.739976313	0.011474546
Tulare	2024	LHDT1	Aggregate	10	Diesel	16703.02347	2.757634841	0.097919288	0.102346764	1047.701932	0.020267618	0.165065866	0.436349882	0.49675533	1.38163301	0.009927508
Tulare	2024	LHDT1	Aggregate	15	Diesel	36173.96378	2.584276847	0.08030452	0.083935534	872.5912269	0.016689399	0.137477103	0.359312943	0.409053897	1.106713079	0.008268245
Tulare	2024	LHDT1	Aggregate	20	Diesel	39658.34844	2.43547052	0.066068665	0.069055997	753.9126512	0.013845043	0.118779245	0.298075615	0.33933927	0.889090784	0.007143706
Tulare	2024	LHDT1	Aggregate	25	Diesel	42445.01301	2.323073091	0.054460277	0.056922729	655.3377044	0.01153645	0.103248722	0.248372972	0.282756115	0.714233	0.006209658
						Total	13.06342242	0.41899853	0.437943785	4540.512489	0.087269566	0.715359592	1.878862374	2.138959898	5.831646186	0.043023663
Tulare	2024	LHDT2	Aggregate	5	Diesel	1756.511464	2.646751961	0.104340118	0.109057915	1442.816856	0.021570989	0.227316383	0.464410686	0.52870069	1.501488037	0.013671423
Tulare	2024	LHDT2	Aggregate	10	Diesel	5841.201193	2.42415259	0.085704722	0.089579909	1258.319819	0.017797171	0.1982488	0.383162619	0.436205167	1.203555204	0.01192322
Tulare	2024	LHDT2	Aggregate	15	Diesel	12650.36841	2.233734655	0.070778448	0.073978735	1064.201296	0.014841402	0.167665348	0.319526641	0.363759837	0.969501013	0.010083848
Tulare	2024	LHDT2	Aggregate	20	Diesel	13868.88983	2.069044193	0.058567663	0.061215832	920.3463345	0.012446869	0.14500094	0.267973771	0.305070322	0.780504347	0.008720749
Tulare	2024	LHDT2	Aggregate	25	Diesel	14843.4121	1.940159569	0.048512149	0.050705654	799.8306102	0.010468783	0.126013638	0.225386738	0.256587817	0.62609547	0.007578802
						Total	11.31384297	0.3679031	0.384538045	5485.514915	0.077125214	0.864245109	1.660460456	1.890323834	5.081144071	0.051978042
Tulare	2024	MHDT	Aggregate	5	Diesel	394.7048632	9.306292537	0.058611292	0.061261434	2374.719806	0.015375772	0.374138073	0.331036144	0.376859451	0.580617579	0.022487177
Tulare	2024	MHDT	Aggregate	10	Diesel	4527.712292	3.781262882	0.04633684	0.048431986	2000.64768	0.009324524	0.315202857	0.200754437	0.228543645	0.456511155	0.018944937
Tulare	2024	MHDT	Aggregate	15	Diesel	7887.855438	2.369144866	0.030021827	0.031379281	1573.0734	0.004703618	0.247838355	0.101267596	0.11528545	0.295096533	0.014896064
Tulare	2024	MHDT	Aggregate	20	Diesel	10385.323	1.796341551	0.01914673	0.02001246	1338.697471	0.00228569	0.210912332	0.049210287	0.056022166	0.211793953	0.012676665
Tulare	2024	MHDT	Aggregate	25	Diesel	14295.81924	1.503647128	0.014832723	0.015503393	1205.196736	0.001634053	0.189879237	0.035180708	0.040050558	0.16940122	0.011412492
						Total	18.75668897	0.168949412	0.176588555	8492.335094	0.033323656	1.337970852	0.717449173	0.81676127	1.71342044	0.080417335

Running Emissions 5-25 MPH Averaged

	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX
HHDT	**8.9268**	**0.0381**	**0.0398**	**2620.3449**	**0.0082**	**0.4128**	**0.1756**	**0.1999**	**0.6100**	**0.0248**
LHDT1	**2.6127**	**0.0838**	**0.0876**	**908.1025**	**0.0175**	**0.1431**	**0.3758**	**0.4278**	**1.1663**	**0.0086**
LHDT2	**2.2628**	**0.0736**	**0.0769**	**1097.1030**	**0.0154**	**0.1728**	**0.3321**	**0.3781**	**1.0162**	**0.0104**
MHDT	**3.7513**	**0.0338**	**0.0353**	**1698.4670**	**0.0067**	**0.2676**	**0.1435**	**0.1634**	**0.3427**	**0.0161**

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: County
Region: Tulare
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Trips	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW
Tulare	2024	HHDT	Aggregate	Aggregate	Gasoline	0.77933665	37.07212	15.59297	0.004923461	0	0.00261697	0.020000006	0.098417686
Tulare	2024	HHDT	Aggregate	Aggregate	Diesel	5376.747763	746360.2	88441.1	0.029221922	0.039529044	0	0.035560512	0.077359765
Tulare	2024	HHDT	Aggregate	Aggregate	Electricity	14.81130688	1735.037	234.8221	0	0	0	0.035302365	0.039505034
Tulare	2024	HHDT	Aggregate	Aggregate	Natural Gas	159.7905936	10121.14	1180.455	0.002182183	0.02028136	0	0.03600001	0.149588051
						Total	758253.4						
						Diesel	0.984315						
Tulare	2024	LHDT1	Aggregate	Aggregate	Gasoline	7112.717281	252436.5	105968.9	0.001894774	0	0.000407069	0.008000002	0.078000022
Tulare	2024	LHDT1	Aggregate	Aggregate	Diesel	8035.272749	285636	101073.6	0.054166451	0.027611831	0	0.012000003	0.078000022
Tulare	2024	LHDT1	Aggregate	Aggregate	Electricity	14.40698275	1110.169	201.2564	0	0	0	0.008000002	0.039000011
						Total	539182.6						
						Diesel	0.529757						
Tulare	2024	LHDT2	Aggregate	Aggregate	Gasoline	1081.046628	37535.93	16105.98	0.001515786	0	0.000277495	0.008000002	0.091000026
Tulare	2024	LHDT2	Aggregate	Aggregate	Diesel	2738.705526	99889.53	34449.47	0.048042687	0.027620089	0	0.012000003	0.091000026
Tulare	2024	LHDT2	Aggregate	Aggregate	Electricity	3.728977655	272.2527	49.36037	0	0	0	0.008000002	0.045500013
						Total	137697.7						
						Diesel	0.725426						
Tulare	2024	MHDT	Aggregate	Aggregate	Gasoline	386.2093164	18095.21	7727.276	0.001618405	0	0.00070071	0.012000003	0.045047526
Tulare	2024	MHDT	Aggregate	Aggregate	Diesel	4025.767481	189979.3	47814.5	0.0151211	0.038972324	0	0.012000003	0.044887495
Tulare	2024	MHDT	Aggregate	Aggregate	Electricity	10.42963549	570.6182	132.2308	0	0	0	0.012000003	0.02251761
Tulare	2024	MHDT	Aggregate	Aggregate	Natural Gas	32.82155374	1720.722	249.5499	0.001538116	0.024776573	0	0.012000003	0.045617499
						Total	210365.9						
						Diesel	0.90309						

Running Emission Rates (Source Data)
Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: County
Region: Tulare
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed, kWh/mile for Energy Consumption, gallon/mile for Fuel Consumption. PHEV calculated based on total VMT.

Region	Calendar Y	Vehicle Cat	Model Year	Speed	Fuel	Total VMT	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX	NH3_RUNEX	PM10_PMBW	PM2.5_PMBW	Fuel Consumption
Tulare	2024	HHDT	Aggregate	5	Diesel	468.4285514	21.17597	0.135866	0.142008766	3496.905457	0.029539877	0.550938879	0.635985455	0.724021028	1.380148017	0.033113604	0.131837807	0.158754358	0.055564025	0.344336799
Tulare	2024	HHDT	Aggregate	10	Diesel	5372.627085	9.839894	0.026464	0.027660253	3094.63276	0.006460053	0.487560652	0.139083171	0.158335603	0.757091629	0.029304322	0.197494373	0.146703711	0.051346299	0.304725407
Tulare	2024	HHDT	Aggregate	15	Diesel	11784.34764	5.974289	0.011995	0.012536863	2477.165163	0.002341856	0.39027838	0.050419523	0.057398789	0.405233079	0.023457273	0.206925972	0.142393533	0.049837737	0.243923988
Tulare	2024	HHDT	Aggregate	20	Diesel	23079.04758	4.025632	0.00769	0.008038025	2113.893539	0.00137324	0.333044788	0.029565488	0.033658057	0.287954704	0.020017308	0.213605173	0.083852463	0.029348362	0.208152992
Tulare	2024	HHDT	Aggregate	25	Diesel	13956.89518	3.617974	0.008485	0.008868475	1919.127622	0.001072103	0.302359338	0.023082091	0.026277204	0.219746656	0.018172991	0.208938165	0.13525889	0.047340611	0.188974586
Tulare	2024	LHDT1	Aggregate	5	Diesel	5022.777203	2.962967	0.120246	0.125682761	1210.968974	0.024931056	0.190788655	0.536750963	0.611055286	1.739976313	0.011474546	0.143978985	0.078000022	0.027300008	0.119242909
Tulare	2024	LHDT1	Aggregate	10	Diesel	16703.02347	2.757635	0.097919	0.102346764	1047.701932	0.020267618	0.165065866	0.436349882	0.49675533	1.38163301	0.009927508	0.143978985	0.078000022	0.027300008	0.103166166
Tulare	2024	LHDT1	Aggregate	15	Diesel	36173.96378	2.584277	0.080305	0.083935534	872.5912269	0.016689399	0.137477103	0.359312943	0.409053897	1.106713079	0.008268245	0.143978985	0.078000022	0.027300008	0.085923189
Tulare	2024	LHDT1	Aggregate	20	Diesel	39658.34844	2.435471	0.066069	0.069055997	753.9126512	0.013845043	0.118779245	0.298075615	0.33933927	0.889090784	0.007143706	0.143978985	0.078000022	0.027300008	0.074237028
Tulare	2024	LHDT1	Aggregate	25	Diesel	42445.01301	2.323073	0.05446	0.056922729	655.3377044	0.01153645	0.103248722	0.248372972	0.282756115	0.714233	0.006209658	0.143978985	0.078000022	0.027300008	0.064530451
Tulare	2024	LHDT2	Aggregate	5	Diesel	1756.511464	2.646752	0.10434	0.109057915	1442.816856	0.021570989	0.227316383	0.464410686	0.52870069	1.501488037	0.013671423	0.159391876	0.091000026	0.031850009	0.142072739
Tulare	2024	LHDT2	Aggregate	10	Diesel	5841.201193	2.424153	0.085705	0.089579909	1258.319819	0.017797171	0.1982488	0.383162619	0.436205167	1.203555204	0.01192322	0.159391876	0.091000026	0.031850009	0.1239055
Tulare	2024	LHDT2	Aggregate	15	Diesel	12650.36841	2.233735	0.070778	0.073978735	1064.201296	0.014841402	0.167665348	0.319526641	0.363759837	0.969501013	0.010083848	0.159391876	0.091000026	0.031850009	0.104790842
Tulare	2024	LHDT2	Aggregate	20	Diesel	13868.88983	2.069044	0.058568	0.061215832	920.3463345	0.012446869	0.14500094	0.267973771	0.305070322	0.780504347	0.008720749	0.159391876	0.091000026	0.031850009	0.090625587
Tulare	2024	LHDT2	Aggregate	25	Diesel	14843.4121	1.94016	0.048512	0.050705654	799.8306102	0.010468783	0.126013638	0.225386738	0.256587817	0.62609547	0.007578802	0.159391876	0.091000026	0.031850009	0.078758524
Tulare	2024	MHDT	Aggregate	5	Diesel	394.7048632	9.306293	0.058611	0.061261434	2374.719806	0.015375772	0.374138073	0.331036144	0.376859451	0.580617579	0.022487177	0.148181536	0.061495877	0.021523557	0.233836295
Tulare	2024	MHDT	Aggregate	10	Diesel	4527.712292	3.781263	0.046337	0.048431986	2000.64768	0.009324524	0.315202857	0.200754437	0.228543645	0.456511155	0.018944937	0.203938727	0.061495877	0.021523557	0.197001785
Tulare	2024	MHDT	Aggregate	15	Diesel	7887.855438	2.369145	0.030022	0.031379281	1573.0734	0.004703618	0.247838355	0.101267596	0.11528545	0.295096533	0.014896064	0.209913337	0.061495877	0.021523557	0.154898972
Tulare	2024	MHDT	Aggregate	20	Diesel	10385.323	1.796342	0.019147	0.02001246	1338.697471	0.00228569	0.210912332	0.049210287	0.056022166	0.211793953	0.012676665	0.212054778	0.060630201	0.02122057	0.131820207
Tulare	2024	MHDT	Aggregate	25	Diesel	14295.81924	1.503647	0.014833	0.015503393	1205.196736	0.001634053	0.189879237	0.035180708	0.040050558	0.16940122	0.011412492	0.211959136	0.049809241	0.017433234	0.118674523

Woodlake Cannabis Project

Summary of Emissions in Pounds

Diesel Truck Idling Emissions

Segment - On-site Truck Idle	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/year)	Max Emissions in an Hour (lbs/hr)	Source #	Source Group
On-site Idling – Location 1	0.176110586	0.000387909	0.141586704	3.87909E-05	1	IDLE1
On-site Idling – Location 2	0.176110586	0.000387909	0.141586704	3.87909E-05	2	IDLE2
Subtotal Idle	**0.352221171**	**0.000775818**	**0.283173409**			

Diesel Truck On-site Travel Emissions (5 mph)

Segment	Source ID	Source #	Source Group	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/year)	Max Emissions in an Hour (lbs/hr)
On-site Truck Route 1	SLINE3	5	ON1	9.859958627	0.021717971	7.927059249	0.002171797
On-site Truck Route 2	SLINE4	6	ON2	9.865306505	0.02172975	7.931358754	0.002172975
			Subtotal On-site Travel	**19.72526513**	**0.043447721**	**15.858418**	

Diesel Truck Localized Off-site Travel Emissions (5-25 mph aggregated)

Segment	Source ID	Source #	Source Group	Emissions (g/day)	Emissions (lb/day)	Emissions (lb/year)	Max Emissions in an Hour (lbs/hr)
Off-site Truck Route 1	OFF1	3	Off1	4.311006591	0.009495609	3.465897369	0.001582602
Off-site Truck Route 2	OFF2	4	Off2	6.89113799	0.015178718	5.540232084	0.002529786
			Subtotal Off-site Travel	**11.20214458**	**0.024674327**	**9.006129454**	

Notes: Divided pounds per day by 10 hours to estimate maximum pounds in an hour.

Health Risk Summary (Summary of HARP2 Results)

Woodlake Cannabis Project - Operations

	RISK_SUM	Cancer Risk/million	MAXHI NonCancer Chronic	MAXHI Acute
Maximum Risk	1.36E-05	13.58	2.59E-03	0.00E+00

	X	Y
MEI UTM	310219.12	4031545.11
Receptor # 478		

*HARP - HRACalc v22118 8/21/2022 1:48:17 PM - Cancer Risk - Input File: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk - OpsHRAInput.hra
*HARP - HRACalc v22118 8/21/2022 1:48:17 PM - Chronic Risk - Input File: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk - OpsHRAInput.hra
*HARP - HRACalc v22118 8/21/2022 1:48:17 PM - Acute Risk - Input File: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk - OpsHRAInput.hra

REC	GRP	X	Y	RISK_SUM	SCENARIO	MAXHI NonCancerChronic	MAXHI Acute
1	ALL	310250.67	4030868.71	1.71E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	3.26E-04	0.00E+00
2	ALL	310273.55	4030869.1	1.82E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	3.46E-04	0.00E+00
3	ALL	310294.52	4030866.81	1.85E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	3.53E-04	0.00E+00
4	ALL	310317.02	4030867.57	1.93E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	3.68E-04	0.00E+00
5	ALL	310210.81	4030704.83	5.75E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.10E-04	0.00E+00
6	ALL	310253.88	4030704.39	6.48E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.24E-04	0.00E+00
7	ALL	310214.4	4030652.79	4.86E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	9.26E-05	0.00E+00
8	ALL	310206.32	4030530.76	3.39E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.45E-05	0.00E+00
9	ALL	310259.26	4030512.81	3.61E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.89E-05	0.00E+00
10	ALL	310203.19	4030456.53	2.84E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.42E-05	0.00E+00
11	ALL	310401.5	4030457.88	4.24E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.08E-05	0.00E+00
12	ALL	310401.05	4030439.48	4.04E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.71E-05	0.00E+00
13	ALL	310424.38	4030445.76	4.29E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.18E-05	0.00E+00
14	ALL	310200.94	4030408.52	2.58E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.91E-05	0.00E+00
15	ALL	310199.15	4030371.73	2.40E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.57E-05	0.00E+00
16	ALL	310306.83	4030352.44	2.81E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.35E-05	0.00E+00
17	ALL	310197.01	4030296.75	2.10E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.00E-05	0.00E+00
18	ALL	310201.23	4030152.12	1.69E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	3.23E-05	0.00E+00
19	ALL	310137.89	4030098.28	1.44E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.75E-05	0.00E+00
20	ALL	311800.39	4030344.95	3.61E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.87E-05	0.00E+00
21	ALL	311797.82	4030376.75	3.64E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.94E-05	0.00E+00
22	ALL	311800.39	4030411.13	3.65E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.96E-05	0.00E+00
23	ALL	311802.11	4030455.83	3.67E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.99E-05	0.00E+00
24	ALL	311798.91	4030498.57	3.70E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.05E-05	0.00E+00
25	ALL	311803.84	4030529.98	3.69E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.03E-05	0.00E+00
26	ALL	311800.25	4030560.94	3.70E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.06E-05	0.00E+00
27	ALL	311805.19	4030606.72	3.68E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.02E-05	0.00E+00
28	ALL	311803.84	4030626.91	3.68E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.02E-05	0.00E+00
29	ALL	311758.07	4030692.87	3.86E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.36E-05	0.00E+00
30	ALL	311738.33	4030704.09	3.95E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.53E-05	0.00E+00
31	ALL	311811.47	4030739.54	3.60E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.86E-05	0.00E+00
32	ALL	311808.33	4030669.09	3.65E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.96E-05	0.00E+00
33	ALL	311833.01	4030716.21	3.53E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.72E-05	0.00E+00
34	ALL	311697.94	4030705.89	4.15E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.90E-05	0.00E+00
35	ALL	311711.4	4030741.79	4.06E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.73E-05	0.00E+00
36	ALL	311817.3	4030839.16	3.49E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.65E-05	0.00E+00
37	ALL	311717.68	4030864.29	3.90E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.44E-05	0.00E+00
38	ALL	311751.34	4030891.67	3.71E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.07E-05	0.00E+00
39	ALL	311703.77	4030906.47	3.91E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.46E-05	0.00E+00
40	ALL	311762.11	4030927.56	3.61E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.89E-05	0.00E+00
41	ALL	311768.39	4030964.81	3.53E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.73E-05	0.00E+00
42	ALL	311763.01	4030911.86	3.63E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.92E-05	0.00E+00
43	ALL	311699.29	4030950	3.87E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.37E-05	0.00E+00
44	ALL	311767.49	4030980.07	3.51E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.69E-05	0.00E+00
45	ALL	311762.56	4031005.2	3.49E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.65E-05	0.00E+00
46	ALL	311707.81	4031012.83	3.72E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.08E-05	0.00E+00
47	ALL	311706.91	4031035.26	3.68E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.01E-05	0.00E+00
48	ALL	311763.01	4031028.08	3.44E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.56E-05	0.00E+00
49	ALL	311726.66	4031067.12	3.52E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.71E-05	0.00E+00
50	ALL	311767.49	4031072.96	3.34E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.36E-05	0.00E+00
51	ALL	311759.87	4031050.97	3.41E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.50E-05	0.00E+00
52	ALL	309679.38	4030404.9	1.31E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.50E-05	0.00E+00
53	ALL	309692.46	4030374.88	1.27E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.43E-05	0.00E+00
54	ALL	309420.01	4030509.57	1.29E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.45E-05	0.00E+00
55	ALL	309389.23	4030513.41	1.27E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.42E-05	0.00E+00
56	ALL	309829.96	4031975.46	1.38E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.62E-04	0.00E+00
57	ALL	310115.2	4032014.06	2.26E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.31E-04	0.00E+00
58	ALL	310067.44	4031968.27	3.57E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.80E-04	0.00E+00
59	ALL	310230.34	4031970.88	3.42E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.52E-04	0.00E+00
60	ALL	310245.39	4031955.84	4.31E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.20E-04	0.00E+00
61	ALL	310154.45	4032102.38	1.18E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.25E-04	0.00E+00
62	ALL	310160.34	4032167.8	8.77E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.67E-04	0.00E+00
63	ALL	311337.23	4031674.02	4.61E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.79E-05	0.00E+00
64	ALL	311355.78	4031575.44	4.41E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.41E-05	0.00E+00
65	ALL	311452.22	4031519.43	3.81E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.25E-05	0.00E+00
66	ALL	311451.09	4031609.42	3.65E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.96E-05	0.00E+00

67	ALL	311350.96	4031646.96	4.46E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.50E-05	0.00E+00
68	ALL	311341.8	4031605.08	4.52E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.62E-05	0.00E+00
69	ALL	311377.13	4031603.12	4.24E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.07E-05	0.00E+00
70	ALL	311337.87	4031548.16	4.54E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.66E-05	0.00E+00
71	ALL	311364.04	4031548.81	4.36E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.31E-05	0.00E+00
72	ALL	311333.29	4031524.27	4.59E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.74E-05	0.00E+00
73	ALL	311359.46	4031524.93	4.41E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.40E-05	0.00E+00
74	ALL	311428.82	4031676.08	3.69E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.04E-05	0.00E+00
75	ALL	311455	4031676.73	3.47E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.61E-05	0.00E+00
76	ALL	311428.17	4031658.41	3.74E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.12E-05	0.00E+00
77	ALL	311454.34	4031659.07	3.52E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.71E-05	0.00E+00
78	ALL	311370.03	4031673.48	4.26E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	8.12E-05	0.00E+00
79	ALL	311428.65	4031716.04	3.58E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.83E-05	0.00E+00
80	ALL	311443.78	4031722.65	3.43E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.53E-05	0.00E+00
81	ALL	311418.25	4031740.15	3.61E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.87E-05	0.00E+00
82	ALL	311420.62	4031807.76	3.29E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.27E-05	0.00E+00
83	ALL	311457.97	4031811.54	2.95E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.62E-05	0.00E+00
84	ALL	311423.45	4031875.37	2.85E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.44E-05	0.00E+00
85	ALL	311422.51	4031855.98	2.98E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.69E-05	0.00E+00
86	ALL	311431.02	4031832.82	3.05E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.82E-05	0.00E+00
87	ALL	311454.19	4031834.23	2.86E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.45E-05	0.00E+00
88	ALL	311462.22	4031783.64	3.05E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.81E-05	0.00E+00
89	ALL	311458.44	4031760.48	3.17E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.05E-05	0.00E+00
90	ALL	311465.06	4031741.57	3.19E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.08E-05	0.00E+00
91	ALL	311428.18	4031779.39	3.36E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.40E-05	0.00E+00
92	ALL	311416.83	4031920.28	2.59E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.94E-05	0.00E+00
93	ALL	311446.15	4031920.75	2.42E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.62E-05	0.00E+00
94	ALL	311464.11	4031924.06	2.31E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.41E-05	0.00E+00
95	ALL	311466.95	4031944.39	2.19E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.17E-05	0.00E+00
96	ALL	311422.04	4031941.56	2.42E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.60E-05	0.00E+00
97	ALL	311358.21	4031944.39	2.79E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.31E-05	0.00E+00
98	ALL	311310.46	4031921.7	3.54E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.75E-05	0.00E+00
99	ALL	311309.98	4031946.76	3.18E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.05E-05	0.00E+00
100	ALL	311239.54	4031969.93	3.71E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	7.07E-05	0.00E+00
101	ALL	311330.79	4031974.65	2.71E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.16E-05	0.00E+00
102	ALL	311361.05	4031972.29	2.53E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.82E-05	0.00E+00
103	ALL	311414.94	4031975.13	2.24E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.26E-05	0.00E+00
104	ALL	311227.72	4031999.71	3.45E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.58E-05	0.00E+00
105	ALL	311291.54	4031977.02	3.00E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	5.71E-05	0.00E+00
106	ALL	311229.14	4032024.3	3.17E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	6.04E-05	0.00E+00
107	ALL	311190.37	4031941.56	6.03E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.15E-04	0.00E+00
108	ALL	311174.77	4031924.06	9.16E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.74E-04	0.00E+00
109	ALL	311160.11	4031935.88	9.45E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.80E-04	0.00E+00
110	ALL	311059.13	4032343.44	2.24E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.27E-05	0.00E+00
111	ALL	310729.62	4032215.63	4.79E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	9.13E-05	0.00E+00
112	ALL	310731.16	4032194.85	5.14E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	9.79E-05	0.00E+00
113	ALL	310961.09	4031552.29	7.74E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.47E-04	0.00E+00
114	ALL	310853.56	4031573.79	9.24E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.76E-04	0.00E+00
115	ALL	310970.13	4031581.1	7.50E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.43E-04	0.00E+00
116	ALL	310413.36	4031679.84	2.58E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	4.91E-04	0.00E+00
117	ALL	310765.31	4031644.13	1.06E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.01E-04	0.00E+00
118	ALL	310644.29	4031653.93	1.41E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.70E-04	0.00E+00
119	ALL	310980.39	4031759.57	9.37E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.79E-04	0.00E+00
120	ALL	311015.31	4031526.64	7.22E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.38E-04	0.00E+00
121	ALL	311008.12	4031544.53	7.21E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.37E-04	0.00E+00
122	ALL	311000.94	4031562.42	7.22E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.38E-04	0.00E+00
123	ALL	310993.75	4031580.31	7.25E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.38E-04	0.00E+00
124	ALL	310986.56	4031598.2	7.30E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.39E-04	0.00E+00
125	ALL	310979.38	4031616.09	7.40E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.41E-04	0.00E+00
126	ALL	310972.19	4031633.98	7.53E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.43E-04	0.00E+00
127	ALL	310965	4031651.87	7.70E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.47E-04	0.00E+00
128	ALL	310957.82	4031669.76	7.91E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.51E-04	0.00E+00
129	ALL	310933.02	4031695.49	8.41E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.60E-04	0.00E+00
130	ALL	310880.17	4031719.01	9.27E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.77E-04	0.00E+00
131	ALL	310862.56	4031726.85	9.59E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.83E-04	0.00E+00
132	ALL	310792.11	4031758.21	1.11E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.11E-04	0.00E+00
133	ALL	311022.5	4031508.75	7.24E-07	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	1.38E-04	0.00E+00
134	ALL	311021.36	4031134.55	1.13E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.16E-04	0.00E+00
135	ALL	311021.3	4031114.86	1.15E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.19E-04	0.00E+00
136	ALL	311021.24	4031095.16	1.17E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.22E-04	0.00E+00
137	ALL	311021.18	4031075.47	1.18E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.25E-04	0.00E+00
138	ALL	311021.12	4031055.77	1.19E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.28E-04	0.00E+00
139	ALL	311021.06	4031036.08	1.21E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.30E-04	0.00E+00
140	ALL	311021	4031016.39	1.22E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.33E-04	0.00E+00
141	ALL	311020.94	4030996.69	1.23E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.35E-04	0.00E+00
142	ALL	311020.88	4030977	1.24E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.37E-04	0.00E+00
143	ALL	311020.82	4030957.3	1.25E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.38E-04	0.00E+00
144	ALL	311020.76	4030937.61	1.25E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.39E-04	0.00E+00
145	ALL	311020.7	4030917.91	1.26E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.39E-04	0.00E+00
146	ALL	311020.64	4030898.22	1.25E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.39E-04	0.00E+00
147	ALL	311020.58	4030878.52	1.25E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.39E-04	0.00E+00
148	ALL	311020.52	4030858.83	1.25E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.38E-04	0.00E+00
149	ALL	311020.46	4030839.14	1.24E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.36E-04	0.00E+00
150	ALL	311020.4	4030819.44	1.23E-06	70YrCancerHighEnd_InhSoilDermMMilkCropsChickenEgg	2.35E-04	0.00E+00

HARP2 - HRACalc (dated 22118) 8/21/2022 1:48:17 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: HighEnd

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 70

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 0
16 to 70 Years Bin: 54

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True

Beef: False
Dairy: False
Pig: False
Chicken: True
Egg: True

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

****
PIG, CHICKEN, & EGG PATHWAY SETTINGS

Surface area (m^2): 0
Volume (kg): 0

```
Volume changes per year: 0

Pig
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

Chicken
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

Egg
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

**********************************
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment.  Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk -
OpsCancerRisk.csv
Cancer risk total by receptor saved to: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk - OpsCancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk -
OpsNCChronicRisk.csv
Chronic risk total by receptor saved to: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk - OpsNCChronicRiskSumByRec.csv
Calculating acute risk
Acute risk breakdown by pollutant and receptor saved to: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk -
OpsNCAcuteRisk.csv
```

```
Acute risk total by receptor saved to: F:\0014-018\HARP\WDLK_OPS\hra\Wdlk - OpsNCAcuteRiskSumByRec.csv
HRA ran successfully
```

This page intentionally left blank.

Appendix D

Traffic Study

Project No: 524-19

TRAFFIC STUDY

Industrial Development

Southeast Corner of Ropes Avenue & Blair Road

City of Woodlake, CA

Prepared for:

Crawford & Bowen Planning, Inc

August 2022

Prepared by:

RUETTGERS & SCHULER CIVIL ENGINEERS

1800 30TH STREET, SUITE 260
BAKERSFIELD, CA 93301

Ian J. Parks, RCE 58155

REGISTERED PROFESSIONAL ENGINEER
IAN JEFFREY PARKS
No. C58155
Exp. 6-30-24
CIVIL
STATE OF CALIFORNIA

TABLE OF CONTENTS

INTRODUCTION

The purpose of this study is to evaluate the potential traffic impact of a light industrial complex on the southeast corner of Ropes Avenue and Blair Road in the City of Woodlake, California.

A. Land Use, Site and Study Area Boundaries

The proposed project consists of 432,000 square feet of industrial building space and 1,068,000 square feet of warehousing. Based on the City of Woodlake's General Plan, the current land use designation for the project site is Neighborhood Commercial and zoning is Light Industrial (ML). A vicinity map is presented in Figure 1 and a location map is presented in Figure 2. The site plan for the project is shown in Figure 3.

The scope of the study was developed in association with the City of Woodlake Roads Department and Caltrans. Five unsignalized intersections are included in this study as follows:

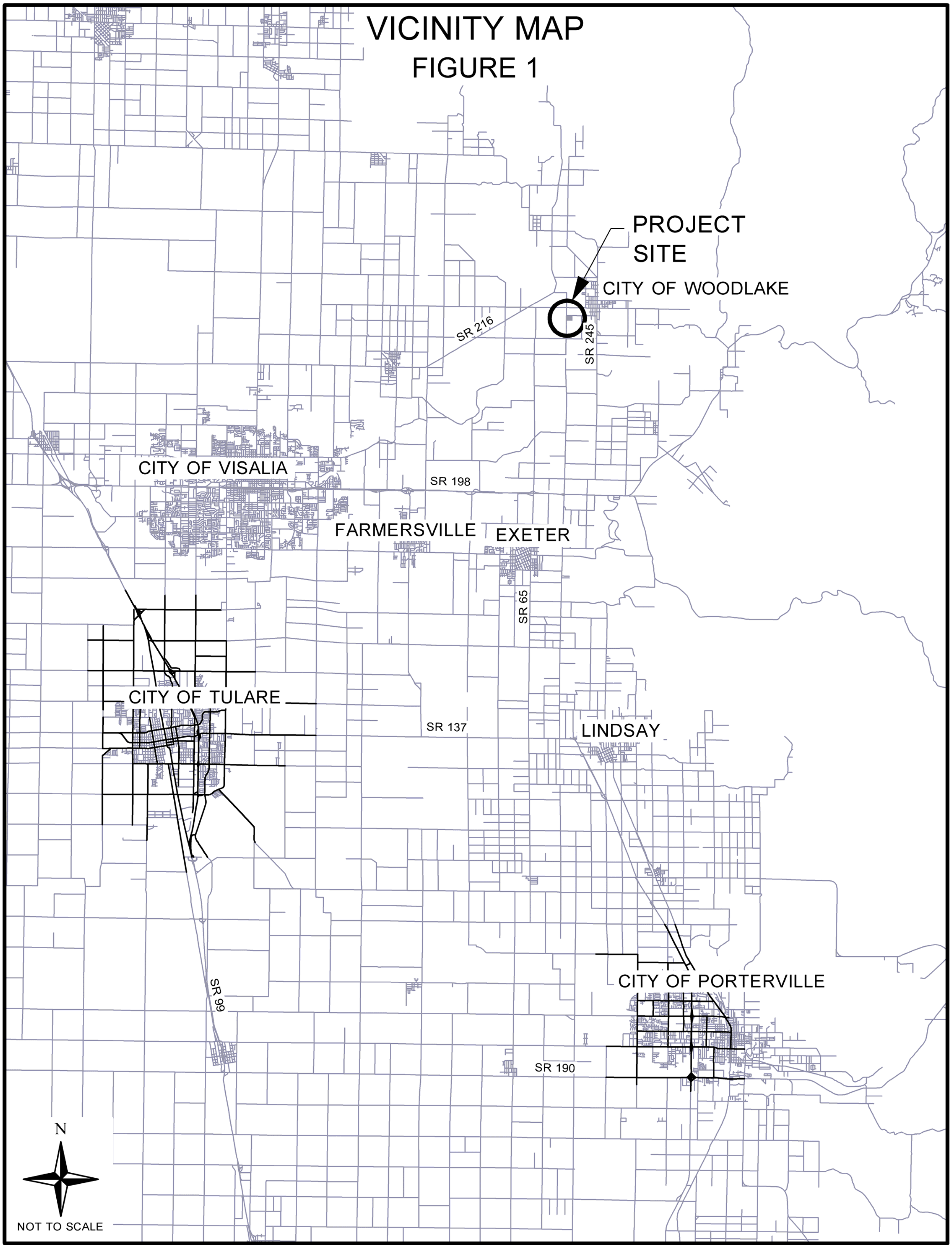
- Millwood Drive (SR 216) & Naranjo Boulevard
- Road 196 & Naranjo Boulevard
- Road 204/Blair Road & Naranjo Boulevard
- Road 204 & Ropes Avenue/Avenue 342
- Valencia Boulevard & Ropes Avenue/Avenue 342

B. Existing Site Uses and Site Access

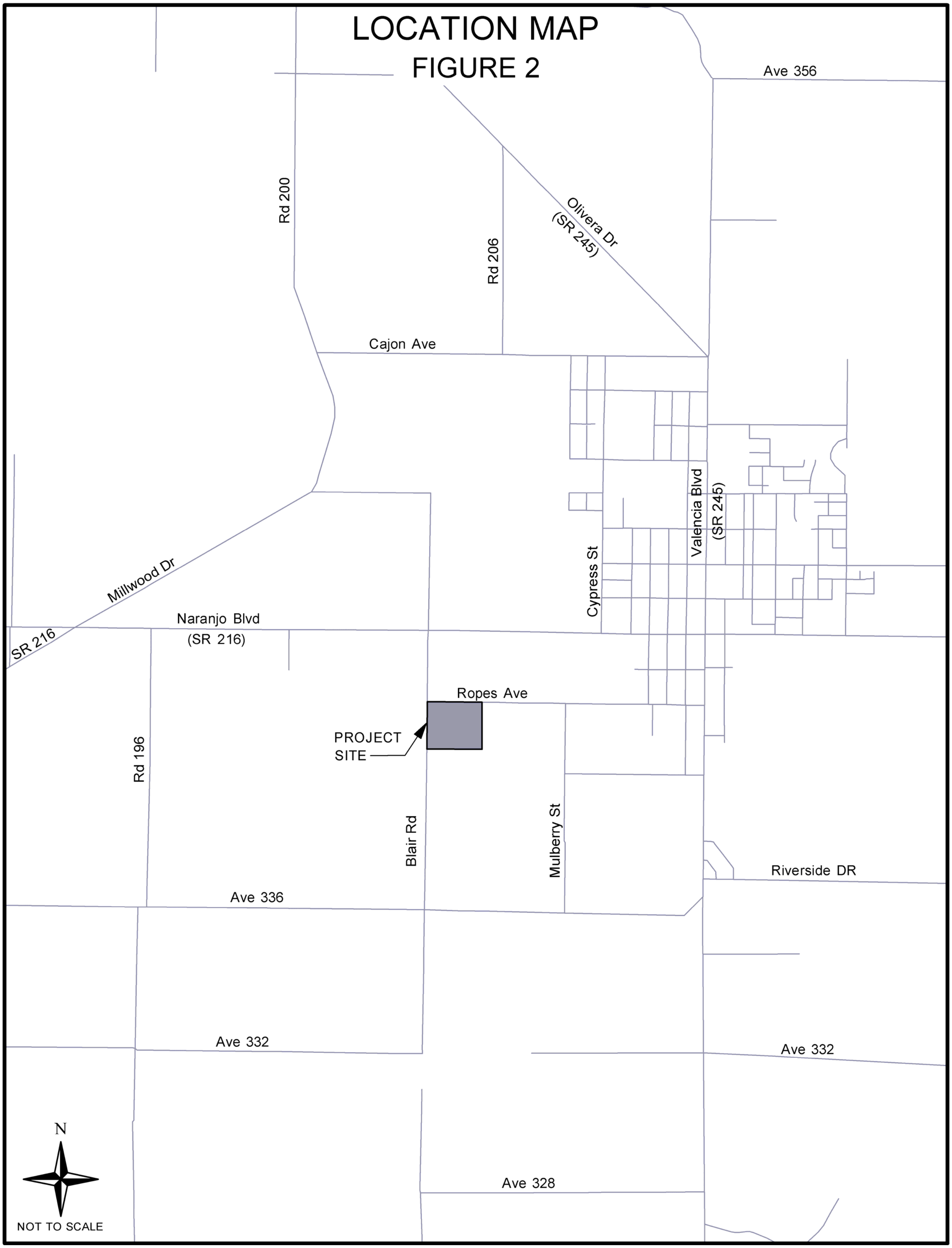
The project site is currently being used for agricultural purposes. Primary access to the project is anticipated from Blair Road.

C. Existing Uses in the Vicinity of the Site

Existing land uses in the immediate vicinity of the project include agriculture to the south, east and west. Light industrial uses exist to the north and farther east. Residential housing also exists to the east.

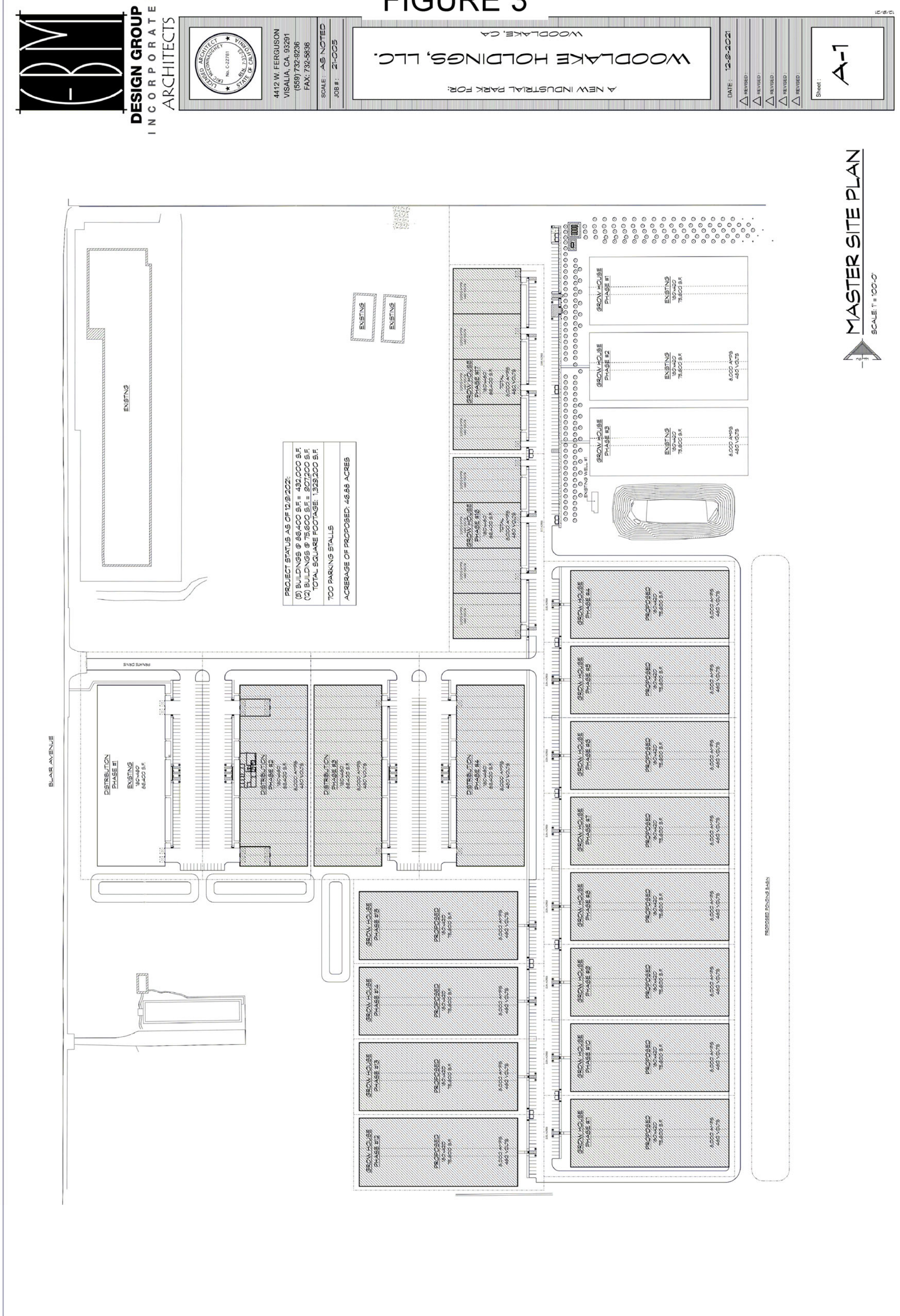


RUETTGERS & SCHULER CIVIL ENGINEERS


LOCATION MAP
FIGURE 2
Ave 356
Rd 200
Rd 206
Olivera Dr
(SR 245)
Cajon Ave
Valencia Blvd
(SR 245)
Cypress St
Millwood Dr
Naranjo Blvd
(SR 216)
SR 216
Ropes Ave
PROJECT
SITE
Rd 196
Blair Rd
Mulberry St
Riverside DR
Ave 336
Ave 332
Ave 332
Ave 328
N
NOT TO SCALE

SITE PLAN

FIGURE 3



D. Existing Street Descriptions

Millwood Drive is generally a north-south roadway that extends north from State Route 216 and provides access to agricultural land uses. In the vicinity of the project it exists as a two-lane roadway with graded shoulders.

Naranjo Boulevard (SR 216) is an east-west arterial that provides access to agricultural, commercial, and residential land uses in Woodlake. In the vicinity of the project it exists as a two-lane roadway with paved shoulders.

Road 196 is a north-south roadway that extends from Millwood Drive to Avenue 336. It provides access to agricultural land uses, and in the vicinity of the project, it exists as a two-lane roadway with graded shoulders.

Road 204/Blair Road is a north-south two-lane roadway that extends from Naranjo Boulevard to Avenue 348. It provides access to residential and agricultural land uses

Ropes Avenue/Avenue 342 is an east-west roadway that extends from Blair Road to Valencia Boulevard. West of Oaks Street, it provides access to agricultural land use, and east of Oaks Street it provides access to residential land uses. It exists as a two-lane roadway with curb and gutter adjacent to development. Based on information provided by the City of Woodlake Transportation Department, Ropes Avenue is a dedicated roadway for traffic accessing directly to the industrial park from the south.

Valencia Boulevard is a major north-south arterial that extends through the metropolitan region of the City of Woodlake. It exists as a two-lane roadway with curb and gutter and provides access to commercial, residential, and agricultural land uses.

PROJECT TRIP GENERATION AND DESIGN HOUR VOLUMES

The trip generation and design hour volumes shown in Table 1 were calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition. The ADT, AM and PM peak hour rates, and peak hour directional splits for ITE Land Use Codes 110 (General Light Industrial) and 150 (Warehousing) were used to estimate the project traffic for peak hour of adjacent street traffic.

Table 1
Project Trip Generation

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
110	General Light Industrial	432 1000 sq ft GFA	4.87	1675	0.74	88% 281	12% 38	0.65	14% 39	86% 241
150	Warehousing	1068 1000 sq ft GFA	1.71	1826	0.17	77% 140	23% 42	0.18	28% 54	72% 138
Total				3,501		421	80		93	380
					Total	**501**		**Total**	**473**	

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The project trip distribution in Table 2 represents the most logically traveled routes for traffic accessing the project. Project traffic distribution was estimated based on a review of the potential draw from population centers within the region and the type of land use involved. The City anticipates a significant amount of project traffic to travel along State Route 65 between Woodlake and other towns such as Exeter, Lindsey, Porterville, Visalia, and Tulare. These assumptions were used to distribute project traffic as shown in Figure 4.

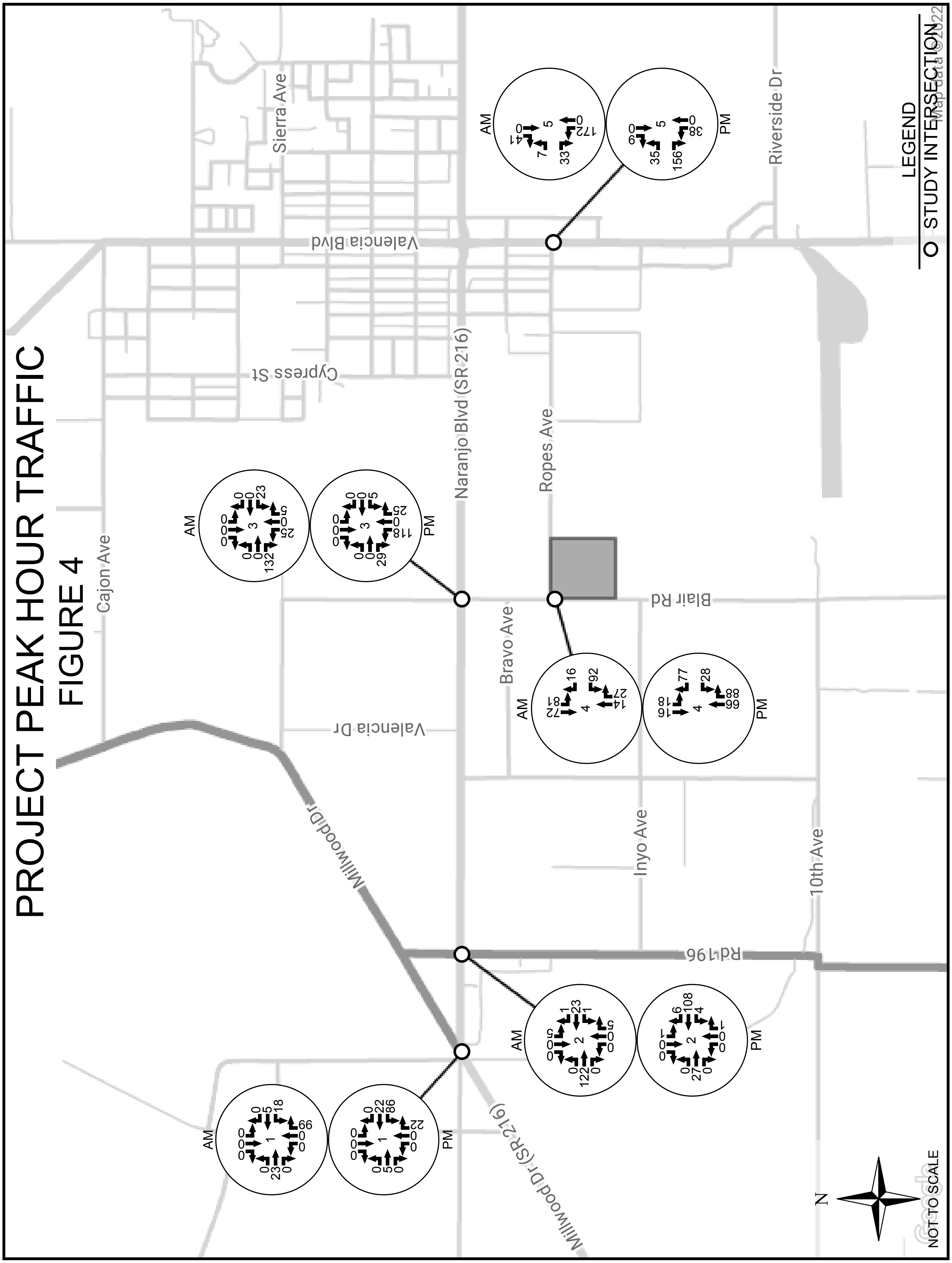
Table 2
Project Trip Distribution

Direction	Percent
North	10%
South	20%
East	40%
West	30%

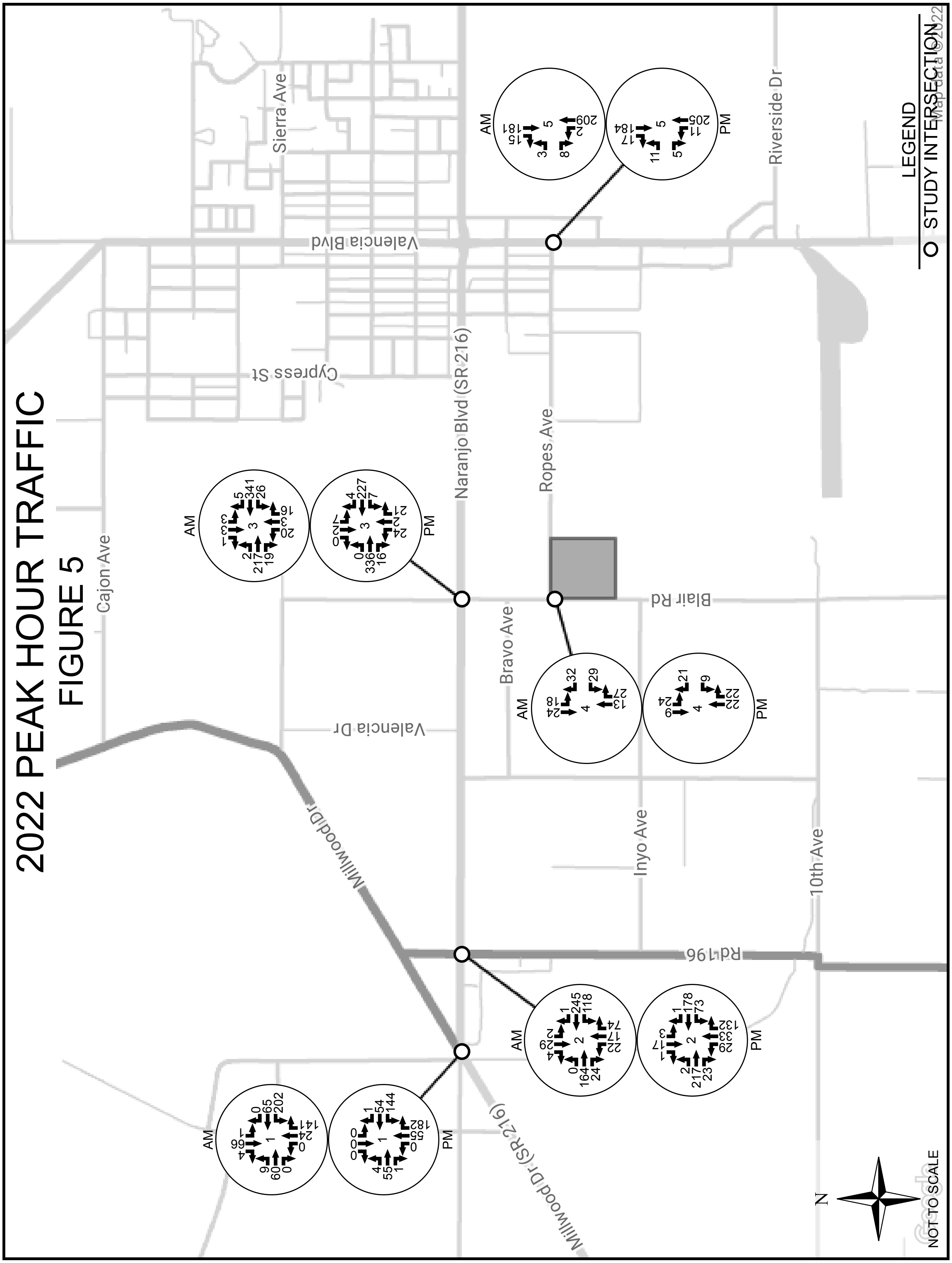
EXISTING AND FUTURE TRAFFIC

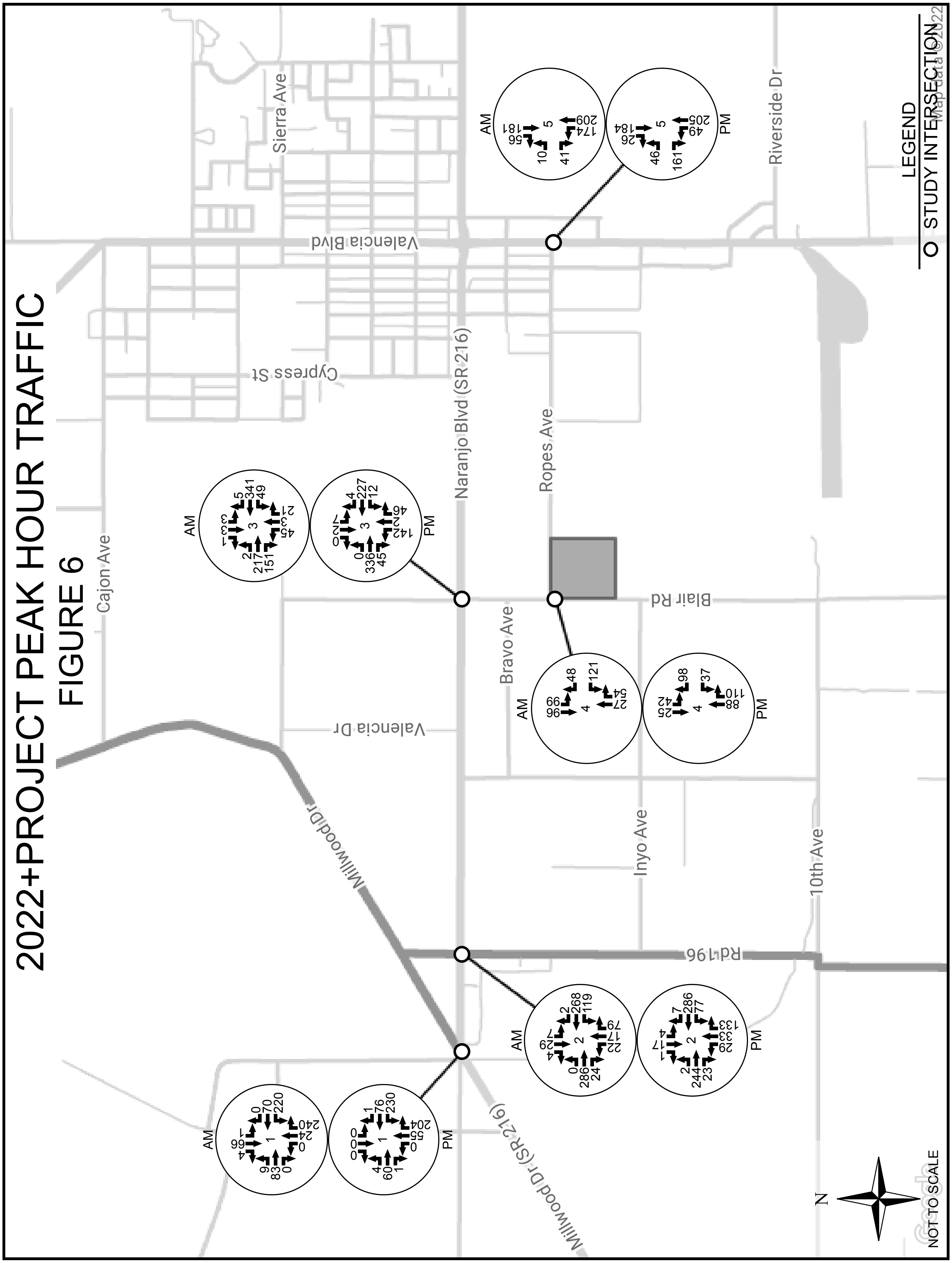
Existing peak hour turn movement volumes were field measured in May 2022 at the study intersections and are shown in Figure 5. Existing plus project peak hour volumes are shown in Figure 6.

Annual growth rates of 0.49% to 0.83% were applied to existing traffic volumes to estimate future traffic volumes for the year 2042. These growth rates were estimated based on a review of TCAG traffic model data. Future peak hour volumes are shown in Figures 7 and 8.

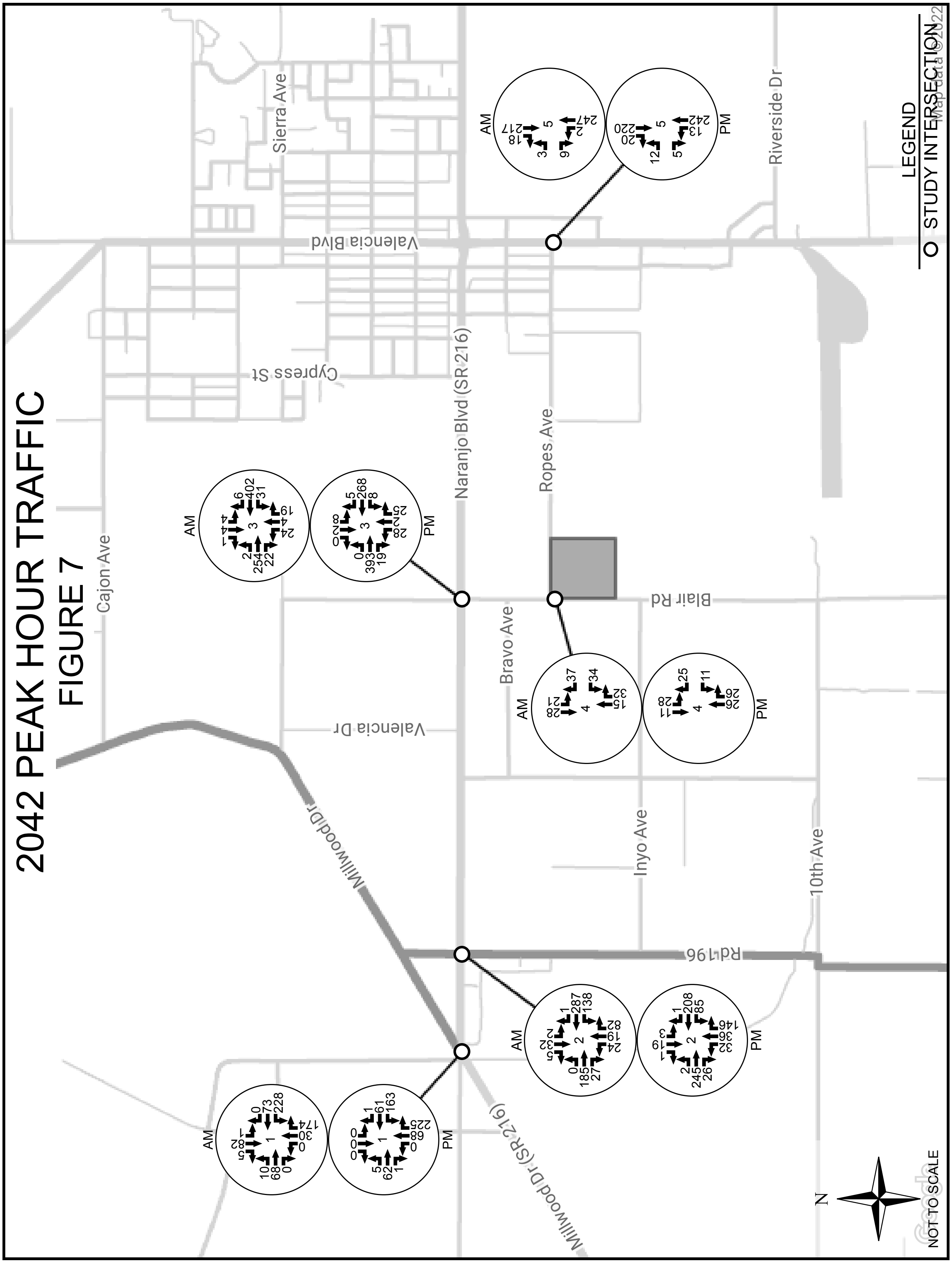


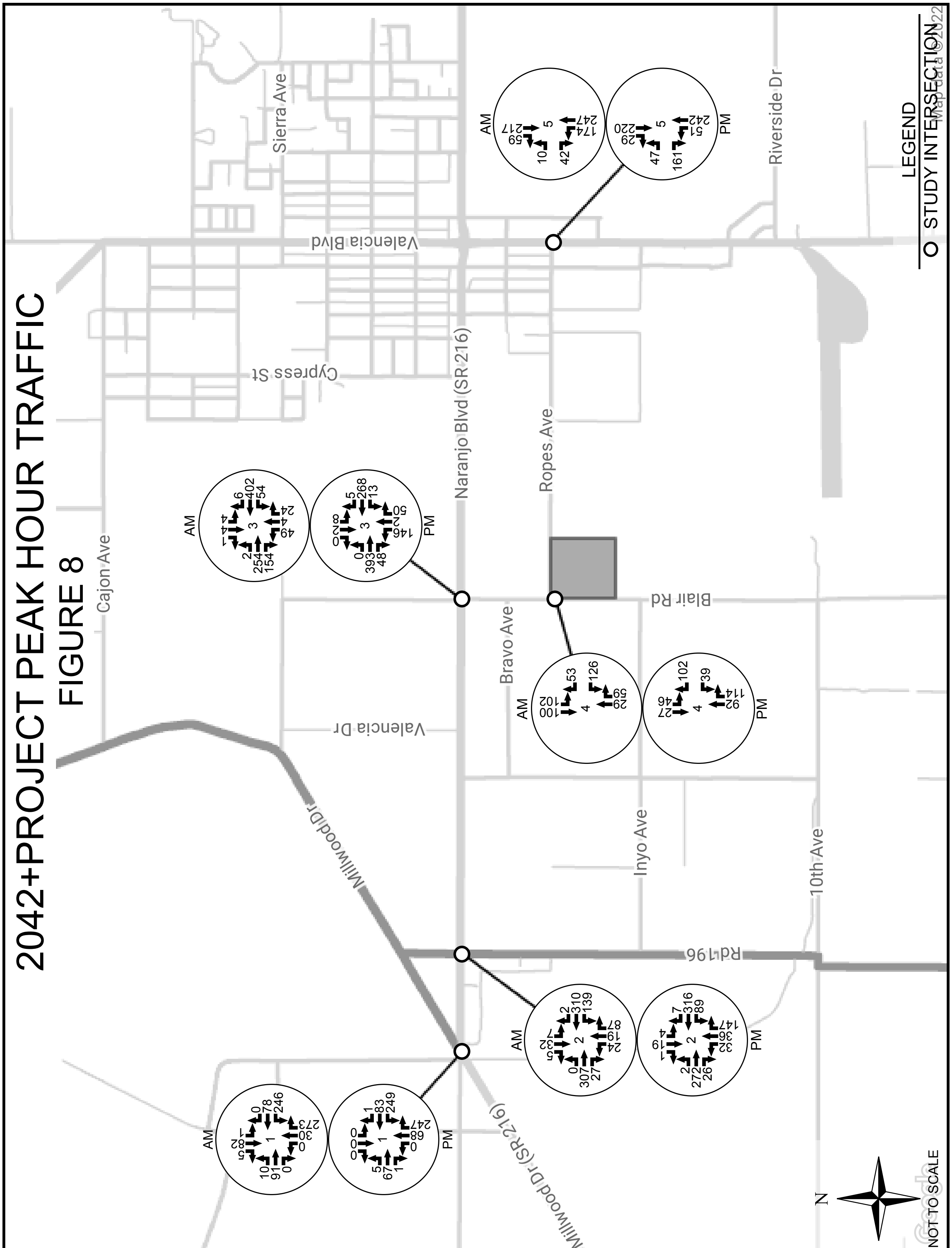
RUETTGERS & SCHULER CIVIL ENGINEERS


2022 PEAK HOUR TRAFFIC
FIGURE 5
Sierra Ave
Valencia Blvd
Cypress St
Cajon Ave
Naranjo Blvd (SR 216)
Ropes Ave
Blair Rd
Bravo Ave
Valencia Dr
Millwood Dr
Inyo Ave
Rd 196
10th Ave
Riverside Dr
Millwood Dr (SR 216)
AM
PM
LEGEND
STUDY INTERSECTION
N
NOT TO SCALE



RUETTGERS & SCHULER CIVIL ENGINEERS


2042 PEAK HOUR TRAFFIC
FIGURE 7
Cajon Ave
Sierra Ave
Cypress St
Valencia Blvd
Naranjo Blvd (SR 216)
Ropes Ave
Riverside Dr
Blair Rd
Bravo Ave
Valencia Dr
Inyo Ave
10th Ave
Rd 196
Millwood Dr
Millwood Dr (SR 216)
AM
PM
LEGEND
STUDY INTERSECTION
NOT TO SCALE
N



Ruettgers & Schuler Civil Engineers

INTERSECTION ANALYSIS

A capacity analysis of the study intersections was conducted using Synchro software from Trafficware. This software utilizes the capacity analysis methodology in the Transportation Research Board's 2010 Highway Capacity Manual. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2022)
- Existing+Project (2022)
- Future (2042)
- Future+Project (2042)

Criteria for intersection level of service (LOS) are shown in the tables below.

LEVEL OF SERVICE CRITERIA
UNSIGNALIZED INTERSECTION

Average Control Delay (sec/veh)	Level of Service	Expected Delay to Minor Street Traffic
≤ 10	A	Little or no delay
> 10 and ≤ 15	B	Short traffic delays
> 15 and ≤ 25	C	Average traffic delays
> 25 and ≤ 35	D	Long traffic delays
> 35 and ≤ 50	E	Very long traffic delays
> 50	F	Extreme delays

LEVEL OF SERVICE CRITERIA
SIGNALIZED INTERSECTIONS

Volume/Capacity	Control Delay (sec/veh)	Level of Service
< 0.60	≤ 10	A
0.61 - 0.70	> 10 and ≤ 20	B
0.71 - 0.80	> 20 and ≤ 35	C
0.81 - 0.90	> 35 and ≤ 55	D
0.91 - 1.00	> 55 and ≤ 80	E
> 1.0	> 80	F

According to the City of Woodlake Roads Department, the peak hour level of service shall be no lower than LOS "D" for urban areas and LOS "C" for rural areas. Levels of service for the study intersections are presented in Tables 5a and 5b. The intersection peak hour level of service goal for the study intersections is LOS C or better.

Table 3a
AM Intersection Level of Service

#	Intersection	Control Type	2022	2022+ Project	2042	2042+ Project	2042+ Project w/Mitigation[1]
1	Millwood Dr & Naranjo Blvd	AWSC	B	B	B	B	-
2	Rd 196 & Naranjo Blvd	AWSC	B	B	B	C	-
3	Blair Rd & Naranjo Blvd	NB SB	B C	C C	C C	D (26.4) C	C
4	Blair Rd & Ropes Ave	WB	A	B	A	C	-
5	Valencia Blvd & Ropes Ave	EB	B	B	B	B	-

[1]See Table 7 for Mitigation Measures

Table 3b
PM Intersection Level of Service

#	Intersection	Control Type	2022	2022+ Project	2042	2042+ Project	2042+ Project w/Mitigation[1]
1	Millwood Dr & Naranjo Blvd	AWSC	A	B	B	B	-
2	Rd 196 & Naranjo Blvd	AWSC	B	B	B	C	-
3	Blair Rd & Naranjo Blvd	NB SB	C C	D (30.1) C	C C	E (48.3) C	C
4	Blair Rd & Ropes Ave	WB	A	B	A	B	-
5	Valencia Blvd & Ropes Ave	EB	B	C	B	C	-

[1]See Table 7 for Mitigation Measures

TRAFFIC SIGNAL WARRANT ANALYSIS

Peak hour signal warrants were evaluated for each of the unsignalized intersections within the study area based on the California Manual on Uniform Traffic Control Devices (MUTCD). Peak hour signal warrants assess delay to traffic on the minor street approaches when entering or crossing a major street. Signal warrant analysis results for AM and PM peak hours are shown in Tables 4a through 4d.

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered in order to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service or operate below an acceptable level of service and not meet signal warrant criteria.

Table 4a
AM Traffic Signal Warrant Analysis

		2022			2022+Project			2042			2042+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	Millwood Dr at Naranjo Blvd	336	165	NO	382	264	NO	379	204	NO	425	303	YES
2	Rd 196 at Naranjo Blvd	552	113	NO	699	118	NO	638	125	NO	785	130	YES
3	Blair Rd at Naranjo Blvd	610	39	NO	765	69	NO	717	47	NO	872	77	NO
4	Blair Rd at Ropes Ave	82	61	NO	276	169	NO	96	71	NO	290	179	NO
5	Valencia Blvd at Ropes Ave	407	11	NO	620	51	NO	484	12	NO	697	52	NO

Table 4b
PM Traffic Signal Warrant Analysis

		2022			2022+Project			2042			2042+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	Millwood Dr at Naranjo Blvd	259	237	NO	372	259	NO	293	225	NO	406	315	YES
2	Rd 196 at Naranjo Blvd	494	194	NO	639	195	YES	567	214	YES	712	215	YES
3	Blair Rd at Naranjo Blvd	590	47	NO	624	190	YES	693	55	NO	727	198	YES
4	Blair Rd at Ropes Ave	77	30	NO	265	135	NO	91	36	NO	279	141	NO
5	Valencia Blvd at Ropes Ave	418	16	NO	465	207	NO	496	17	NO	543	208	YES

ROADWAY ANALYSIS

A capacity analysis of the study roadways was conducted using Table 4 in the State of Florida Department of Transportation *Quality/Level of Service Handbook* dated June 2020 (see Appendix). The City of Woodlake Circulation Element states that the peak hour level of service for roadways shall be no lower than LOS "D" for urban areas. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2022)
- Existing (2022) + Project
- Future (2042)
- Future (2042) + Project

Table 5a
AM Roadway Level of Service

Street	2022 Two-Way LOS		2022+Project Two-Way LOS		2042 Two-Way LOS		2042+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Naranjo Blvd: Millwood Dr - Rd 196	455	C	600	C	700	C	845	C
Naranjo Blvd: Rd 196 - Blair Rd	602	C	759	C	929	C	1086	C
Ropes Ave: Blair Rd - Valencia Blvd	72	C	220	C	206	C	565	C
Blair Rd: Naranjo Blvd - Ropes Ave	81	C	264	C	349	C	532	C

Table 5b
PM Roadway Level of Service

Street	2022 Two-Way LOS		2022+Project Two-Way LOS		2042 Two-Way LOS		2042+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Naranjo Blvd: Millwood Dr - Rd 196	441	C	576	C	725	C	860	C
Naranjo Blvd: Rd 196 - Blair Rd	604	C	754	C	969	C	1116	C
Ropes Ave: Blair Rd - Valencia Blvd	46	C	342	C	362	C	658	C
Blair Rd: Naranjo Blvd - Ropes Ave	80	C	257	C	517	C	694	C

VEHICLE MILES TRAVELED (VMT) EVALUATION

An evaluation of vehicle miles traveled (VMT) for project traffic was conducted in accordance with California Environmental Quality Act (CEQA) requirements. The City of Woodlake has adopted the "County of Tulare SB 743 Guidelines", dated June 8, 2020, which contain recommendations regarding VMT assessment, significance thresholds and mitigation measures.

Analysis

Baseline VMT was determined utilizing data from the California Statewide Travel Demand Model (CSTDM). The proposed industrial project is located in Traffic Analysis Zone (TAZ) 2714, which has an average VMT/employee of 20.35 miles. The proposed industrial project is considered a typical project within the TAZ and therefore the project would be expected to have the same VMT per employee. There are no special considerations with the project to assume the project would produce a VMT/employee lower than the average for the TAZ. The threshold of significance for the industrial project VMT/employee is if the project VMT is below the average in the TAZ where the project is located. Since VMT/employee is assumed to be equal to the average for the aforementioned zone, it is anticipated that the proposed project will have a significant transportation impact prior to mitigation.

Mitigation

The Tulare County guidelines include detailed instructions for mitigation if a project has significant impacts. The guidelines state "The preferred method of VMT mitigation in Tulare County is for project applicants to provide transportation improvements that facilitate travel by walking, bicycling, or transit." In accordance with these guidelines, a survey was conducted within a half mile of the project to determine any pedestrian, bicycle or transit facilities deficiencies exist. After review, there were existing curb returns which do not meet current ADA requirements for ramps as well as sidewalk improvements. The identified improvements include the following:

- Four (4) ADA compliant curb ramps at Acacia Street & W Ropes Avenue
- Four (4) ADA compliant curb ramps at S Palm Street & W Ropes Avenue
- Two (2) ADA compliant curb ramps at S Pepper Street & Ropes Avenue
- Four (4) ADA compliant curb ramps at S Acacia Street & W Bravo Avenue
- 295' of sidewalk on the south side of W Ropes Avenue between Mulberry Street & Acacia St
- 305' of sidewalk on the north side of W Ropes Avenue between S Pepper Street & S Palm Street
- 285' of sidewalk on the south side of W Ropes Avenue between S Acacia Street & S Palm Street

The location of the improvements is shown on Figure 9 with circles at the proposed locations. The guidelines include a minimum cost for mitigation of $20 per daily trip generated by the project. As shown in Table 1, the project is anticipated to generate 3,501 daily trips, which equates to a target value of improvements of $70,020. The total estimated project cost is approximately $75,453. Therefore, with the construction of the above identified improvements, the project will meet the minimum cost requirement for mitigation.

Pursuant to the guidelines, if a project provides mitigation which meets the minimum threshold listed above, the project can presume a 1% reduction in VMT. The assumed VMT/employee reduction is 1% of 20.35 or 0.2035. The resulting VMT/employee after mitigation is 20.15 which is below the average VMT/employee in the TAZ which the project is located. After mitigation, the project will have a less than significant transportation impact.

FIGURE 9
Proposed VMT Mitigation

MITIGATION

Intersection improvements needed by the year 2042 to maintain or improve the operational level of service of the street system in the vicinity of the project is shown in Table 6.

Table 6
Future Intersection Improvements and Local Mitigation

#	Intersection	Total Improvements Required by 2042	Project % Share for Local Mitigation
3	Blair Rd & Naranjo Blvd (SR 216)	Add Signal	61.25%

SUMMARY

The purpose of this study is to evaluate the potential traffic impact of a light industrial complex on the southeast corner of Ropes Avenue and Blair Road in the City of Woodlake.

Intersection Analysis

All intersections operate with an acceptable level of service during peak hours in the existing year prior to the addition of project traffic.

With the addition of project traffic in 2022, the intersection of Blair Road & Naranjo Boulevard (SR 216) is anticipated to operate below an acceptable level of service.

In the future year scenario, all remaining intersections are anticipated to operate with an acceptable level of service, prior to and with the addition of project traffic.

Roadway Analysis

All roadways within the project scope currently operate at acceptable levels of service and are expected to continue to do so with the addition of project traffic through the future year.

Vehicle Miles Traveled Evaluation

The average vehicle miles traveled (VMT) is lower than the regional VMT, therefore there are no impacts.

Conclusion

Based on the City of Woodlake's standards for determining whether project traffic has a significant impact on intersections and roadways, the mitigation measures identified in Table 6 are anticipated to be needed in order to reduce the impacts for the listed facilities to less-than-significant levels in the year 2042.

REFERENCES

1. 2020 Quality/Level of Service Handbook, State of Florida Department of Transportation, June 2020.
2. Annual Traffic Census, TCAG
3. City of Woodlake General Plan, 2014.
4. County of Tulare SB 743 Guidelines, June 8, 2020
5. Highway Capacity Manual, Special Report 209, Transportation Research Board
6. California Manual on Uniform Traffic Control Devices for Streets and Highways, 2014 Edition, Federal Highway Administration (FHA)
7. Trip Generation, 11th Edition, Institute of Transportation Engineers (ITE)

APPENDIX

FDOT TABLE 4

TABLE 4 Generalized **Peak Hour Two-Way** Volumes for Florida's Urbanized Areas[1]

January 2020

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	1,510	1,600	**
4	Divided	*	3,420	3,580	**
6	Divided	*	5,250	5,390	**
8	Divided	*	7,090	7,210	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	660	1,330	1,410
4	Divided	*	1,310	2,920	3,040
6	Divided	*	2,090	4,500	4,590
8	Divided	*	2,880	6,060	6,130

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes
by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional
volumes in this table by 0.6

BICYCLE MODE[2]

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	260	680	1,770
50-84%	190	600	1,770	>1,770
85-100%	830	1,700	>1,770	**

PEDESTRIAN MODE[2]

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	250	850
50-84%	*	150	780	1,420
85-100%	340	960	1,560	>1,770

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	4,050	5,640	6,800	7,420
6	5,960	8,310	10,220	11,150
8	7,840	10,960	13,620	14,850
10	9,800	13,510	17,040	18,580
12	11,600	16,350	20,930	23,200

Urbanized

Lanes	B	C	D	E
4	4,130	5,640	7,070	7,690
6	6,200	8,450	10,510	11,530
8	8,270	11,270	13,960	15,380
10	10,350	14,110	17,310	19,220

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 1,800	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	1,050	1,620	2,180	2,930
4	Divided	3,270	4,730	5,960	6,780
6	Divided	4,910	7,090	8,950	10,180

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Implementation Office
https://www.fdot.gov/planning/systems/

INTERSECTION
LEVEL OF SERVICE

Intersection 1
Millwood Dr & Naranjo Blvd

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	55	1	0	144	54	1	0	0	55	182	0	0	0	0
Future Vol, veh/h	0	4	55	1	0	144	54	1	0	0	55	182	0	0	0	0
Peak Hour Factor	0.92	0.71	0.71	0.71	0.92	0.88	0.88	0.88	0.92	0.83	0.83	0.83	0.92	0.66	0.66	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	77	1	0	164	61	1	0	0	66	219	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	9.9	9.4	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	7%	72%	0%
Vol Thru, %	23%	92%	27%	100%
Vol Right, %	77%	2%	1%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	237	60	199	0
LT Vol	0	4	144	0
Through Vol	55	55	54	0
RT Vol	182	1	1	0
Lane Flow Rate	286	85	226	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.336	0.114	0.302	0
Departure Headway (Hd)	4.232	4.845	4.808	5.027
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	851	737	746	0
Service Time	2.259	2.895	2.851	3.078
HCM Lane V/C Ratio	0.336	0.115	0.303	0
HCM Control Delay	9.4	8.5	9.9	8.1
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	1.5	0.4	1.3	0

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	4	60	1	0	230	76	1	0	0	55	204	0	0	0	0
Future Vol, veh/h	0	4	60	1	0	230	76	1	0	0	55	204	0	0	0	0
Peak Hour Factor	0.92	0.71	0.71	0.71	0.92	0.88	0.88	0.88	0.92	0.83	0.83	0.83	0.92	0.66	0.66	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	85	1	0	261	86	1	0	0	66	246	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	12.5	10.6	0
HCM LOS	A	B	B	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	6%	75%	0%
Vol Thru, %	21%	92%	25%	100%
Vol Right, %	79%	2%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	259	65	307	0
LT Vol	0	4	230	0
Through Vol	55	60	76	0
RT Vol	204	1	1	0
Lane Flow Rate	312	92	349	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.394	0.13	0.477	0
Departure Headway (Hd)	4.548	5.106	4.922	5.443
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	695	726	0
Service Time	2.6	3.192	2.991	3.537
HCM Lane V/C Ratio	0.397	0.132	0.481	0
HCM Control Delay	10.6	9	12.5	8.5
HCM Lane LOS	B	A	B	N
HCM 95th-tile Q	1.9	0.4	2.6	0

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	5	62	1	0	163	61	1	0	0	68	225	0	0	0	0
Future Vol, veh/h	0	5	62	1	0	163	61	1	0	0	68	225	0	0	0	0
Peak Hour Factor	0.92	0.71	0.71	0.71	0.92	0.88	0.88	0.88	0.92	0.83	0.83	0.83	0.92	0.66	0.66	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	87	1	0	185	69	1	0	0	82	271	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	10.8	10.6	0
HCM LOS	A	B	B	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	7%	72%	0%
Vol Thru, %	23%	91%	27%	100%
Vol Right, %	77%	1%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	293	68	225	0
LT Vol	0	5	163	0
Through Vol	68	62	61	0
RT Vol	225	1	1	0
Lane Flow Rate	353	96	256	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.427	0.135	0.355	0
Departure Headway (Hd)	4.351	5.067	4.992	5.248
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	826	701	716	0
Service Time	2.394	3.143	3.057	3.328
HCM Lane V/C Ratio	0.427	0.137	0.358	0
HCM Control Delay	10.6	8.9	10.8	8.3
HCM Lane LOS	B	A	B	N
HCM 95th-tile Q	2.2	0.5	1.6	0

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

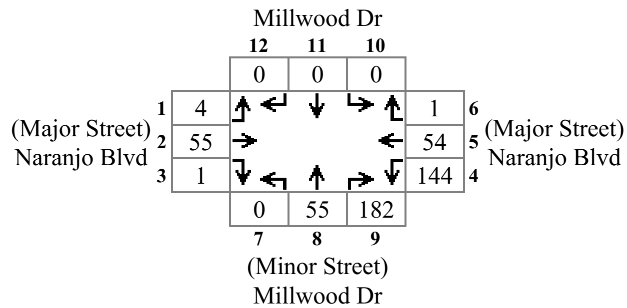
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	5	67	1	0	249	83	1	0	0	68	247	0	0	0	0
Future Vol, veh/h	0	5	67	1	0	249	83	1	0	0	68	247	0	0	0	0
Peak Hour Factor	0.92	0.71	0.71	0.71	0.92	0.88	0.88	0.88	0.92	0.83	0.83	0.83	0.92	0.66	0.66	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	94	1	0	283	94	1	0	0	82	298	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	14.1	12.3	0
HCM LOS	A	B	B	-

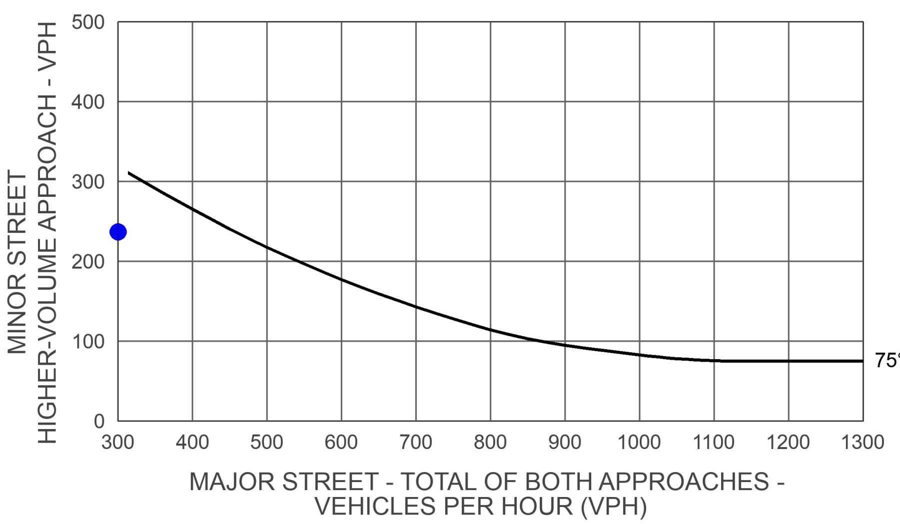
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	7%	75%	0%
Vol Thru, %	22%	92%	25%	100%
Vol Right, %	78%	1%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	315	73	333	0
LT Vol	0	5	249	0
Through Vol	68	67	83	0
RT Vol	247	1	1	0
Lane Flow Rate	380	103	378	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.493	0.156	0.538	0
Departure Headway (Hd)	4.678	5.473	5.219	5.83
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	763	659	696	0
Service Time	2.757	3.473	3.219	3.836
HCM Lane V/C Ratio	0.498	0.156	0.543	0
HCM Control Delay	12.3	9.5	14.1	8.8
HCM Lane LOS	B	A	B	N
HCM 95th-tile Q	2.8	0.6	3.2	0

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing
Intersection #: 1

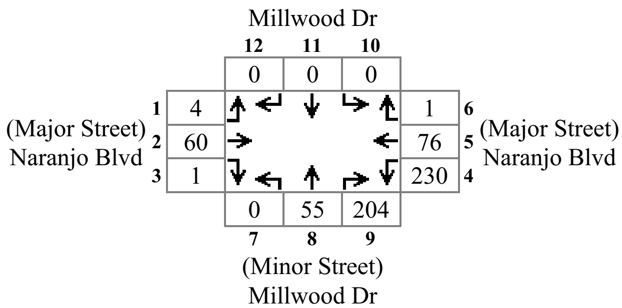


Major Total: 259
Minor High Volume: 237

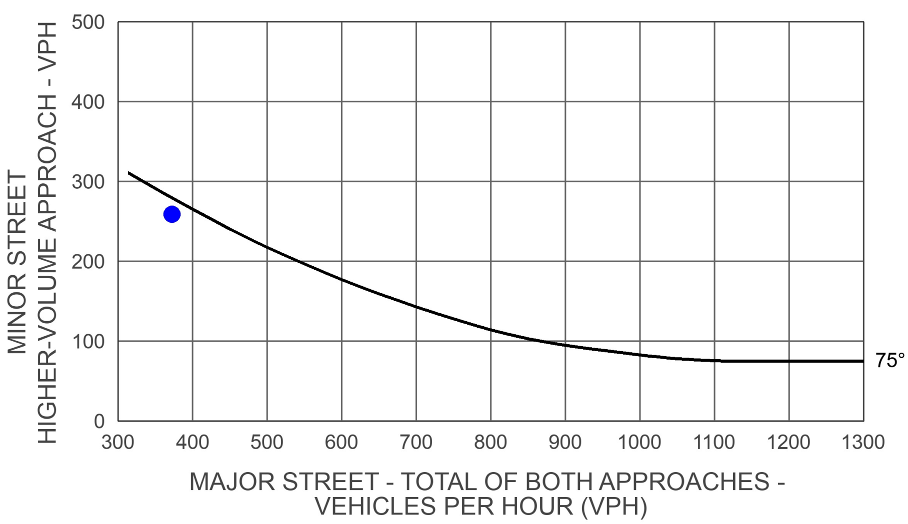


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing+Project
Intersection #: 1

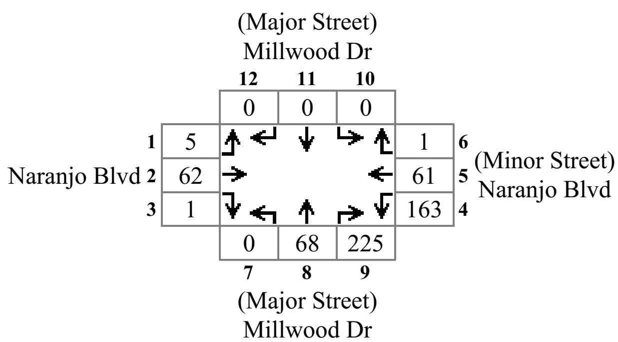


Major Total: 372
Minor High Volume: 259

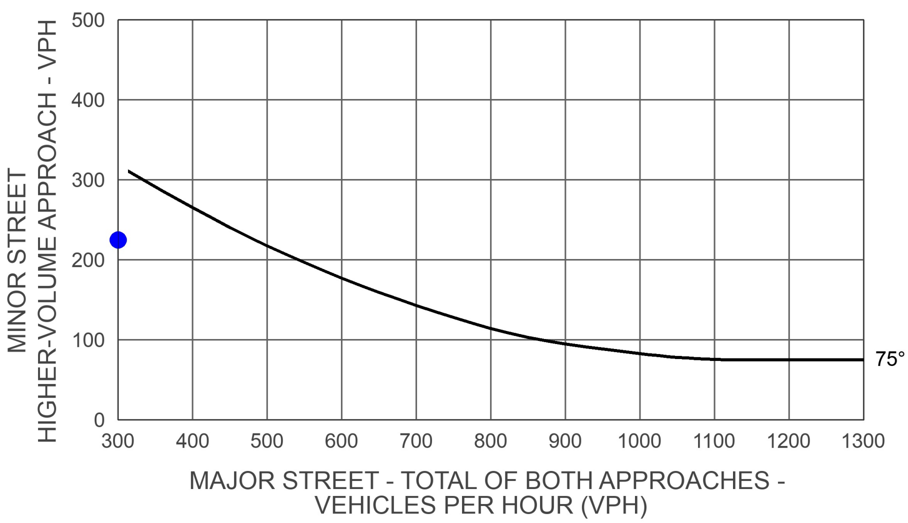


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future
Intersection #: 1

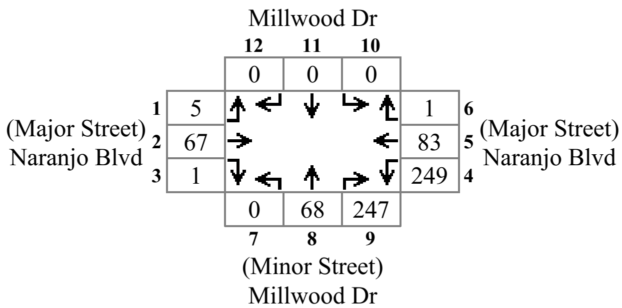


Major Total: 293
Minor High Volume: 225

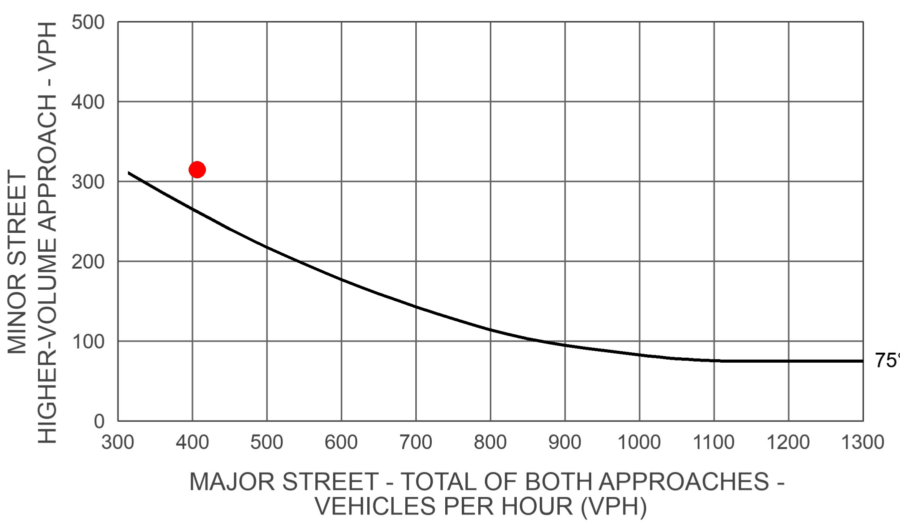


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Future+Project
Intersection #: 1



Major Total: 406
Minor High Volume: 315



Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	9	60	0	0	202	65	0	0	0	24	141	0	1	66	4
Future Vol, veh/h	0	9	60	0	0	202	65	0	0	0	24	141	0	1	66	4
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.87	0.87	0.87	0.92	0.84	0.84	0.84	0.92	0.66	0.66	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	12	77	0	0	232	75	0	0	0	29	168	0	2	100	6
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	11.5	9.1	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	13%	76%	1%
Vol Thru, %	15%	87%	24%	93%
Vol Right, %	85%	0%	0%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	69	267	71
LT Vol	0	9	202	1
Through Vol	24	60	65	66
RT Vol	141	0	0	4
Lane Flow Rate	196	88	307	108
Geometry Grp	1	1	1	1
Degree of Util (X)	0.248	0.125	0.419	0.153
Departure Headway (Hd)	4.552	5.075	4.911	5.135
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	782	699	727	693
Service Time	2.617	3.158	2.977	3.211
HCM Lane V/C Ratio	0.251	0.126	0.422	0.156
HCM Control Delay	9.1	8.9	11.5	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	1	0.4	2.1	0.5

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	9	83	0	0	220	70	0	0	0	24	240	0	1	66	4
Future Vol, veh/h	0	9	83	0	0	220	70	0	0	0	24	240	0	1	66	4
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.87	0.87	0.87	0.92	0.84	0.84	0.84	0.92	0.66	0.66	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	12	106	0	0	253	80	0	0	0	29	286	0	2	100	6
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	13.6	11.3	9.8
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	10%	76%	1%
Vol Thru, %	9%	90%	24%	93%
Vol Right, %	91%	0%	0%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	264	92	290	71
LT Vol	0	9	220	1
Through Vol	24	83	70	66
RT Vol	240	0	0	4
Lane Flow Rate	314	118	333	108
Geometry Grp	1	1	1	1
Degree of Util (X)	0.421	0.183	0.498	0.169
Departure Headway (Hd)	4.821	5.595	5.375	5.641
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	745	640	670	635
Service Time	2.859	3.639	3.407	3.687
HCM Lane V/C Ratio	0.421	0.184	0.497	0.17
HCM Control Delay	11.3	9.9	13.6	9.8
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	2.1	0.7	2.8	0.6

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	68	0	0	228	73	0	0	0	30	174	0	1	82	5
Future Vol, veh/h	0	10	68	0	0	228	73	0	0	0	30	174	0	1	82	5
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.87	0.87	0.87	0.92	0.84	0.84	0.84	0.92	0.66	0.66	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	87	0	0	262	84	0	0	0	36	207	0	2	124	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	13.5	10.3	9.9
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	13%	76%	1%
Vol Thru, %	15%	87%	24%	93%
Vol Right, %	85%	0%	0%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	204	78	301	88
LT Vol	0	10	228	1
Through Vol	30	68	73	82
RT Vol	174	0	0	5
Lane Flow Rate	243	100	346	133
Geometry Grp	1	1	1	1
Degree of Util (X)	0.328	0.152	0.503	0.203
Departure Headway (Hd)	4.857	5.487	5.23	5.488
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	741	653	692	653
Service Time	2.889	3.523	3.254	3.524
HCM Lane V/C Ratio	0.328	0.153	0.5	0.204
HCM Control Delay	10.3	9.5	13.5	9.9
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.4	0.5	2.8	0.8

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	10	91	0	0	246	78	0	0	0	30	273	0	1	82	5
Future Vol, veh/h	0	10	91	0	0	246	78	0	0	0	30	273	0	1	82	5
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.87	0.87	0.87	0.92	0.84	0.84	0.84	0.92	0.66	0.66	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	117	0	0	283	90	0	0	0	36	325	0	2	124	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

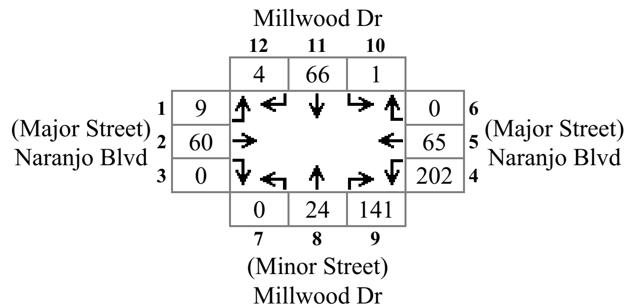
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	16.5	13.4	10.8
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	10%	76%	1%
Vol Thru, %	10%	90%	24%	93%
Vol Right, %	90%	0%	0%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	303	101	324	88
LT Vol	0	10	246	1
Through Vol	30	91	78	82
RT Vol	273	0	0	5
Lane Flow Rate	361	129	372	133
Geometry Grp	1	1	1	1
Degree of Util (X)	0.511	0.215	0.586	0.221
Departure Headway (Hd)	5.095	5.974	5.661	5.973
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	597	637	597
Service Time	3.156	4.05	3.716	4.051
HCM Lane V/C Ratio	0.514	0.216	0.584	0.223
HCM Control Delay	13.4	10.7	16.5	10.8
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	2.9	0.8	3.8	0.8

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

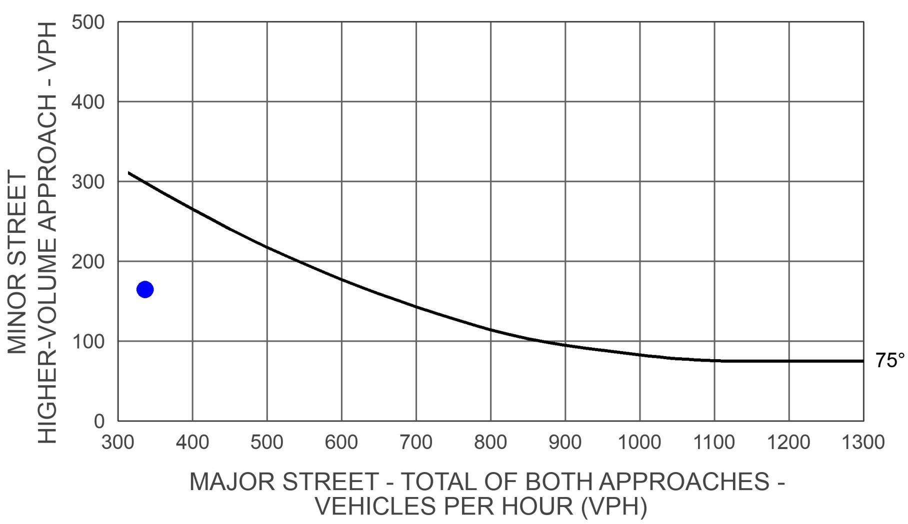
Scenario: AM Existing

Intersection #: 1



Major Total: 336

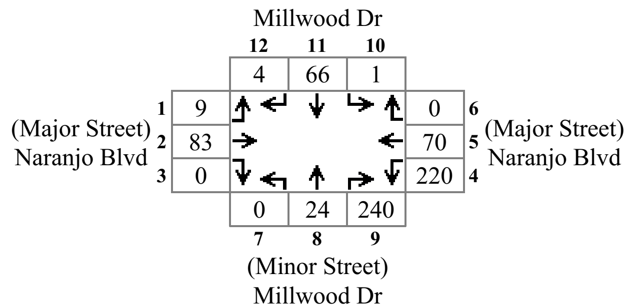
Minor High Volume: 165



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

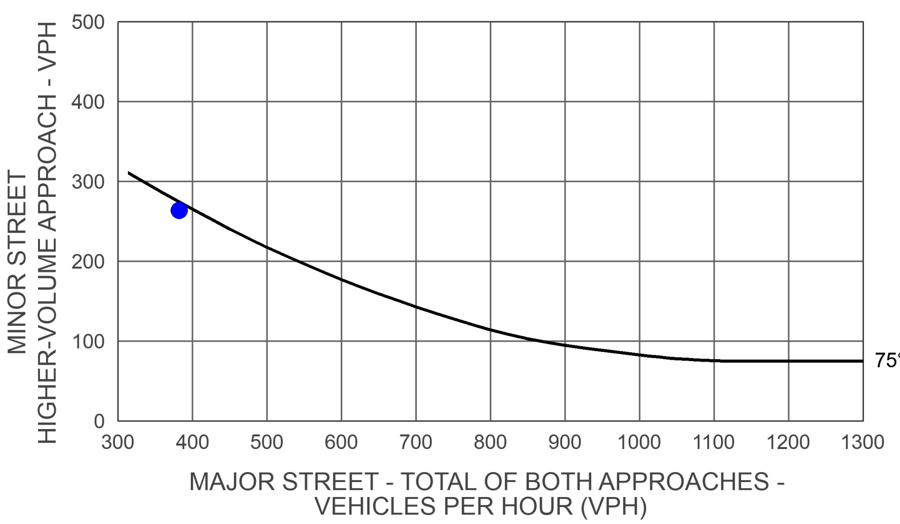
Scenario: AM Existing+Project

Intersection #: 1



Major Total: 382

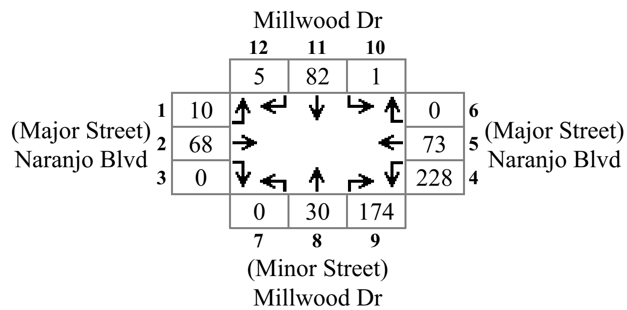
Minor High Volume: 264



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

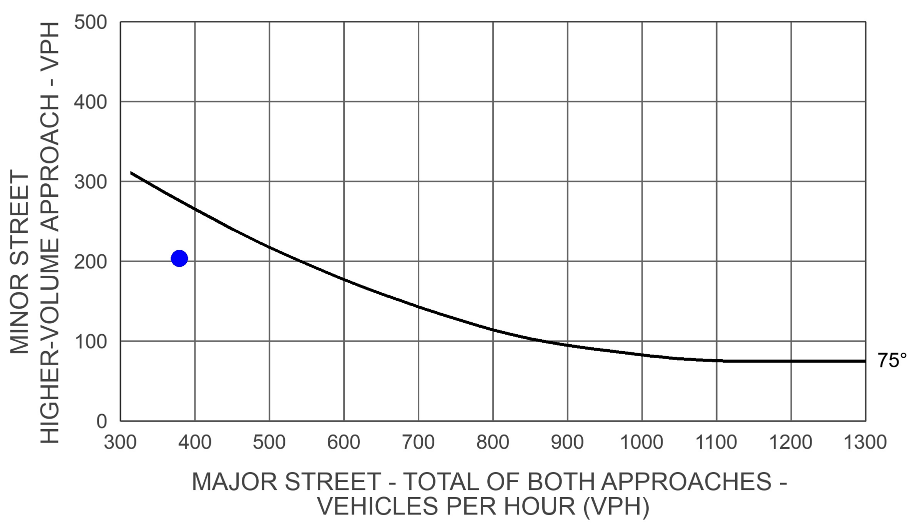
Scenario: AM Future

Intersection #: 1



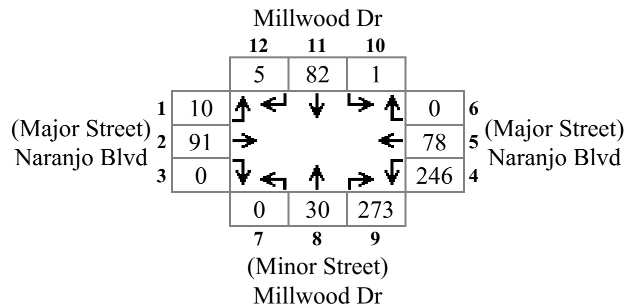
Major Total: 379

Minor High Volume: 204

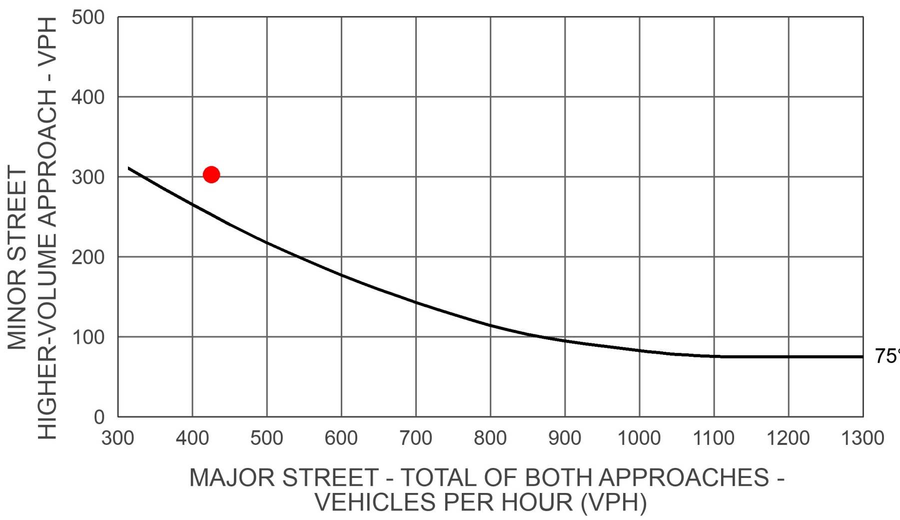


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: AM Future+Project
Intersection #: 1



Major Total: 425
Minor High Volume: 303



Intersection 2
Rd 196 & Naranjo Blvd

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	217	23	0	73	178	1	0	29	33	132	0	3	17	1
Future Vol, veh/h	0	2	217	23	0	73	178	1	0	29	33	132	0	3	17	1
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.89	0.89	0.89	0.92	0.77	0.77	0.77	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	247	26	0	82	200	1	0	38	43	171	0	3	19	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	11.4	10.6	9
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	1%	29%	14%
Vol Thru, %	17%	90%	71%	81%
Vol Right, %	68%	10%	0%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	242	252	21
LT Vol	29	2	73	3
Through Vol	33	217	178	17
RT Vol	132	23	1	1
Lane Flow Rate	252	275	283	24
Geometry Grp	1	1	1	1
Degree of Util (X)	0.344	0.376	0.395	0.038
Departure Headway (Hd)	4.916	4.922	5.016	5.794
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	723	721	708	622
Service Time	3.009	3.018	3.111	3.794
HCM Lane V/C Ratio	0.349	0.381	0.4	0.039
HCM Control Delay	10.6	11	11.4	9
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.5	1.8	1.9	0.1

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	244	23	0	77	286	7	0	29	33	133	0	4	17	1
Future Vol, veh/h	0	2	244	23	0	77	286	7	0	29	33	133	0	4	17	1
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.89	0.89	0.89	0.92	0.77	0.77	0.77	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	277	26	0	87	321	8	0	38	43	173	0	5	19	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.6	15.9	11.9	9.7
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	1%	21%	18%
Vol Thru, %	17%	91%	77%	77%
Vol Right, %	68%	9%	2%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	269	370	22
LT Vol	29	2	77	4
Through Vol	33	244	286	17
RT Vol	133	23	7	1
Lane Flow Rate	253	306	416	25
Geometry Grp	1	1	1	1
Degree of Util (X)	0.383	0.45	0.603	0.044
Departure Headway (Hd)	5.447	5.294	5.22	6.347
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	658	679	690	562
Service Time	3.493	3.334	3.256	4.415
HCM Lane V/C Ratio	0.384	0.451	0.603	0.044
HCM Control Delay	11.9	12.6	15.9	9.7
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	1.8	2.3	4.1	0.1

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	245	26	0	85	208	1	0	32	36	146	0	3	19	1
Future Vol, veh/h	0	2	245	26	0	85	208	1	0	32	36	146	0	3	19	1
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.89	0.89	0.89	0.92	0.77	0.77	0.77	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	278	30	0	96	234	1	0	42	47	190	0	3	22	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.5	13.3	11.9	9.5
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	1%	29%	13%
Vol Thru, %	17%	90%	71%	83%
Vol Right, %	68%	10%	0%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	214	273	294	23
LT Vol	32	2	85	3
Through Vol	36	245	208	19
RT Vol	146	26	1	1
Lane Flow Rate	278	310	330	26
Geometry Grp	1	1	1	1
Degree of Util (X)	0.406	0.45	0.486	0.045
Departure Headway (Hd)	5.256	5.22	5.296	6.147
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	684	689	680	580
Service Time	3.298	3.258	3.333	4.207
HCM Lane V/C Ratio	0.406	0.45	0.485	0.045
HCM Control Delay	11.9	12.5	13.3	9.5
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	2	2.3	2.7	0.1

Intersection	
Intersection Delay, s/veh	16.4
Intersection LOS	C

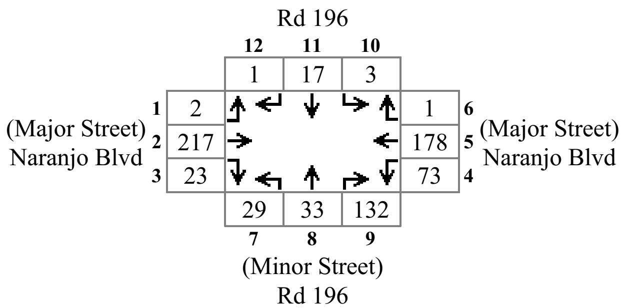
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	272	26	0	89	316	7	0	32	36	147	0	4	19	1
Future Vol, veh/h	0	2	272	26	0	89	316	7	0	32	36	147	0	4	19	1
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.89	0.89	0.89	0.92	0.77	0.77	0.77	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	309	30	0	100	355	8	0	42	47	191	0	5	22	1
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.5	20.1	13.3	10.2
HCM LOS	B	C	B	B

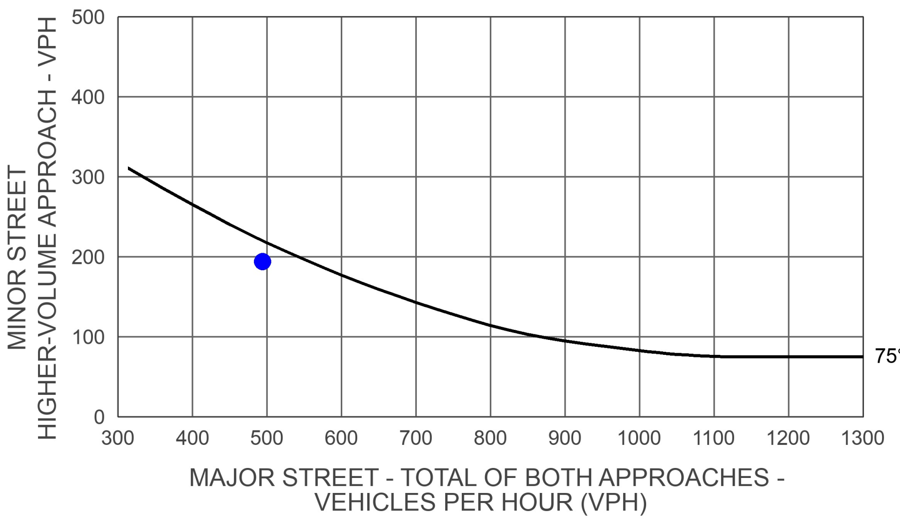
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	1%	22%	17%
Vol Thru, %	17%	91%	77%	79%
Vol Right, %	68%	9%	2%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	300	412	24
LT Vol	32	2	89	4
Through Vol	36	272	316	19
RT Vol	147	26	7	1
Lane Flow Rate	279	341	463	27
Geometry Grp	1	1	1	1
Degree of Util (X)	0.443	0.523	0.697	0.052
Departure Headway (Hd)	5.708	5.521	5.424	6.842
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	628	651	662	527
Service Time	3.775	3.584	3.482	4.842
HCM Lane V/C Ratio	0.444	0.524	0.699	0.051
HCM Control Delay	13.3	14.5	20.1	10.2
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	2.3	3	5.6	0.2

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing
Intersection #: 2

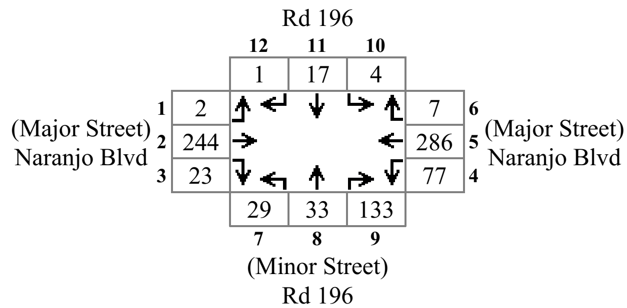


Major Total: 494
Minor High Volume: 194

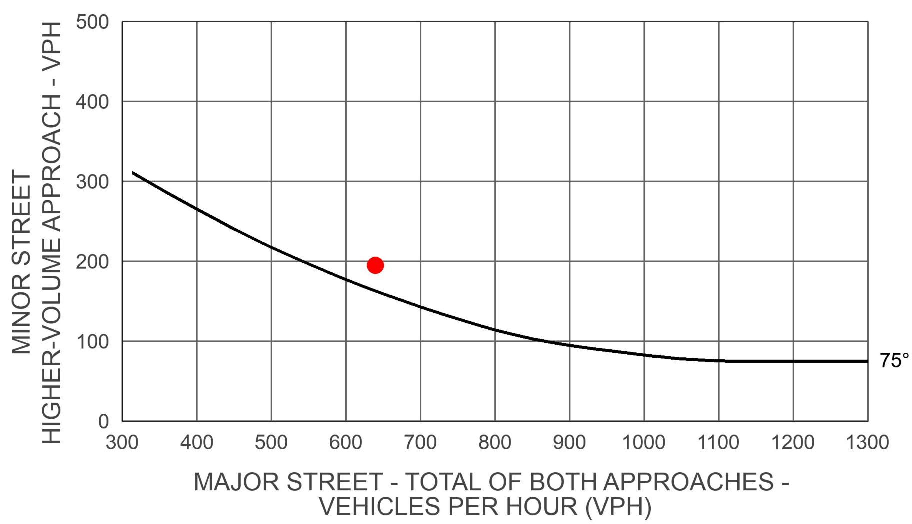


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Existing+Project
Intersection #: 2



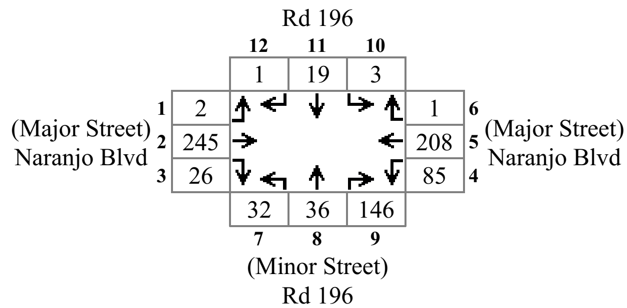
Major Total: 639
Minor High Volume: 195



Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

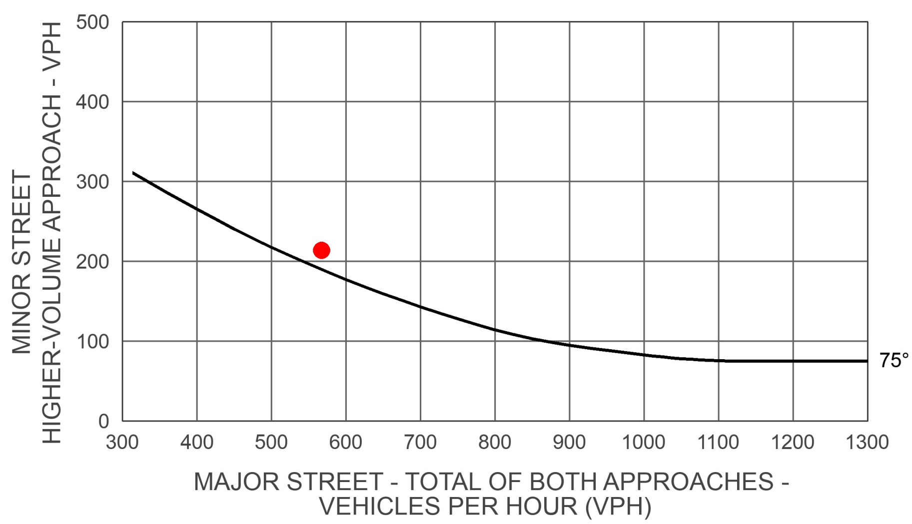
Scenario: PM Future

Intersection #: 2



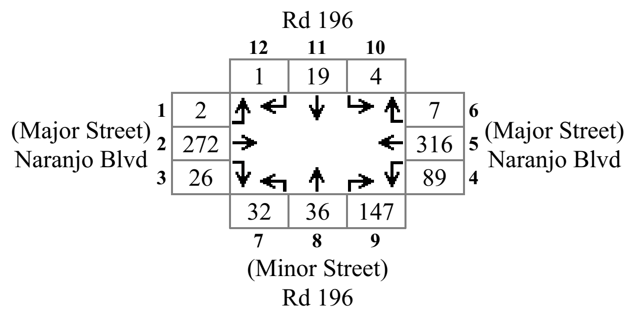
Major Total: 567

Minor High Volume: 214

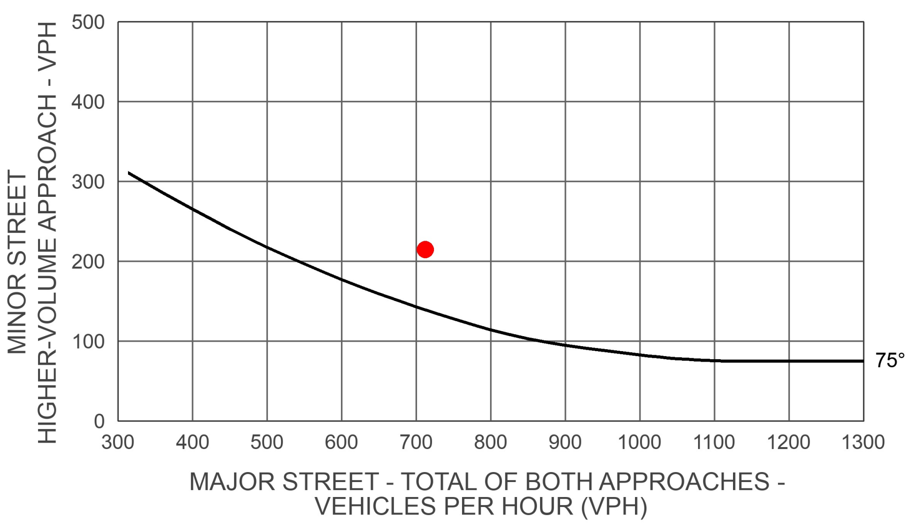


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: PM Future+Project
Intersection #: 2



Major Total: 712
Minor High Volume: 215



Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	164	24	0	118	245	1	0	22	17	74	0	2	29	4
Future Vol, veh/h	0	0	164	24	0	118	245	1	0	22	17	74	0	2	29	4
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.84	0.84	0.84	0.92	0.83	0.83	0.83	0.92	0.67	0.67	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	198	29	0	140	292	1	0	27	20	89	0	3	43	6
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	14.1	9.6	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	0%	32%	6%
Vol Thru, %	15%	87%	67%	83%
Vol Right, %	65%	13%	0%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	188	364	35
LT Vol	22	0	118	2
Through Vol	17	164	245	29
RT Vol	74	24	1	4
Lane Flow Rate	136	227	433	52
Geometry Grp	1	1	1	1
Degree of Util (X)	0.2	0.306	0.573	0.083
Departure Headway (Hd)	5.29	4.862	4.757	5.75
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	682	729	750	626
Service Time	3.292	2.957	2.839	3.755
HCM Lane V/C Ratio	0.199	0.311	0.577	0.083
HCM Control Delay	9.6	10.1	14.1	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.7	1.3	3.7	0.3

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	286	24	0	119	268	2	0	22	17	79	0	7	29	4
Future Vol, veh/h	0	0	286	24	0	119	268	2	0	22	17	79	0	7	29	4
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.84	0.84	0.84	0.92	0.83	0.83	0.83	0.92	0.67	0.67	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	345	29	0	142	319	2	0	27	20	95	0	10	43	6
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14	17.6	10.6	10.1
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	0%	31%	17%
Vol Thru, %	14%	92%	69%	72%
Vol Right, %	67%	8%	1%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	310	389	40
LT Vol	22	0	119	7
Through Vol	17	286	268	29
RT Vol	79	24	2	4
Lane Flow Rate	142	373	463	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.228	0.534	0.66	0.105
Departure Headway (Hd)	5.784	5.148	5.131	6.33
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	618	698	704	564
Service Time	3.837	3.184	3.164	4.392
HCM Lane V/C Ratio	0.23	0.534	0.658	0.106
HCM Control Delay	10.6	14	17.6	10.1
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	0.9	3.2	5	0.4

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	185	27	0	138	287	1	0	24	19	82	0	2	32	5
Future Vol, veh/h	0	0	185	27	0	138	287	1	0	24	19	82	0	2	32	5
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.84	0.84	0.84	0.92	0.83	0.83	0.83	0.92	0.67	0.67	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	223	33	0	164	342	1	0	29	23	99	0	3	48	7
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	18.2	10.3	9.8
HCM LOS	B	C	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	0%	32%	5%
Vol Thru, %	15%	87%	67%	82%
Vol Right, %	66%	13%	0%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	212	426	39
LT Vol	24	0	138	2
Through Vol	19	185	287	32
RT Vol	82	27	1	5
Lane Flow Rate	151	255	507	58
Geometry Grp	1	1	1	1
Degree of Util (X)	0.234	0.366	0.687	0.099
Departure Headway (Hd)	5.598	5.161	5.001	6.093
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	643	700	725	590
Service Time	3.615	3.181	3.001	4.116
HCM Lane V/C Ratio	0.235	0.364	0.699	0.098
HCM Control Delay	10.3	11.1	18.2	9.8
HCM Lane LOS	B	B	C	A
HCM 95th-tile Q	0.9	1.7	5.5	0.3

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

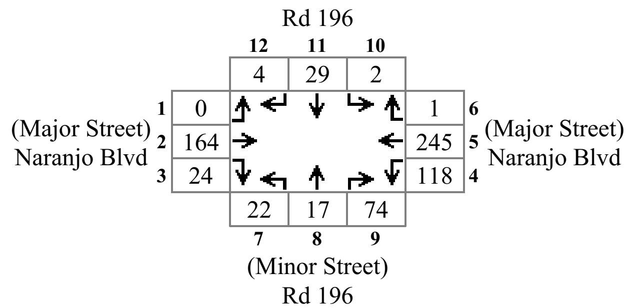
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	307	27	0	139	310	2	0	24	19	87	0	7	32	5
Future Vol, veh/h	0	0	307	27	0	139	310	2	0	24	19	87	0	7	32	5
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.84	0.84	0.84	0.92	0.83	0.83	0.83	0.92	0.67	0.67	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	370	33	0	165	369	2	0	29	23	105	0	10	48	7
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.3	25.5	11.4	10.7
HCM LOS	C	D	B	B

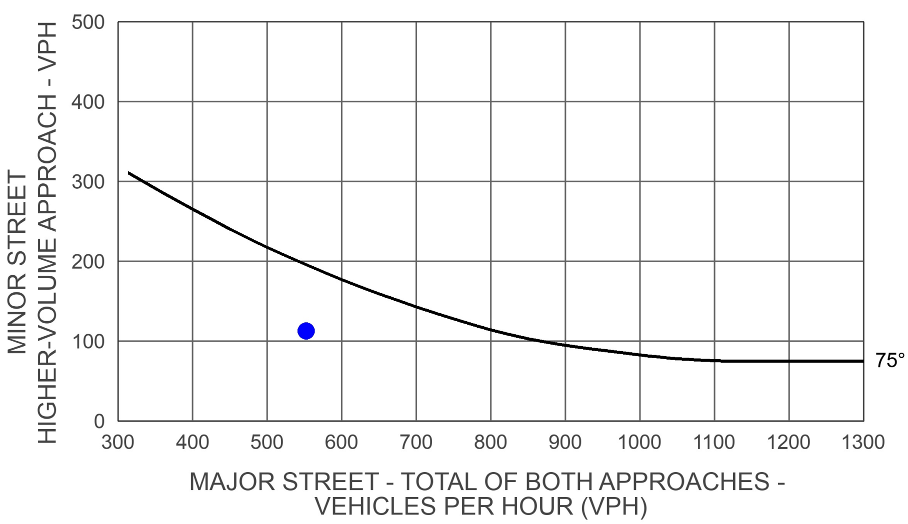
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	0%	31%	16%
Vol Thru, %	15%	92%	69%	73%
Vol Right, %	67%	8%	0%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	334	451	44
LT Vol	24	0	139	7
Through Vol	19	307	310	32
RT Vol	87	27	2	5
Lane Flow Rate	157	402	537	66
Geometry Grp	1	1	1	1
Degree of Util (X)	0.266	0.601	0.791	0.122
Departure Headway (Hd)	6.114	5.381	5.301	6.707
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	584	668	682	530
Service Time	4.193	3.441	3.353	4.802
HCM Lane V/C Ratio	0.269	0.602	0.787	0.125
HCM Control Delay	11.4	16.3	25.5	10.7
HCM Lane LOS	B	C	D	B
HCM 95th-tile Q	1.1	4	7.8	0.4

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing
Intersection #: 2

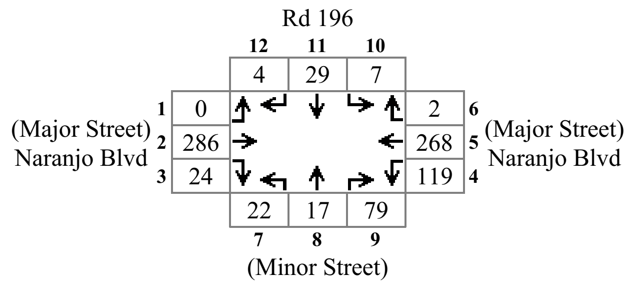


Major Total: 552
Minor High Volume: 113

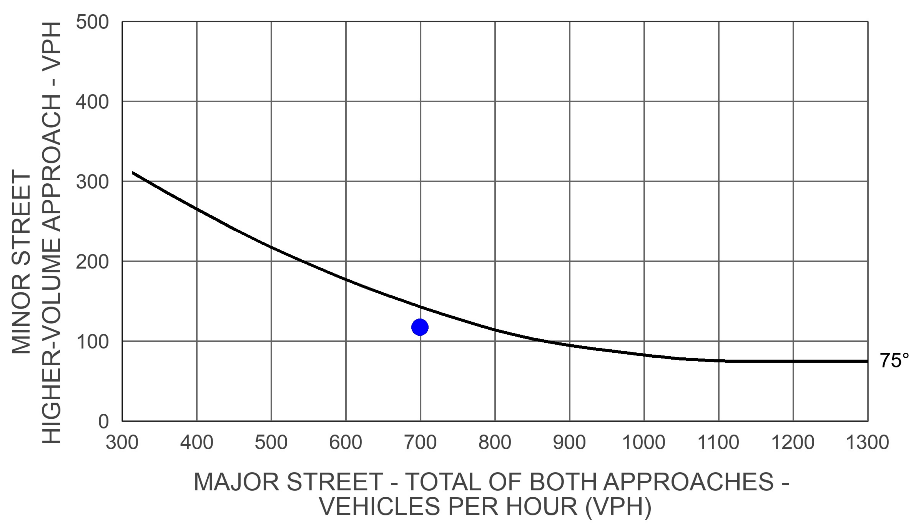


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing+Project
Intersection #: 2



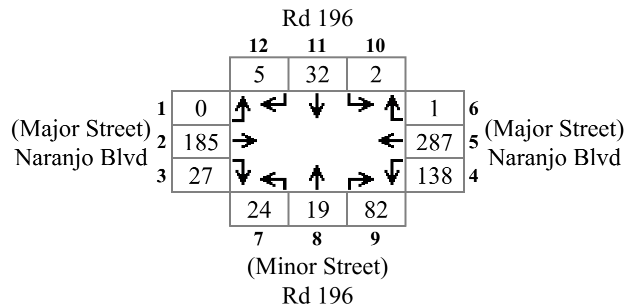
Major Total: 699
Minor High Volume: 118



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

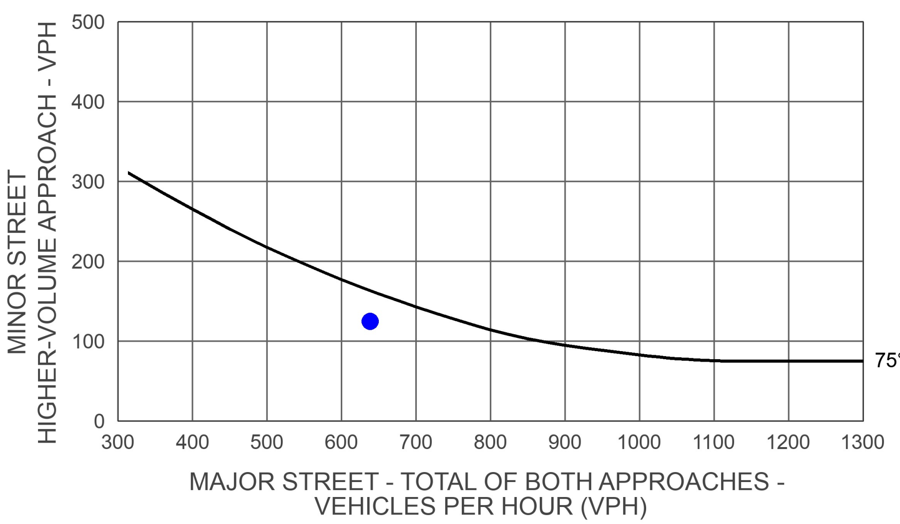
Scenario: AM Future

Intersection #: 2



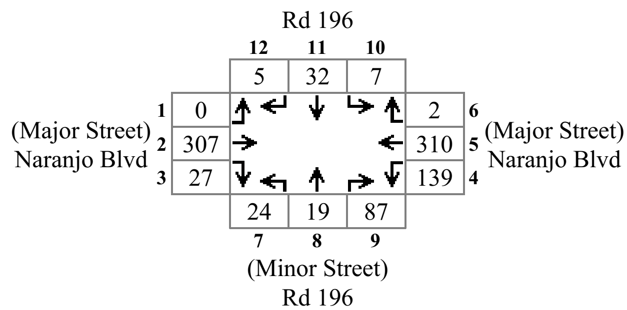
Major Total: 638

Minor High Volume: 125

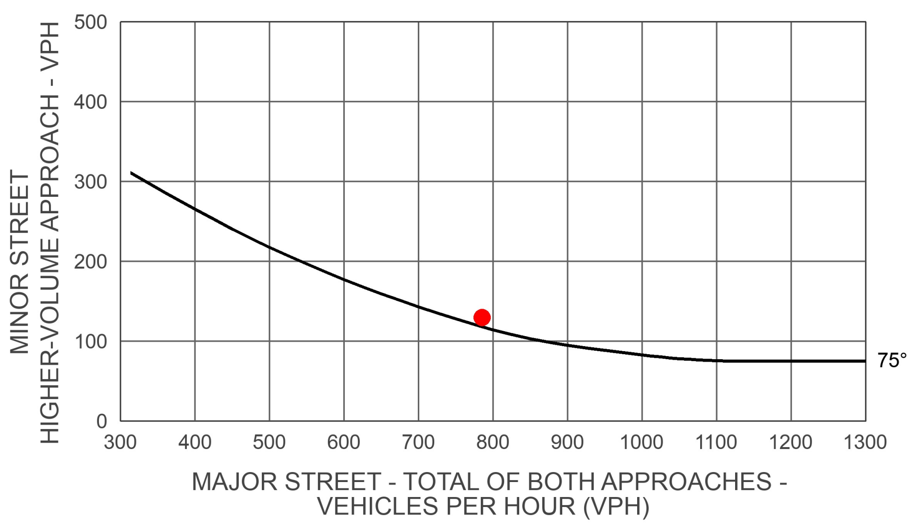


Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

Scenario: AM Future+Project
Intersection #: 2



Major Total: 785
Minor High Volume: 130



Intersection 3
Blair Rd & Naranjo Blvd

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	336	16	7	227	4	24	2	21	7	2	0
Future Vol, veh/h	0	336	16	7	227	4	24	2	21	7	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	78	78	78	56	56	56
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	395	19	8	267	5	31	3	27	13	4	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	272	0	0	414	0	0	693	693	405	705	700	269
Stage 1	-	-	-	-	-	-	405	405	-	286	286	-
Stage 2	-	-	-	-	-	-	288	288	-	419	414	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1291	-	-	1145	-	-	358	367	646	351	363	770
Stage 1	-	-	-	-	-	-	622	598	-	721	675	-
Stage 2	-	-	-	-	-	-	720	674	-	612	593	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1291	-	-	1145	-	-	353	364	646	333	360	770
Mov Cap-2 Maneuver	-	-	-	-	-	-	353	364	-	333	360	-
Stage 1	-	-	-	-	-	-	622	598	-	721	670	-
Stage 2	-	-	-	-	-	-	710	669	-	584	593	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	14.4	16.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	443	1291	-	-	1145	-	-	339
HCM Lane V/C Ratio	0.136	-	-	-	0.007	-	-	0.047
HCM Control Delay (s)	14.4	0	-	-	8.2	0	-	16.1
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	336	45	12	227	4	142	2	46	7	2	0
Future Vol, veh/h	0	336	45	12	227	4	142	2	46	7	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	78	78	78	56	56	56
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	395	53	14	267	5	182	3	59	13	4	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	272	0	0	448	0	0	721	722	422	751	746	269
Stage 1	-	-	-	-	-	-	422	422	-	298	298	-
Stage 2	-	-	-	-	-	-	299	300	-	453	448	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1291	-	-	1112	-	-	343	353	632	327	342	770
Stage 1	-	-	-	-	-	-	609	588	-	711	667	-
Stage 2	-	-	-	-	-	-	710	666	-	586	573	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1291	-	-	1112	-	-	336	348	632	291	337	770
Mov Cap-2 Maneuver	-	-	-	-	-	-	336	348	-	291	337	-
Stage 1	-	-	-	-	-	-	609	588	-	711	657	-
Stage 2	-	-	-	-	-	-	696	656	-	529	573	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	30.1	17.7
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	379	1291	-	-	1112	-	-	300
HCM Lane V/C Ratio	0.643	-	-	-	0.013	-	-	0.054
HCM Control Delay (s)	30.1	0	-	-	8.3	0	-	17.7
HCM Lane LOS	D	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	4.3	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	393	19	8	268	5	28	2	25	8	2	0
Future Vol, veh/h	0	393	19	8	268	5	28	2	25	8	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	78	78	78	56	56	56
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	462	22	9	315	6	36	3	32	14	4	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	321	0	0	485	0	0	813	814	474	828	822	318
Stage 1	-	-	-	-	-	-	474	474	-	337	337	-
Stage 2	-	-	-	-	-	-	339	340	-	491	485	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1239	-	-	1078	-	-	297	312	590	290	309	723
Stage 1	-	-	-	-	-	-	571	558	-	677	641	-
Stage 2	-	-	-	-	-	-	676	639	-	559	552	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1239	-	-	1078	-	-	292	309	590	270	306	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	292	309	-	270	306	-
Stage 1	-	-	-	-	-	-	571	558	-	677	635	-
Stage 2	-	-	-	-	-	-	665	633	-	526	552	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	16.6	18.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	380	1239	-	-	1078	-	-	277
HCM Lane V/C Ratio	0.186	-	-	-	0.009	-	-	0.064
HCM Control Delay (s)	16.6	0	-	-	8.4	0	-	18.9
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	11.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	393	48	13	268	5	146	2	50	8	2	0
Future Vol, veh/h	0	393	48	13	268	5	146	2	50	8	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	78	78	78	56	56	56
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	462	56	15	315	6	187	3	64	14	4	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	321	0	0	519	0	0	842	843	491	873	868	318
Stage 1	-	-	-	-	-	-	491	491	-	349	349	-
Stage 2	-	-	-	-	-	-	351	352	-	524	519	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1239	-	-	1047	-	-	284	300	578	271	290	723
Stage 1	-	-	-	-	-	-	559	548	-	667	633	-
Stage 2	-	-	-	-	-	-	666	632	-	537	533	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1239	-	-	1047	-	-	278	295	578	236	285	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	278	295	-	236	285	-
Stage 1	-	-	-	-	-	-	559	548	-	667	622	-
Stage 2	-	-	-	-	-	-	651	621	-	475	533	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	48.3	20.9
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	320	1239	-	-	1047	-	-	244
HCM Lane V/C Ratio	0.793	-	-	-	0.015	-	-	0.073
HCM Control Delay (s)	48.3	0	-	-	8.5	0	-	20.9
HCM Lane LOS	E	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	6.5	0	-	-	0	-	-	0.2

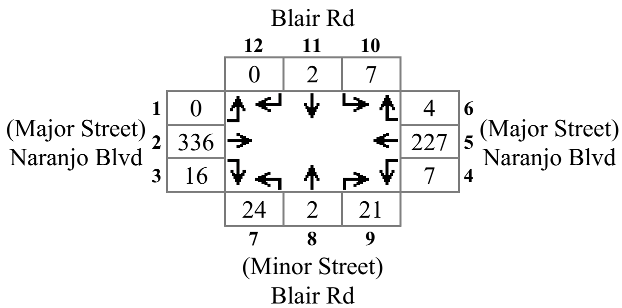
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	393	48	13	268	5	146	2	50	8	2	0
Future Volume (veh/h)	0	393	48	13	268	5	146	2	50	8	2	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1750	1863	1750	1750	1863	1750	1750	1863	1750	1750	1863	1750
Adj Flow Rate, veh/h	0	462	56	15	315	6	187	3	64	14	4	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.78	0.78	0.78	0.56	0.56	0.56
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	545	66	47	460	8	678	20	212	709	194	0
Arrive On Green	0.00	0.33	0.33	0.33	0.33	0.33	0.58	0.58	0.58	0.58	0.58	0.00
Sat Flow, veh/h	0	1630	198	17	1376	25	1054	35	367	1105	336	0
Grp Volume(v), veh/h	0	0	518	336	0	0	254	0	0	18	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1828	1419	0	0	1456	0	0	1441	0	0
Q Serve(g_s), s	0.0	0.0	23.7	1.6	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	23.7	25.3	0.0	0.0	7.9	0.0	0.0	0.4	0.0	0.0
Prop In Lane	0.00		0.11	0.04		0.02	0.74		0.25	0.78		0.00
Lane Grp Cap(c), veh/h	0	0	611	516	0	0	910	0	0	903	0	0
V/C Ratio(X)	0.00	0.00	0.85	0.65	0.00	0.00	0.28	0.00	0.00	0.02	0.00	0.00
Avail Cap(c_a), veh/h	0	0	812	711	0	0	910	0	0	903	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.88	1.00	0.00	0.00	0.99	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	27.8	24.7	0.0	0.0	9.7	0.0	0.0	8.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	5.8	1.4	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	12.9	7.0	0.0	0.0	3.4	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	33.6	26.1	0.0	0.0	10.4	0.0	0.0	8.2	0.0	0.0
LnGrp LOS			C	C			B			A		
Approach Vol, veh/h		518			336			254			18	
Approach Delay, s/veh		33.6			26.1			10.4			8.2	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		55.9		34.1		55.9		34.1
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		42.0		40.0		42.0		40.0
Max Q Clear Time (g_c+I1), s		9.9		25.7		2.4		27.3
Green Ext Time (p_c), s		1.0		2.9		1.0		2.8

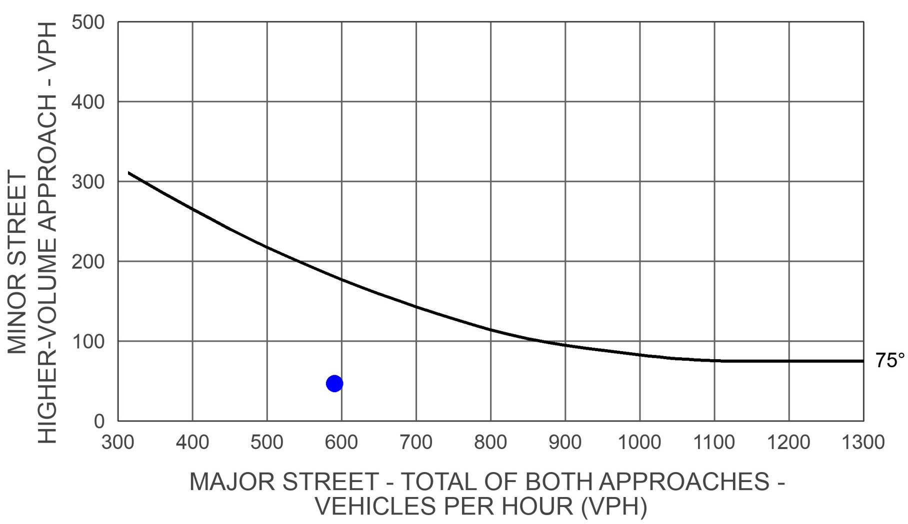
Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing
Intersection #: 3



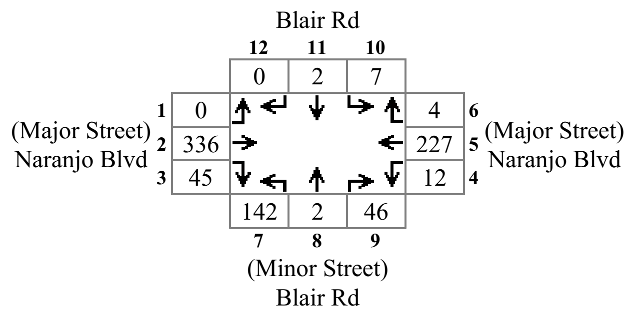
Major Total: 590
Minor High Volume: 47



Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

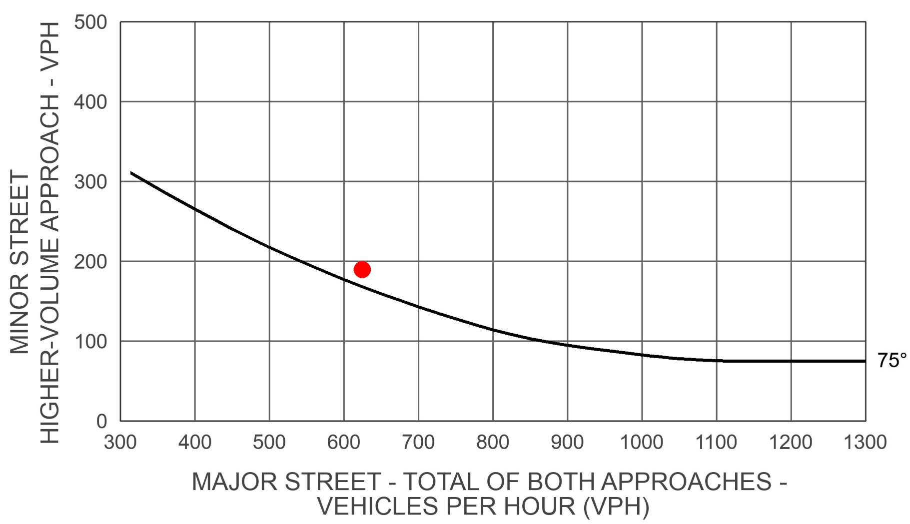
Scenario: PM Existing+Project

Intersection #: 3



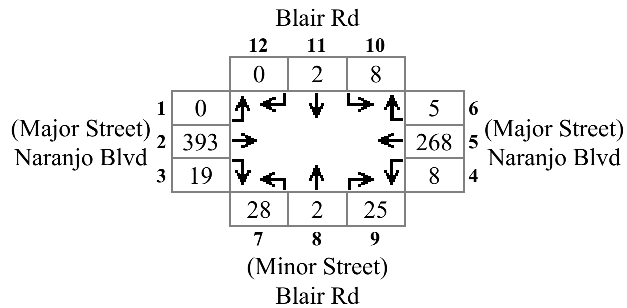
Major Total: 624

Minor High Volume: 190

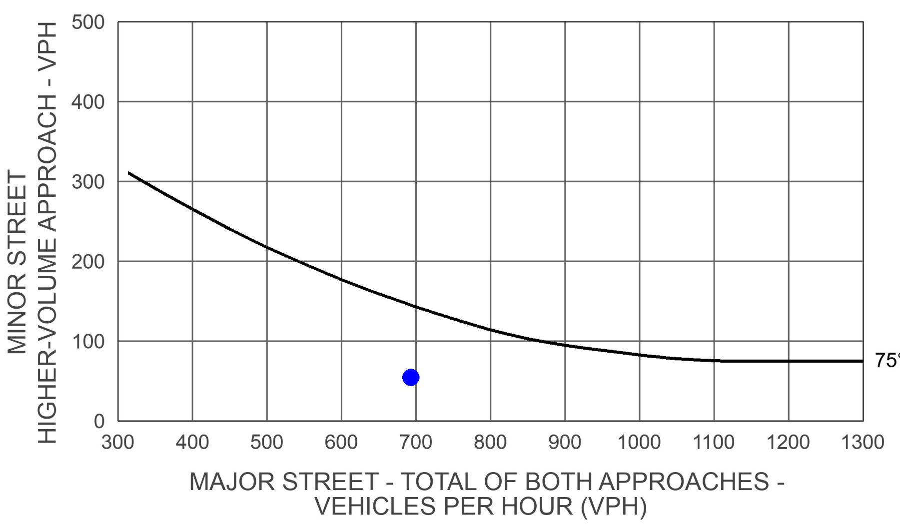


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future
Intersection #: 3



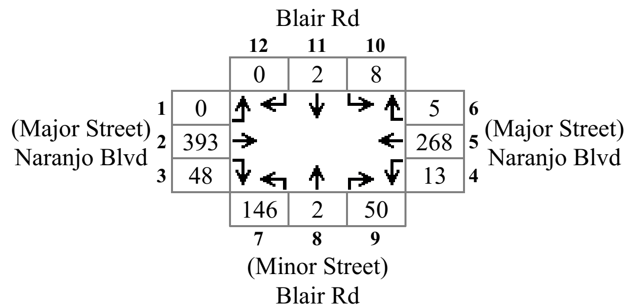
Major Total: 693
Minor High Volume: 55



Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

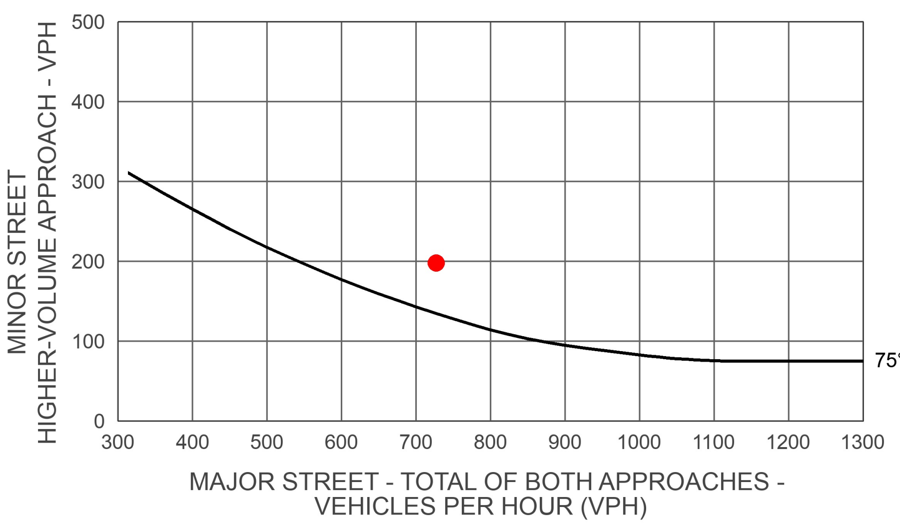
Scenario: PM Future+Project

Intersection #: 3



Major Total: 727

Minor High Volume: 198



Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	2	217	19	26	341	5	20	3	16	3	3	1
Future Vol, veh/h	2	217	19	26	341	5	20	3	16	3	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	86	86	86	81	81	81	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	258	23	30	397	6	25	4	20	3	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	402	0	0	281	0	0	736	737	270	746	746	399
Stage 1	-	-	-	-	-	-	274	274	-	460	460	-
Stage 2	-	-	-	-	-	-	462	463	-	286	286	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1157	-	-	1282	-	-	335	346	769	330	342	651
Stage 1	-	-	-	-	-	-	732	683	-	581	566	-
Stage 2	-	-	-	-	-	-	580	564	-	721	675	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1157	-	-	1282	-	-	324	335	769	311	331	651
Mov Cap-2 Maneuver	-	-	-	-	-	-	324	335	-	311	331	-
Stage 1	-	-	-	-	-	-	731	682	-	580	549	-
Stage 2	-	-	-	-	-	-	558	547	-	697	674	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	14.5	15.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	426	1157	-	-	1282	-	-	346
HCM Lane V/C Ratio	0.113	0.002	-	-	0.024	-	-	0.023
HCM Control Delay (s)	14.5	8.1	0	-	7.9	0	-	15.6
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh	2.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	2	217	151	49	341	5	45	3	21	3	3	1
Future Vol, veh/h	2	217	151	49	341	5	45	3	21	3	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	86	86	86	81	81	81	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	258	180	57	397	6	56	4	26	3	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	402	0	0	438	0	0	869	869	348	881	956	399
Stage 1	-	-	-	-	-	-	353	353	-	513	513	-
Stage 2	-	-	-	-	-	-	516	516	-	368	443	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1157	-	-	1122	-	-	272	290	695	267	258	651
Stage 1	-	-	-	-	-	-	664	631	-	544	536	-
Stage 2	-	-	-	-	-	-	542	534	-	652	576	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1157	-	-	1122	-	-	255	271	695	241	241	651
Mov Cap-2 Maneuver	-	-	-	-	-	-	255	271	-	241	241	-
Stage 1	-	-	-	-	-	-	663	630	-	543	501	-
Stage 2	-	-	-	-	-	-	502	499	-	623	575	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	20.5	19
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	317	1157	-	-	1122	-	-	265
HCM Lane V/C Ratio	0.269	0.002	-	-	0.051	-	-	0.03
HCM Control Delay (s)	20.5	8.1	0	-	8.4	0	-	19
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	2	254	22	31	402	6	24	4	19	4	4	1
Future Vol, veh/h	2	254	22	31	402	6	24	4	19	4	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	86	86	86	81	81	81	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	302	26	36	467	7	30	5	23	5	5	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	474	0	0	329	0	0	866	867	315	877	876	471
Stage 1	-	-	-	-	-	-	320	320	-	543	543	-
Stage 2	-	-	-	-	-	-	546	547	-	334	333	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1088	-	-	1231	-	-	274	291	725	269	287	593
Stage 1	-	-	-	-	-	-	692	652	-	524	520	-
Stage 2	-	-	-	-	-	-	522	517	-	680	644	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1088	-	-	1231	-	-	261	279	725	249	275	593
Mov Cap-2 Maneuver	-	-	-	-	-	-	261	279	-	249	275	-
Stage 1	-	-	-	-	-	-	691	651	-	523	499	-
Stage 2	-	-	-	-	-	-	496	496	-	652	643	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	17.1	18.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	355	1088	-	-	1231	-	-	279
HCM Lane V/C Ratio	0.163	0.002	-	-	0.029	-	-	0.037
HCM Control Delay (s)	17.1	8.3	0	-	8	0	-	18.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	2	254	154	54	402	6	49	4	24	4	4	1
Future Vol, veh/h	2	254	154	54	402	6	49	4	24	4	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	86	86	86	81	81	81	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	302	183	63	467	7	60	5	30	5	5	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	474	0	0	486	0	0	998	999	394	1013	1087	471
Stage 1	-	-	-	-	-	-	399	399	-	597	597	-
Stage 2	-	-	-	-	-	-	599	600	-	416	490	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1088	-	-	1077	-	-	223	243	655	217	216	593
Stage 1	-	-	-	-	-	-	627	602	-	490	491	-
Stage 2	-	-	-	-	-	-	488	490	-	614	549	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1088	-	-	1077	-	-	205	223	655	191	198	593
Mov Cap-2 Maneuver	-	-	-	-	-	-	205	223	-	191	198	-
Stage 1	-	-	-	-	-	-	625	600	-	489	452	-
Stage 2	-	-	-	-	-	-	444	451	-	580	547	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	26.4	23
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	262	1088	-	-	1077	-	-	210
HCM Lane V/C Ratio	0.363	0.002	-	-	0.058	-	-	0.049
HCM Control Delay (s)	26.4	8.3	0	-	8.5	0	-	23
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.6	0	-	-	0.2	-	-	0.2

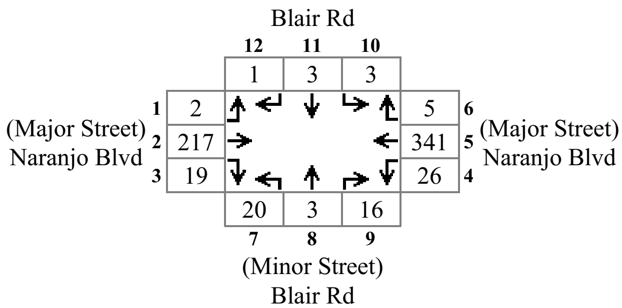
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Volume (veh/h)	2	254	154	54	402	6	49	4	24	4	4	1
Future Volume (veh/h)	2	254	154	54	402	6	49	4	24	4	4	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1750	1863	1750	1750	1863	1750	1750	1863	1750	1750	1863	1750
Adj Flow Rate, veh/h	2	302	183	63	467	7	60	5	30	5	5	1
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.86	0.86	0.86	0.81	0.81	0.81	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	414	249	96	559	8	548	56	249	420	407	77
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1	1088	656	134	1472	21	909	105	468	682	766	145
Grp Volume(v), veh/h	487	0	0	537	0	0	95	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	1746	0	0	1628	0	0	1483	0	0	1592	0	0
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	21.6	0.0	0.0	27.6	0.0	0.0	2.7	0.0	0.0	0.3	0.0	0.0
Prop In Lane	0.00		0.38	0.12		0.01	0.63		0.32	0.45		0.09
Lane Grp Cap(c), veh/h	703	0	0	663	0	0	853	0	0	904	0	0
V/C Ratio(X)	0.69	0.00	0.00	0.81	0.00	0.00	0.11	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	1241	0	0	1174	0	0	853	0	0	904	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.0	0.0	0.0	25.4	0.0	0.0	10.5	0.0	0.0	10.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.4	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	0.0	0.0	12.8	0.0	0.0	1.2	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	25.1	0.0	0.0	27.9	0.0	0.0	10.7	0.0	0.0	10.0	0.0	0.0
LnGrp LOS	C			C			B			A		
Approach Vol, veh/h		487			537			95			11	
Approach Delay, s/veh		25.1			27.9			10.7			10.0	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.8		38.2		51.8		38.2
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		20.0		62.0		20.0		62.0
Max Q Clear Time (g_c+I1), s		4.7		23.6		2.3		29.6
Green Ext Time (p_c), s		0.2		4.6		0.3		4.6

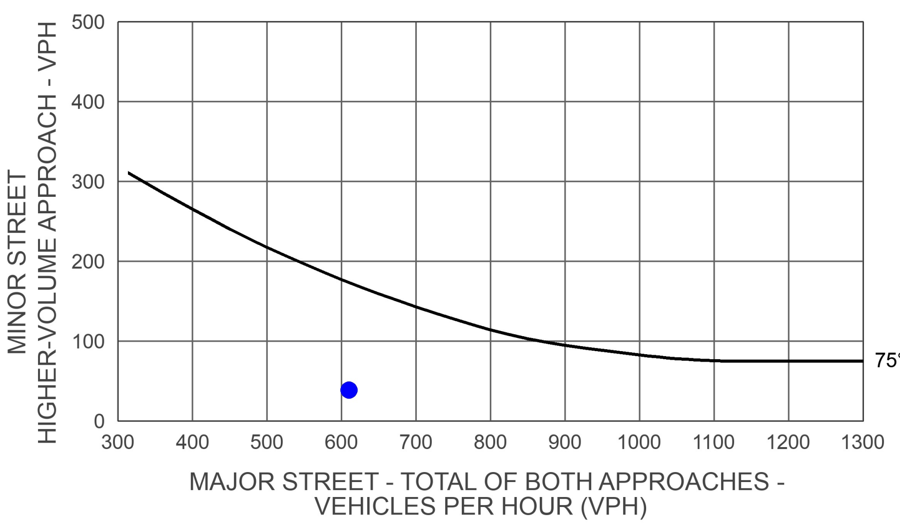
Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing
Intersection #: 3

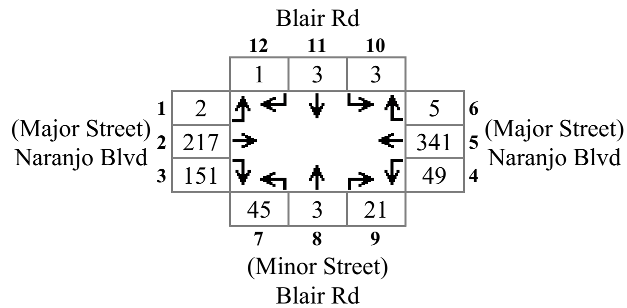


Major Total: 610
Minor High Volume: 39

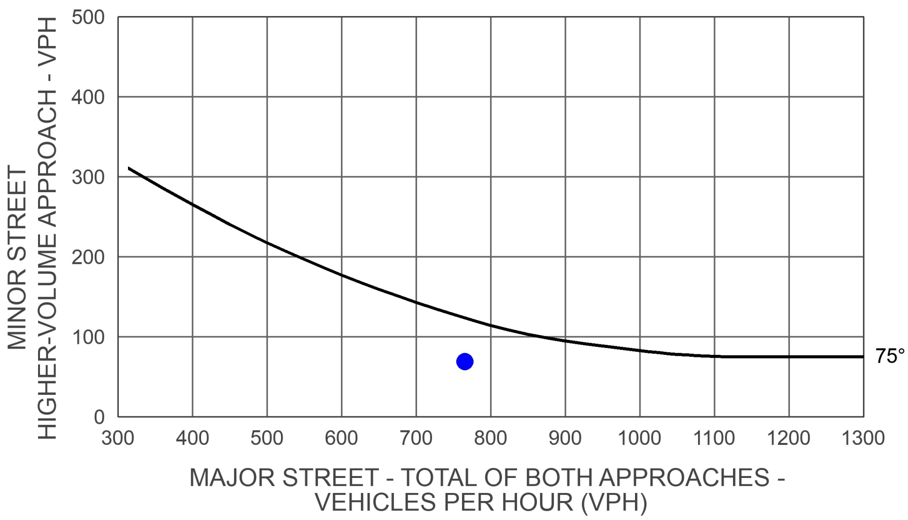


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing+Project
Intersection #: 3



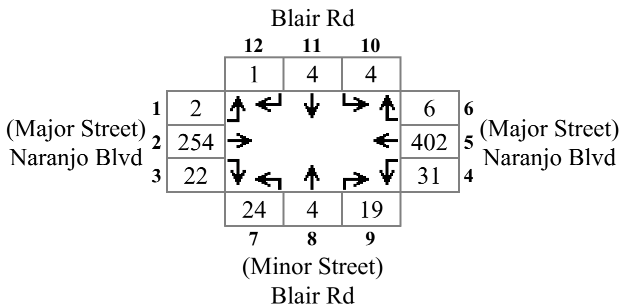
Major Total: 765
Minor High Volume: 69



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

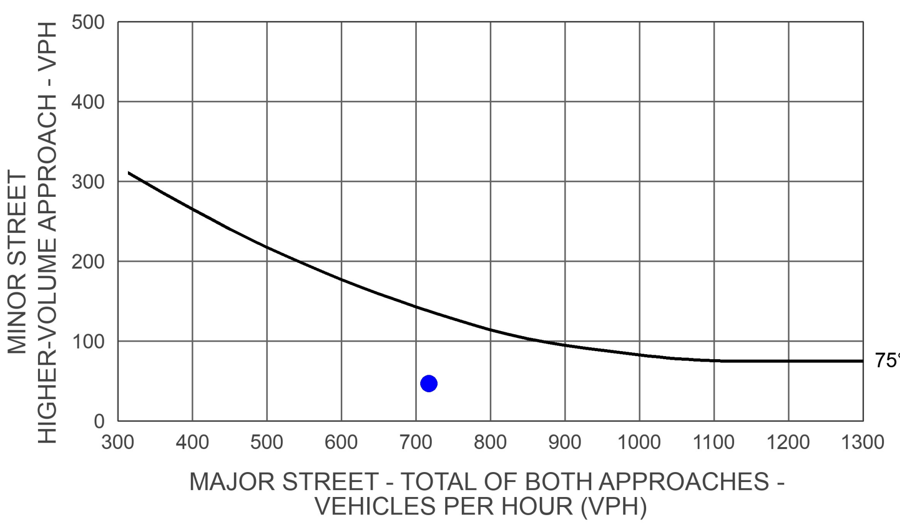
Scenario: AM Future

Intersection #: 3



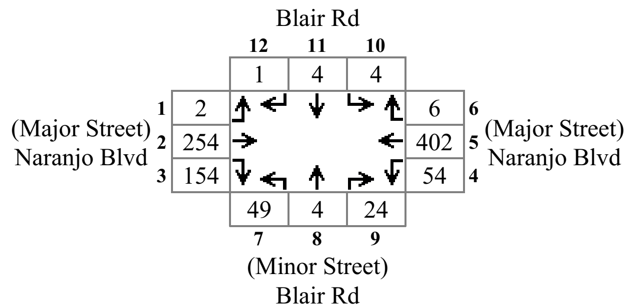
Major Total: 717

Minor High Volume: 47

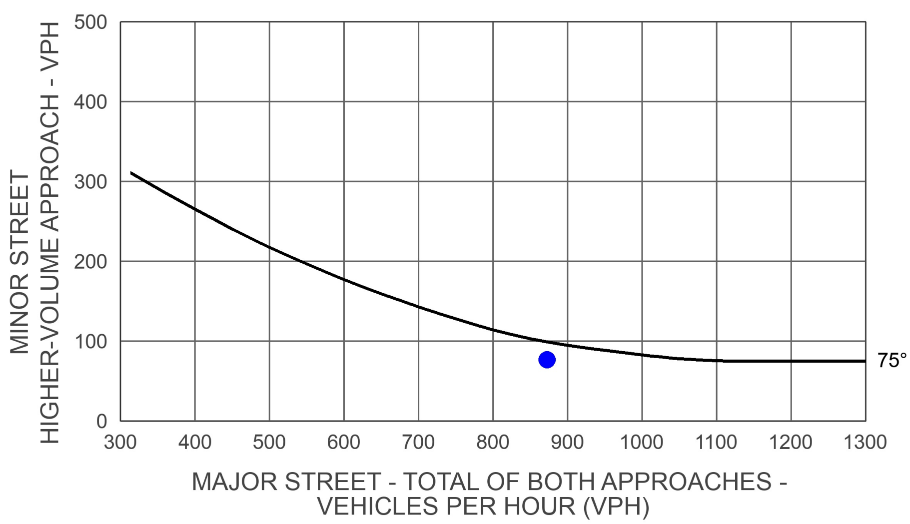


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future+Project
Intersection #: 3



Major Total: 872
Minor High Volume: 77



Intersection 4
Blair Rd & Ropes Ave

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	9	21	22	22	24	9
Future Vol, veh/h	9	21	22	22	24	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	81	81	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	36	27	27	60	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	184	41	0	0	54	0
Stage 1	41	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	805	1030	-	-	1551	-
Stage 1	981	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	774	1030	-	-	1551	-
Mov Cap-2 Maneuver	774	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	850	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	5.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	937	1551	-
HCM Lane V/C Ratio	-	-	0.055	0.039	-
HCM Control Delay (s)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	37	98	88	110	42	25
Future Vol, veh/h	37	98	88	110	42	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	81	81	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	169	109	136	105	63

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	450	177	0	0	244	0
Stage 1	177	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	567	866	-	-	1322	-
Stage 1	854	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	521	866	-	-	1322	-
Mov Cap-2 Maneuver	521	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	710	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	733	1322	-
HCM Lane V/C Ratio	-	-	0.318	0.079	-
HCM Control Delay (s)	-	-	12.2	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.4	0.3	-

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	11	25	26	26	28	11
Future Vol, veh/h	11	25	26	26	28	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	81	81	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	43	32	32	70	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	216	48	0	0	64	0
Stage 1	48	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	772	1021	-	-	1538	-
Stage 1	974	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	736	1021	-	-	1538	-
Mov Cap-2 Maneuver	736	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	822	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	5.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	913	1538	-
HCM Lane V/C Ratio	-	-	0.068	0.046	-
HCM Control Delay (s)	-	-	9.2	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	5.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	39	102	92	114	46	27
Future Vol, veh/h	39	102	92	114	46	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	81	81	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	176	114	141	115	68

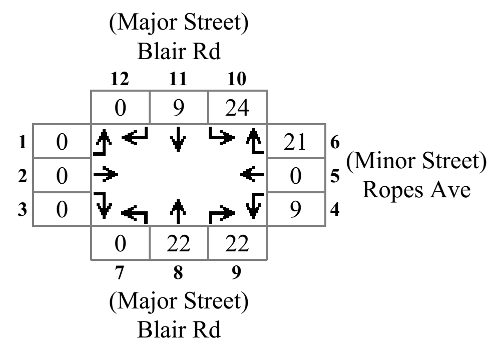
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	482	184	0	0	254	0
Stage 1	184	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	543	858	-	-	1311	-
Stage 1	848	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	494	858	-	-	1311	-
Mov Cap-2 Maneuver	494	-	-	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	684	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	5
HCM LOS	B		

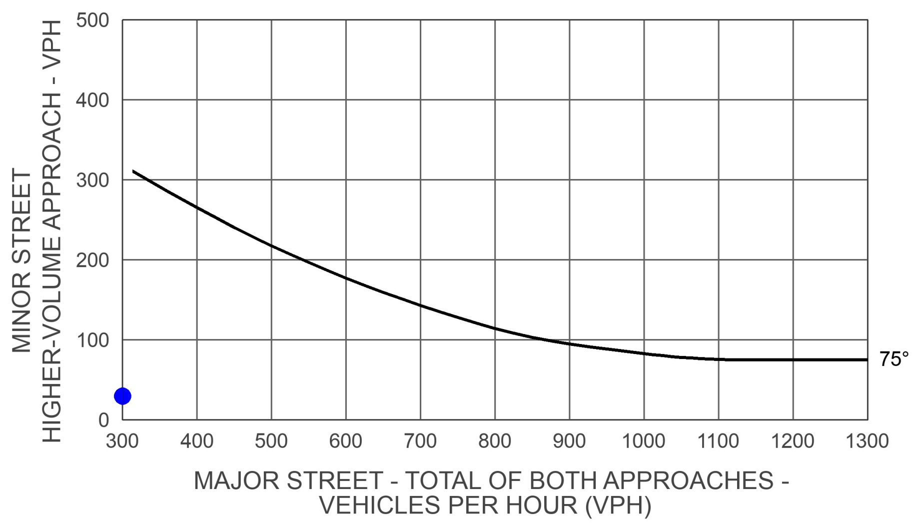
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	713	1311	-
HCM Lane V/C Ratio	-	-	0.341	0.088	-
HCM Control Delay (s)	-	-	12.6	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.5	0.3	-

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing
Intersection #: 4

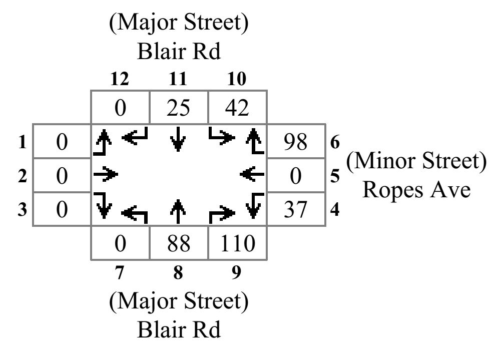


Major Total: 77
Minor High Volume: 30

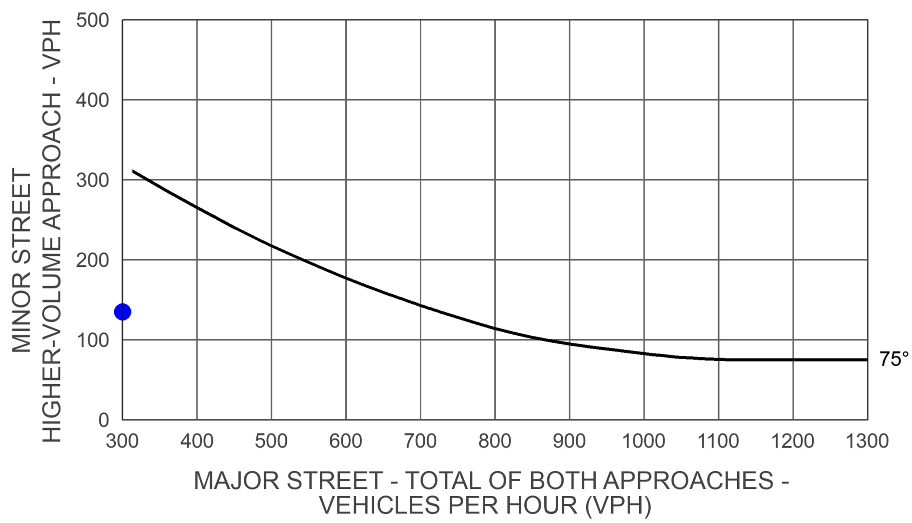


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing+Project
Intersection #: 4



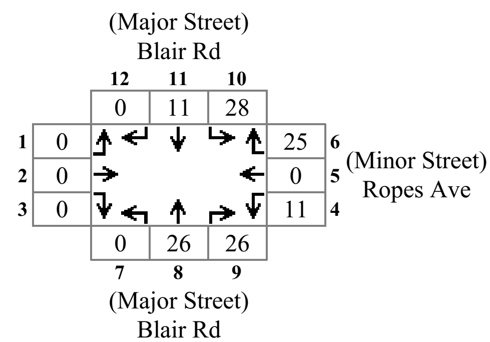
Major Total: 265
Minor High Volume: 135



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

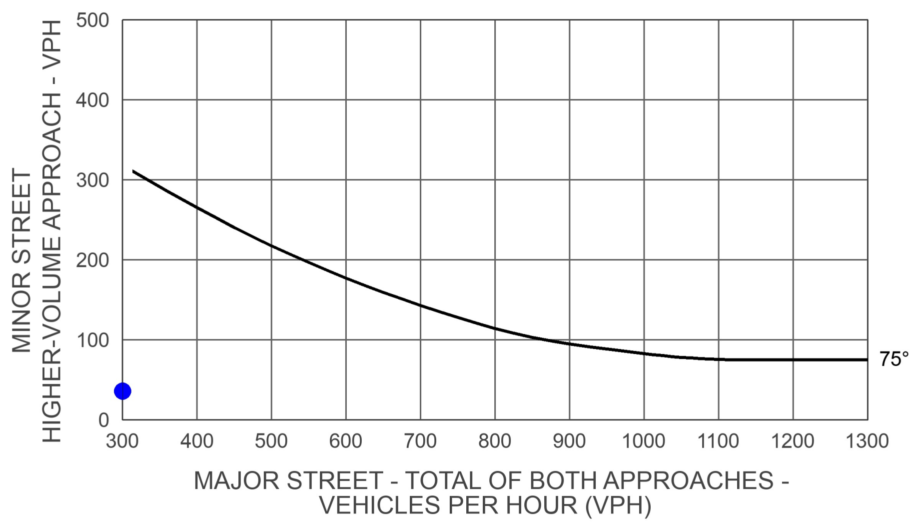
Scenario: PM Future

Intersection #: 4



Major Total: 91

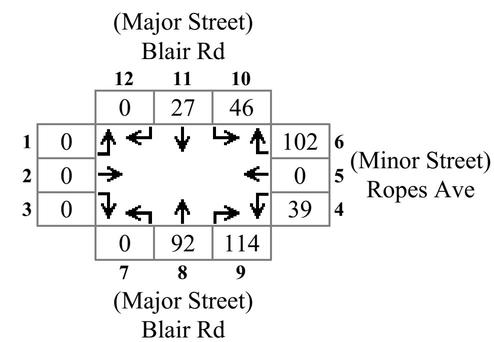
Minor High Volume: 36



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

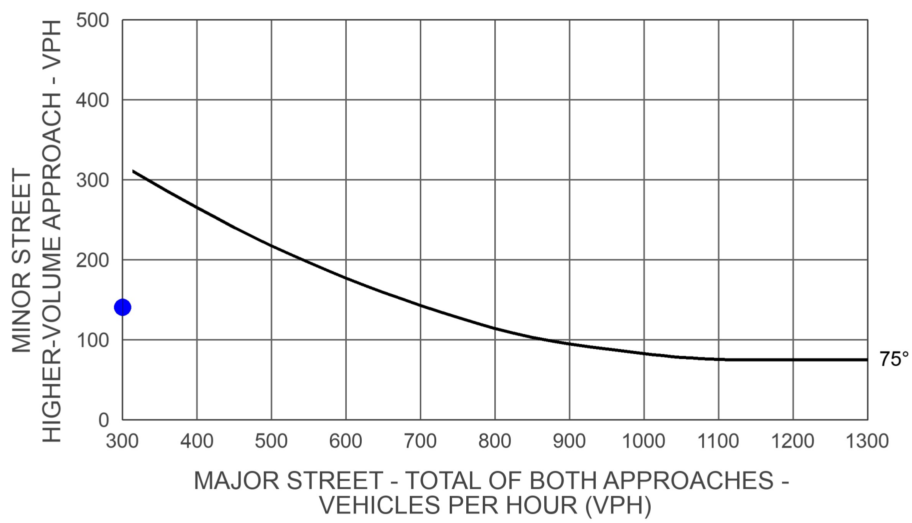
Scenario: PM Future+Project

Intersection #: 4



Major Total: 279

Minor High Volume: 141



Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	29	32	13	27	18	24
Future Vol, veh/h	29	32	13	27	18	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	73	73	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	42	18	37	23	31

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	114	36	0	0	55	0
Stage 1	36	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	882	1037	-	-	1550	-
Stage 1	986	-	-	-	-	-
Stage 2	945	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	869	1037	-	-	1550	-
Mov Cap-2 Maneuver	869	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	3.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	950	1550	-
HCM Lane V/C Ratio	-	-	0.083	0.015	-
HCM Control Delay (s)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	7.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	121	48	27	54	99	96
Future Vol, veh/h	121	48	27	54	99	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	73	73	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	62	37	74	129	125

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	456	74	0	0	111	0
Stage 1	74	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	562	988	-	-	1479	-
Stage 1	949	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	509	988	-	-	1479	-
Mov Cap-2 Maneuver	509	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	625	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.7	0	3.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	590	1479	-
HCM Lane V/C Ratio	-	-	0.372	0.087	-
HCM Control Delay (s)	-	-	14.7	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.7	0.3	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	34	37	15	32	21	28
Future Vol, veh/h	34	37	15	32	21	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	73	73	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	48	21	44	27	36

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	133	42	0	0	64	0
Stage 1	42	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	861	1029	-	-	1538	-
Stage 1	980	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	846	1029	-	-	1538	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	916	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	3.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	932	1538	-
HCM Lane V/C Ratio	-	-	0.099	0.018	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	7.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	126	53	29	59	102	100
Future Vol, veh/h	126	53	29	59	102	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	73	73	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	164	69	40	81	132	130

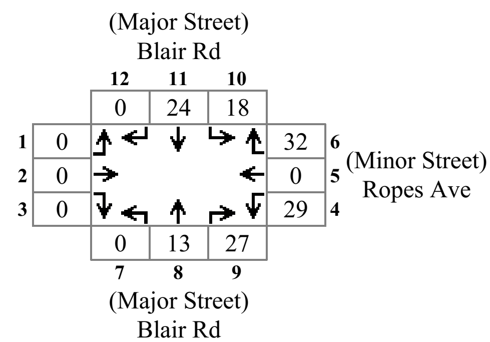
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	475	80	0	0	121	0
Stage 1	80	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	548	980	-	-	1467	-
Stage 1	943	-	-	-	-	-
Stage 2	681	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	495	980	-	-	1467	-
Mov Cap-2 Maneuver	495	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	615	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	3.9
HCM LOS	C		

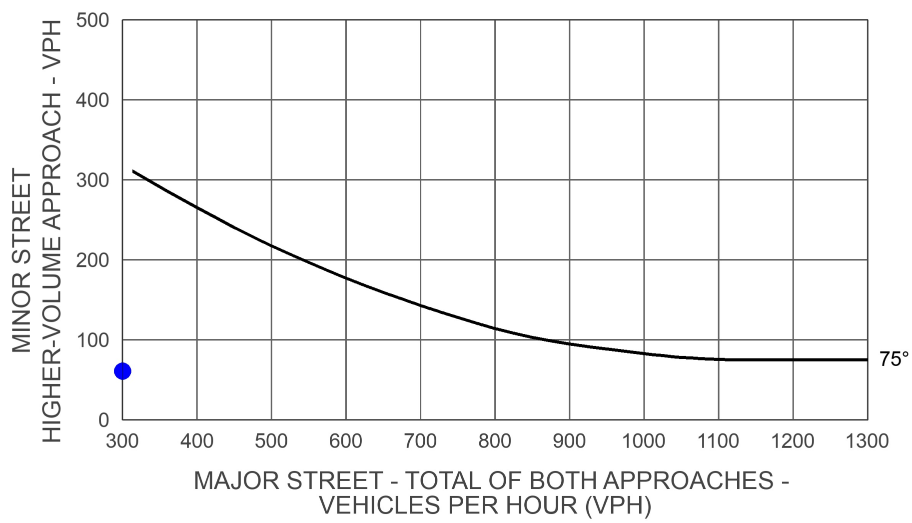
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	580	1467	-
HCM Lane V/C Ratio	-	-	0.401	0.09	-
HCM Control Delay (s)	-	-	15.3	7.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.9	0.3	-

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing
Intersection #: 4



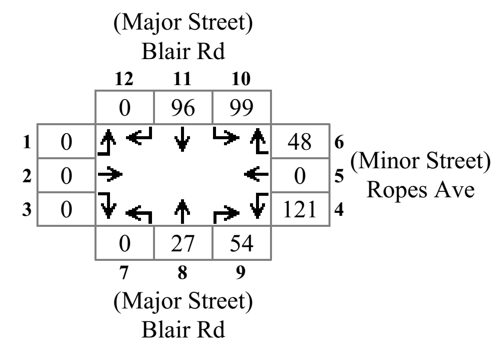
Major Total: 82
Minor High Volume: 61



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

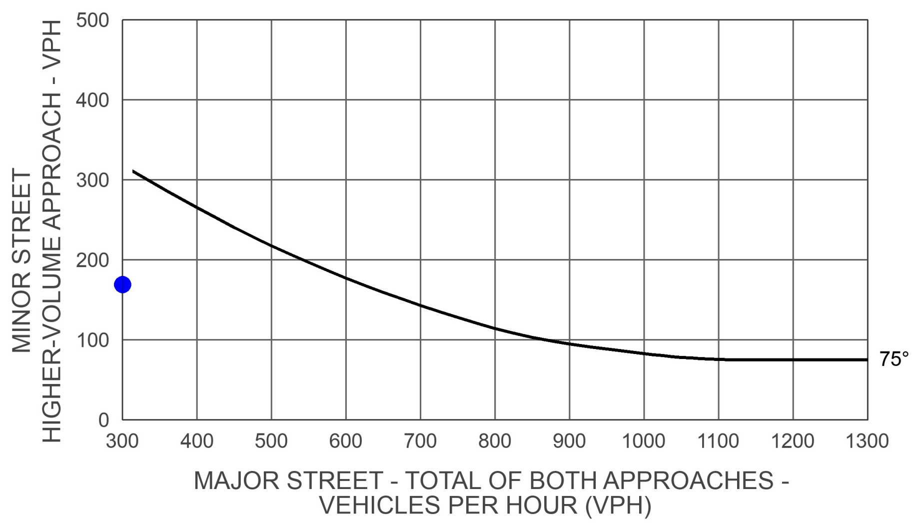
Scenario: AM Existing+Project

Intersection #: 4



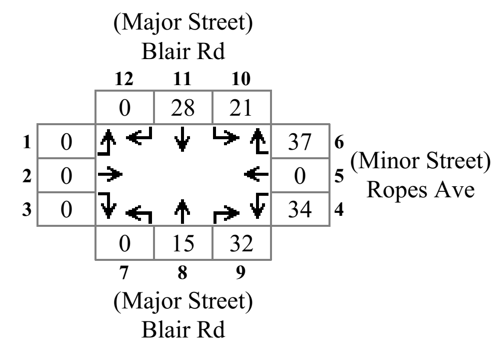
Major Total: 276

Minor High Volume: 169

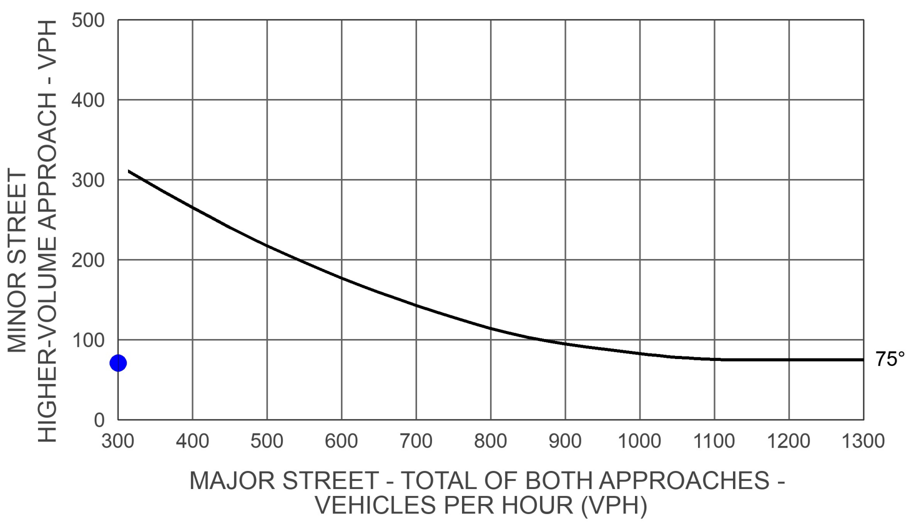


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future
Intersection #: 4

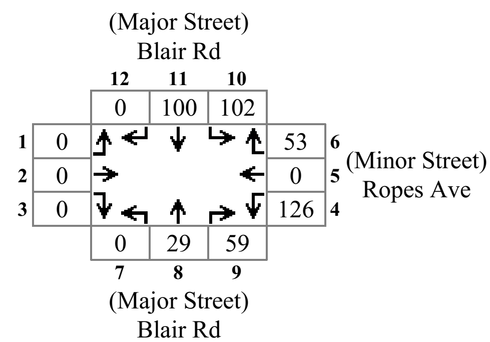


Major Total: 96
Minor High Volume: 71

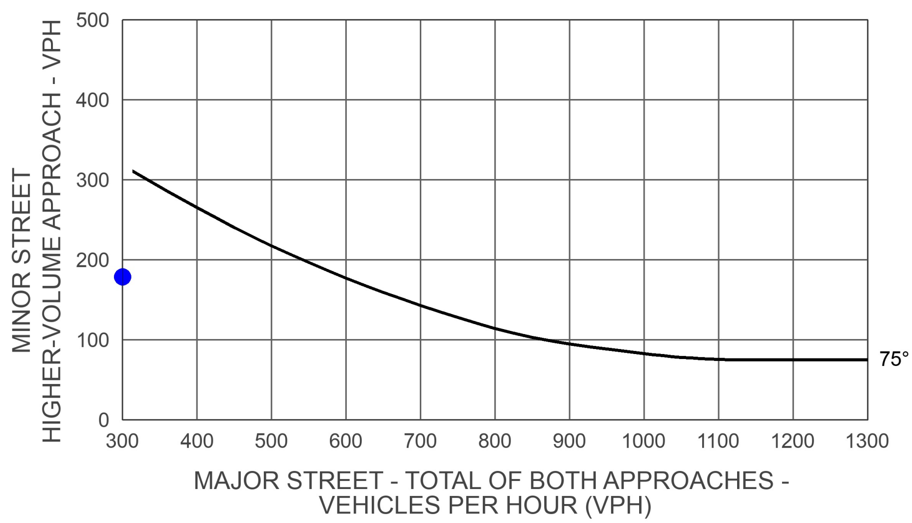


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future+Project
Intersection #: 4



Major Total: 290
Minor High Volume: 179



Intersection 5
Valencia Blvd & Ropes Ave

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	11	5	11	205	184	17
Future Vol, veh/h	11	5	11	205	184	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	89	89	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	9	12	230	219	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	484	229	239	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	255	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	542	810	1328	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	537	810	1328	-	-	-
Mov Cap-2 Maneuver	537	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	780	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1328	-	600	-	-
HCM Lane V/C Ratio	0.009	-	0.047	-	-
HCM Control Delay (s)	7.7	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	46	161	49	205	184	26
Future Vol, veh/h	46	161	49	205	184	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	89	89	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	81	282	55	230	219	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	575	235	250	0	-	0
Stage 1	235	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	480	804	1316	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	457	804	1316	-	-	-
Mov Cap-2 Maneuver	457	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	686	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	1.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1316	-	688	-	-
HCM Lane V/C Ratio	0.042	-	0.528	-	-
HCM Control Delay (s)	7.9	0	15.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	3.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	12	5	13	242	220	20
Future Vol, veh/h	12	5	13	242	220	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	89	89	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	9	15	272	262	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	575	274	286	0	-	0
Stage 1	274	-	-	-	-	-
Stage 2	301	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	480	765	1276	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	473	765	1276	-	-	-
Mov Cap-2 Maneuver	473	-	-	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	740	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.2	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1276	-	533	-	-
HCM Lane V/C Ratio	0.011	-	0.056	-	-
HCM Control Delay (s)	7.9	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	47	161	51	242	220	29
Future Vol, veh/h	47	161	51	242	220	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	89	89	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	282	57	272	262	35

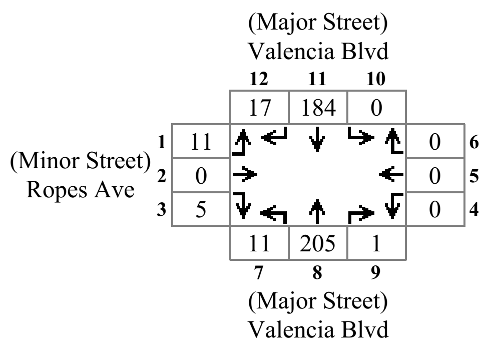
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	666	279	296	0	-	0
Stage 1	279	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	425	760	1265	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	402	760	1265	-	-	-
Mov Cap-2 Maneuver	402	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	650	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	1.4	0
HCM LOS	C		

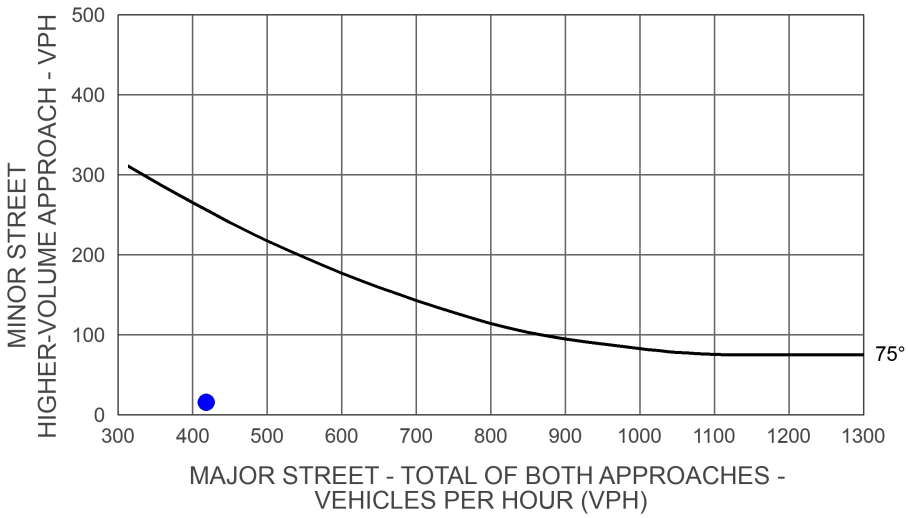
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1265	-	633	-	-
HCM Lane V/C Ratio	0.045	-	0.576	-	-
HCM Control Delay (s)	8	0	18.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	3.7	-	-

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing
Intersection #: 5



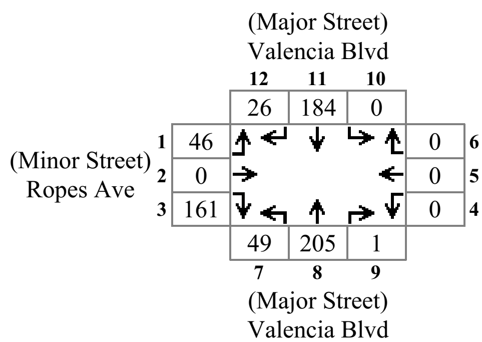
Major Total: 418
Minor High Volume: 16



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

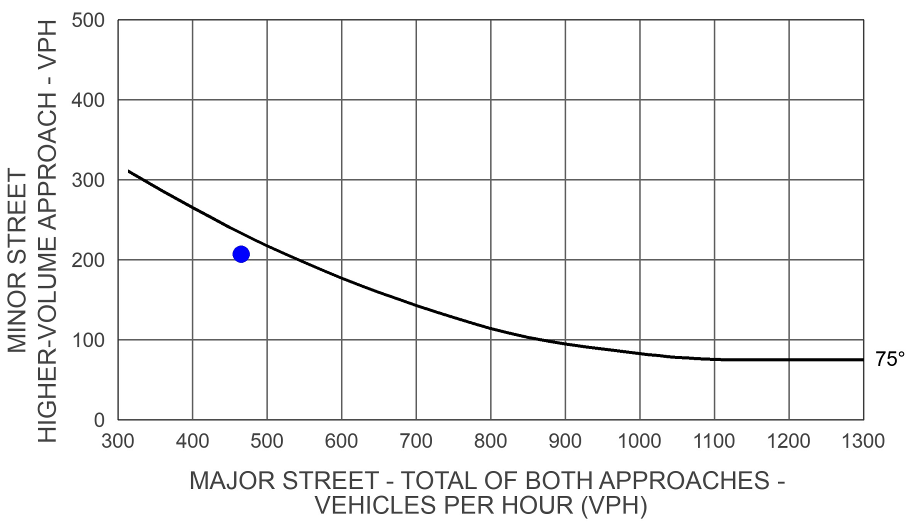
Scenario: PM Existing+Project

Intersection #: 5



Major Total: 465

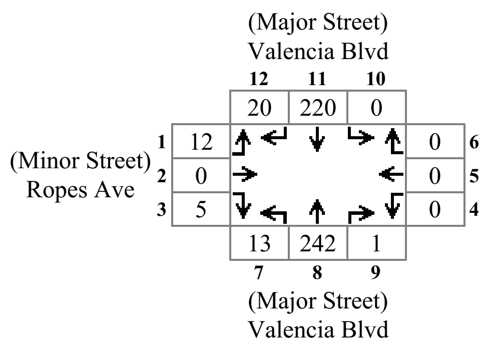
Minor High Volume: 207



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

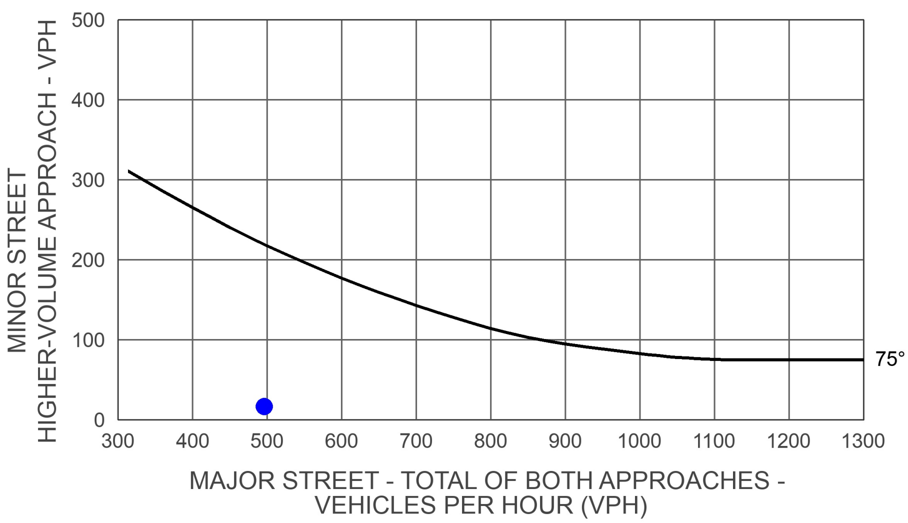
Scenario: PM Future

Intersection #: 5



Major Total: 496

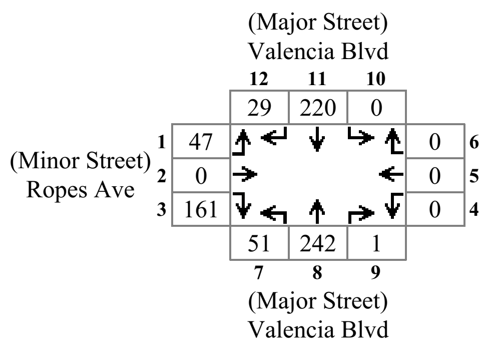
Minor High Volume: 17



Rural Peak Hour Signal Warrant
Intersection Meets Signal Warrant

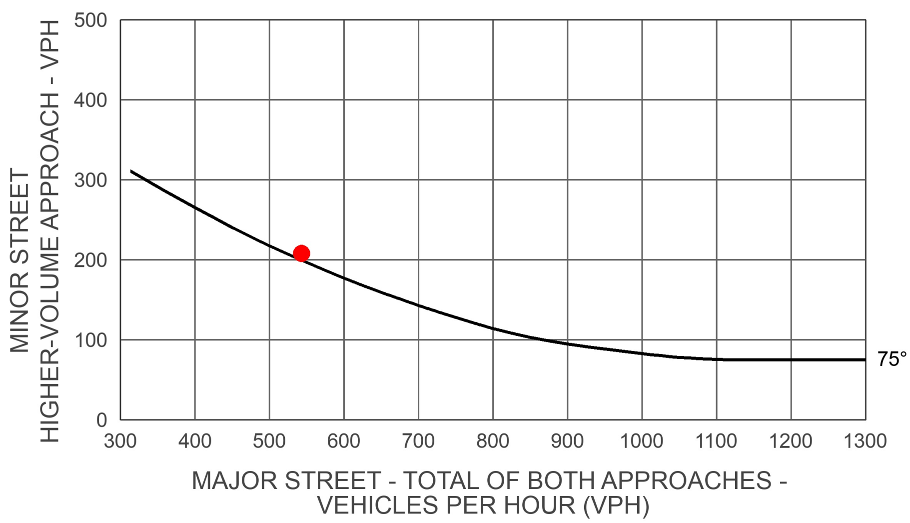
Scenario: PM Future+Project

Intersection #: 5



Major Total: 543

Minor High Volume: 208



Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	3	8	2	209	181	15
Future Vol, veh/h	3	8	2	209	181	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	85	85	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	15	2	246	199	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	458	207	215	0	-	0
Stage 1	207	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	561	833	1355	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	560	833	1355	-	-	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	789	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1355	-	735	-	-
HCM Lane V/C Ratio	0.002	-	0.027	-	-
HCM Control Delay (s)	7.7	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	10	41	174	209	181	56
Future Vol, veh/h	10	41	174	209	181	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	85	85	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	75	205	246	199	62

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	885	230	260	0	-	0
Stage 1	230	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	315	809	1304	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	258	809	1304	-	-	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	423	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	3.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1304	-	570	-	-
HCM Lane V/C Ratio	0.157	-	0.163	-	-
HCM Control Delay (s)	8.3	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.6	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	3	9	2	247	217	18
Future Vol, veh/h	3	9	2	247	217	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	85	85	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	16	2	291	238	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	543	248	258	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	501	791	1307	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	500	791	1307	-	-	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1307	-	691	-	-
HCM Lane V/C Ratio	0.002	-	0.032	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	10	42	174	247	217	59
Future Vol, veh/h	10	42	174	247	217	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	85	85	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	76	205	291	238	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	971	271	303	0	-	0
Stage 1	271	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	280	768	1258	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	226	768	1258	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	397	-	-	-	-	-

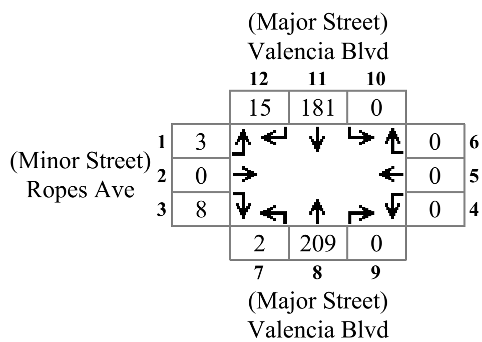
Approach	EB	NB	SB
HCM Control Delay, s	13.3	3.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1258	-	526	-	-
HCM Lane V/C Ratio	0.163	-	0.18	-	-
HCM Control Delay (s)	8.4	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.7	-	-

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

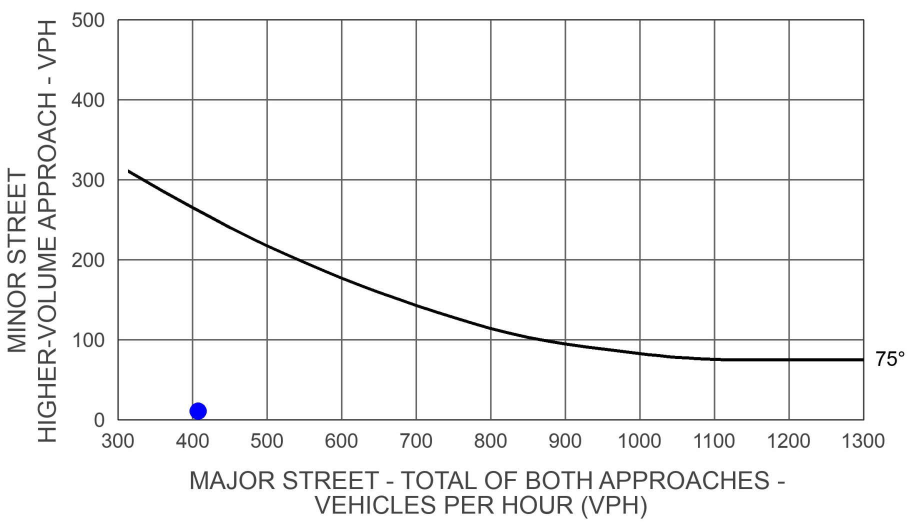
Scenario: AM Existing

Intersection #: 5



Major Total: 407

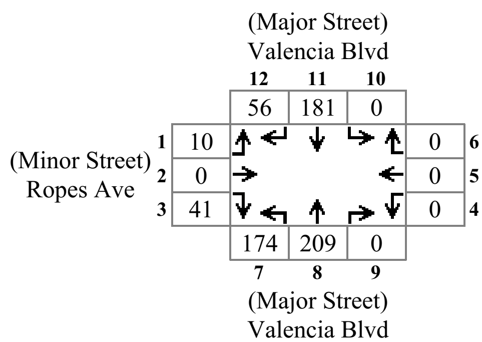
Minor High Volume: 11



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

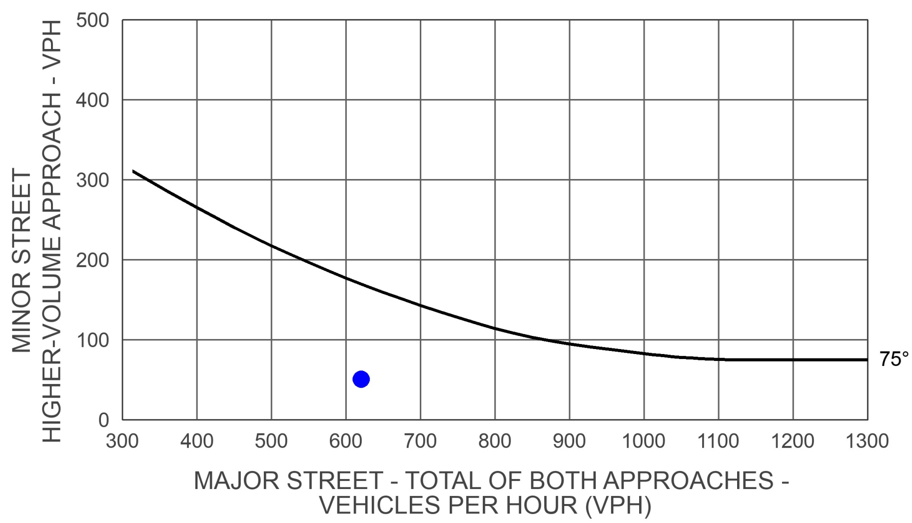
Scenario: AM Existing+Project

Intersection #: 5



Major Total: 620

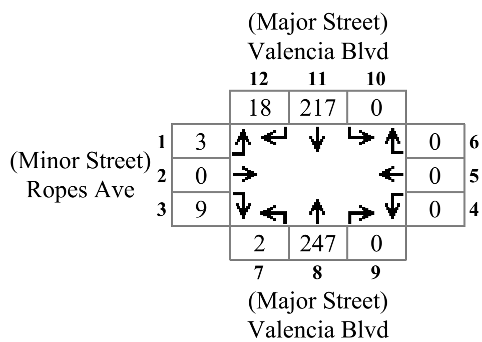
Minor High Volume: 51



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

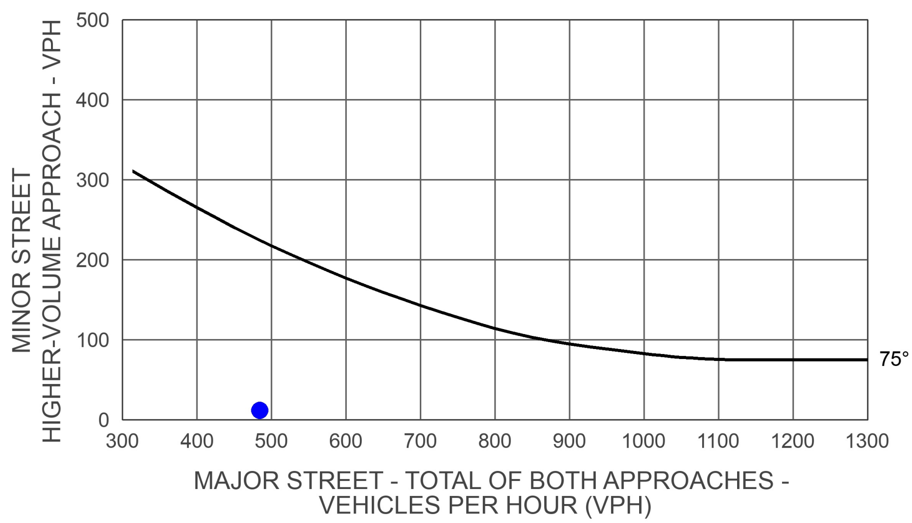
Scenario: AM Future

Intersection #: 5



Major Total: 484

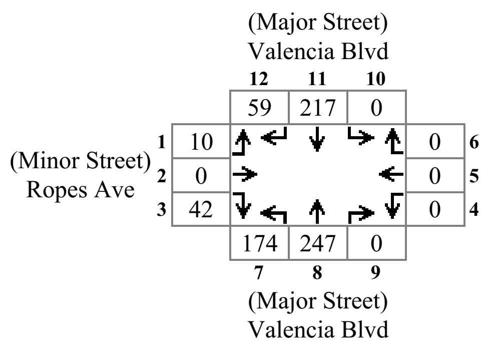
Minor High Volume: 12



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

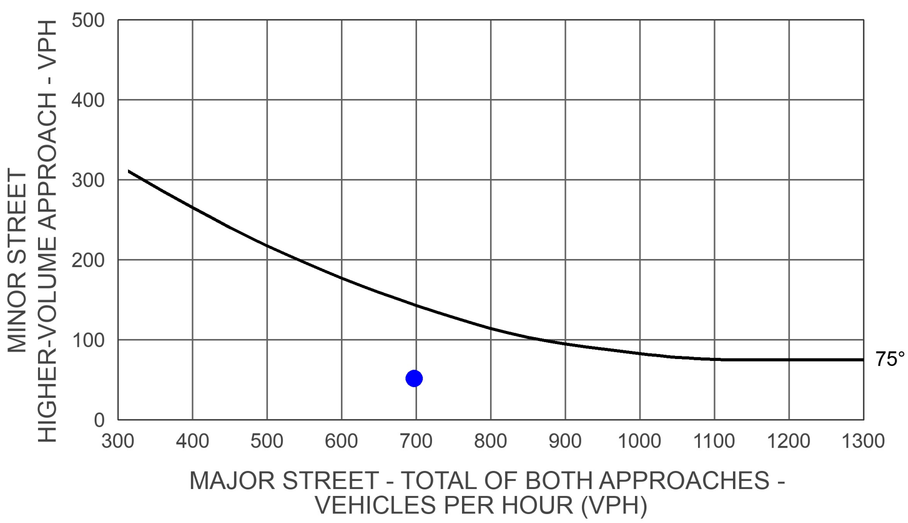
Scenario: AM Future+Project

Intersection #: 5



Major Total: 697

Minor High Volume: 52



Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	10	41	174	209	181	56
Future Vol, veh/h	10	41	174	209	181	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	85	85	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	75	205	246	199	62

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	885	230	260	0	-	0
Stage 1	230	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	315	809	1304	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	258	809	1304	-	-	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	423	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	3.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1304	-	570	-	-
HCM Lane V/C Ratio	0.157	-	0.163	-	-
HCM Control Delay (s)	8.3	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.6	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	4	16	115	268	223	25
Future Vol, veh/h	4	16	115	268	223	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	85	85	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	29	135	315	245	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	845	259	273	0	-	0
Stage 1	259	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	333	780	1290	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	291	780	1290	-	-	-
Mov Cap-2 Maneuver	291	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	485	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	2.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1290	-	584	-	-
HCM Lane V/C Ratio	0.105	-	0.062	-	-
HCM Control Delay (s)	8.1	0	11.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.2	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	11	49	287	268	223	66
Future Vol, veh/h	11	49	287	268	223	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	85	85	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	89	338	315	245	73

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1272	281	318	0	-	0
Stage 1	281	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	185	758	1242	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	359	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	124	758	1242	-	-	-
Mov Cap-2 Maneuver	124	-	-	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	241	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	4.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1242	-	391	-	-
HCM Lane V/C Ratio	0.272	-	0.279	-	-
HCM Control Delay (s)	9	0	17.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	1.1	-	1.1	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	49	287	268	223	66
Future Volume (veh/h)	11	49	287	268	223	66
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1716	1750	1750	1863	1863	1750
Adj Flow Rate, veh/h	20	89	338	315	245	73
Adj No. of Lanes	0	0	0	1	1	0
Peak Hour Factor	0.55	0.55	0.85	0.85	0.91	0.91
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	24	109	601	519	1132	337
Arrive On Green	0.09	0.09	0.82	0.82	0.82	0.82
Sat Flow, veh/h	271	1205	659	633	1379	411
Grp Volume(v), veh/h	110	0	653	0	0	318
Grp Sat Flow(s),veh/h/ln	1489	0	1292	0	0	1790
Q Serve(g_s), s	6.5	0.0	16.7	0.0	0.0	3.5
Cycle Q Clear(g_c), s	6.5	0.0	20.2	0.0	0.0	3.5
Prop In Lane	0.18	0.81	0.52			0.23
Lane Grp Cap(c), veh/h	135	0	1121	0	0	1469
V/C Ratio(X)	0.82	0.00	0.58	0.00	0.00	0.22
Avail Cap(c_a), veh/h	265	0	1121	0	0	1469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	40.2	0.0	3.7	0.0	0.0	1.8
Incr Delay (d2), s/veh	11.3	0.0	2.2	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	7.0	0.0	0.0	1.8
LnGrp Delay(d),s/veh	51.5	0.0	5.9	0.0	0.0	2.1
LnGrp LOS	D		A			A
Approach Vol, veh/h	110			653	318	
Approach Delay, s/veh	51.5			5.9	2.1	
Approach LOS	D			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		77.9		12.1		77.9		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		66.0		16.0		66.0		
Max Q Clear Time (g_c+I1), s		22.2		8.5		5.5		
Green Ext Time (p_c), s		5.0		0.2		5.0		

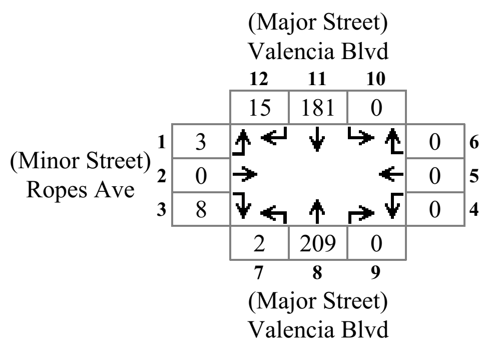
Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Notes
User approved volume balancing among the lanes for turning movement.

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

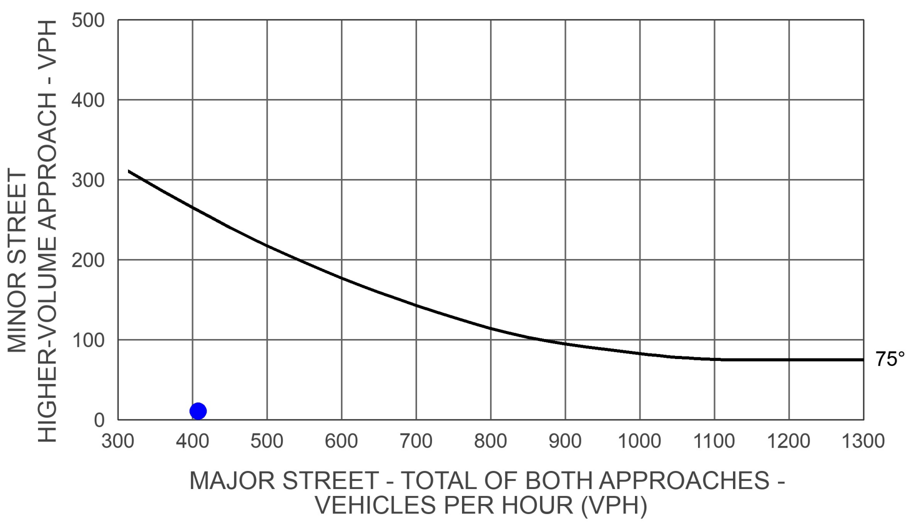
Scenario: AM Existing

Intersection #: 5



Major Total: 407

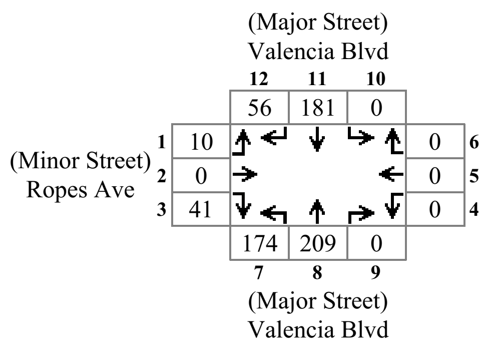
Minor High Volume: 11



Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

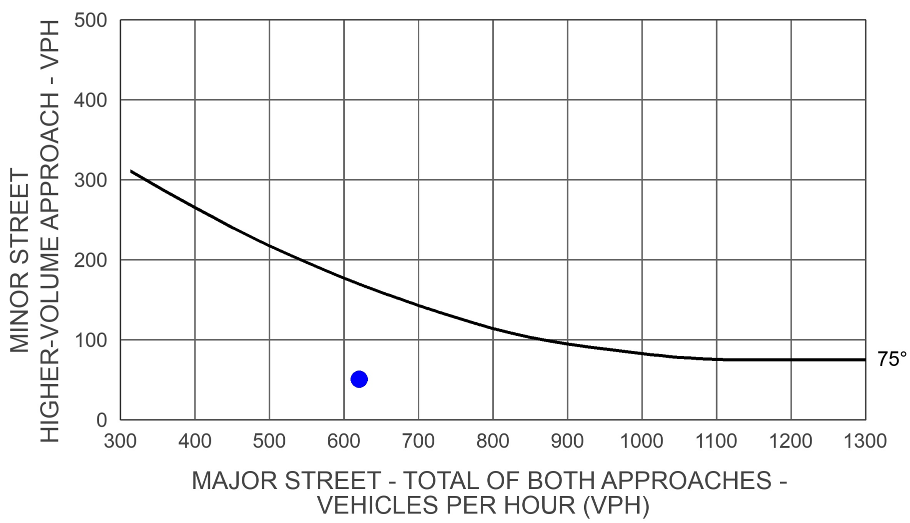
Scenario: AM Existing+Project

Intersection #: 5



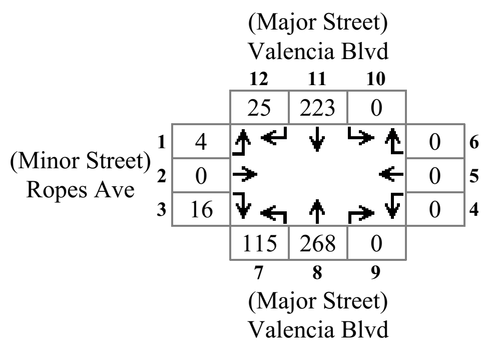
Major Total: 620

Minor High Volume: 51

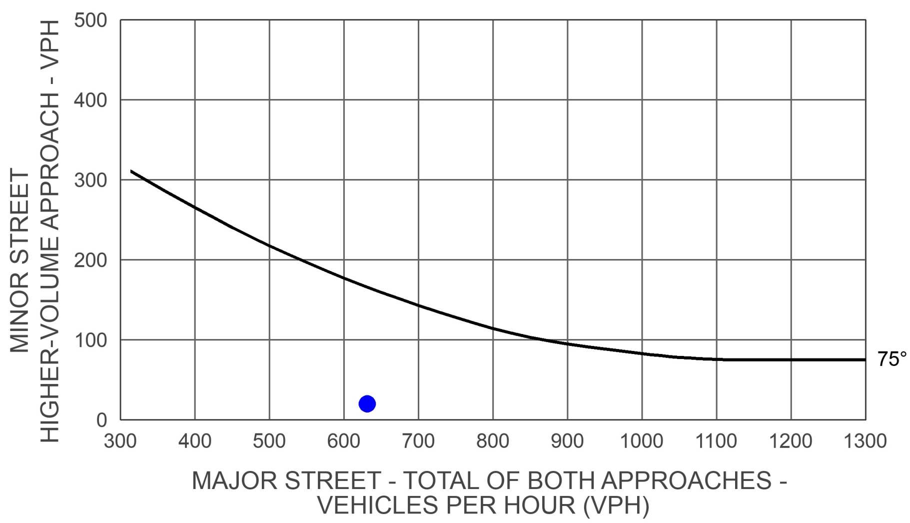


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future
Intersection #: 5

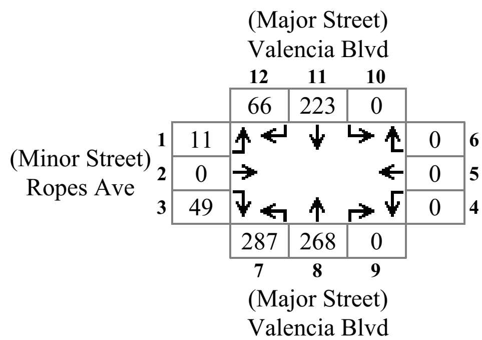


Major Total: 631
Minor High Volume: 20

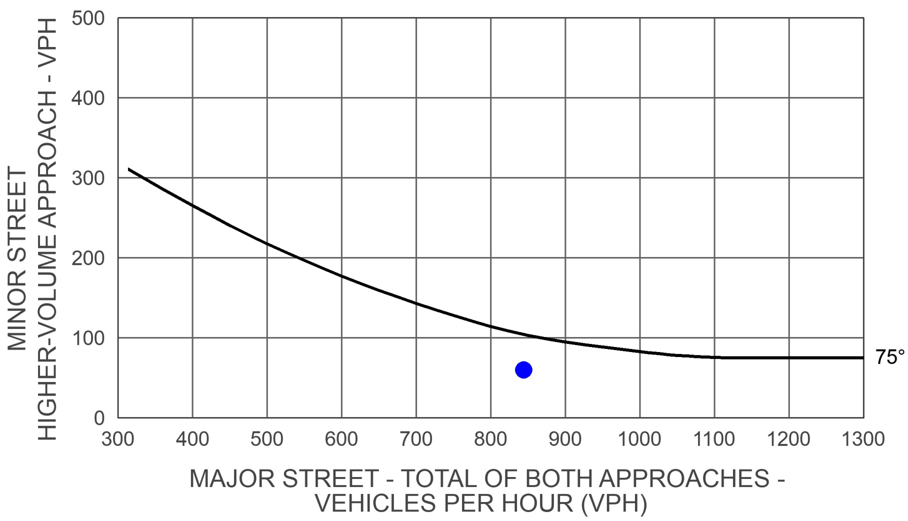


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future+Project
Intersection #: 5



Major Total: 844
Minor High Volume: 60



VEHICLE TURNING MOVEMENT COUNTS

Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:

Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

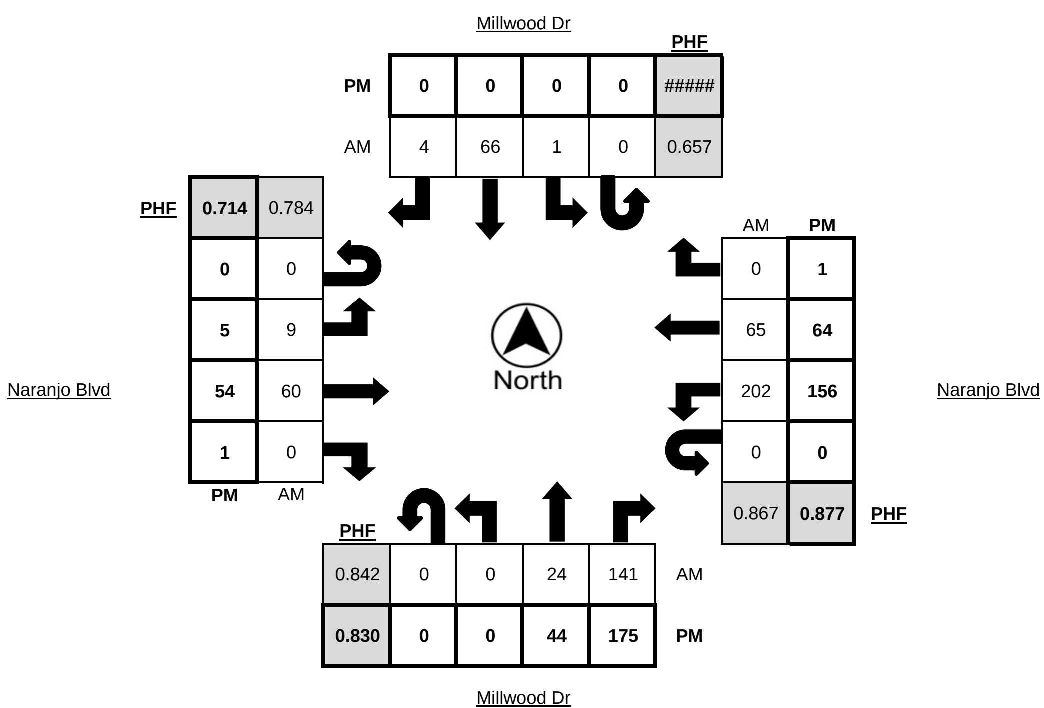
LOCATION Millwood Dr @ Naranjo Blvd
COUNTY Tulare
COLLECTION DATE Tuesday, May 24, 2022
LATITUDE 36.4138
LONGITUDE -119.1396
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 7:15 AM	0	0	8	4	1	0	0	14	1	1	0	0	10	0	0	0	35	14	0	3
7:15 AM - 7:30 AM	0	0	7	30	0	0	0	21	0	0	0	2	20	0	2	0	41	16	0	4
7:30 AM - 7:45 AM	0	0	2	41	3	0	1	23	3	1	0	4	18	0	3	0	66	11	0	1
7:45 AM - 8:00 AM	0	0	8	41	0	0	0	11	0	0	0	2	13	0	2	0	47	18	0	4
8:00 AM - 8:15 AM	0	0	7	29	2	0	0	11	1	0	0	1	9	0	0	0	48	20	0	7
8:15 AM - 8:30 AM	0	0	7	19	1	0	1	12	2	1	0	3	19	0	2	0	33	12	0	6
8:30 AM - 8:45 AM	0	0	4	25	1	0	0	8	1	0	0	0	19	0	3	0	24	10	0	3
8:45 AM - 9:00 AM	0	0	6	24	2	0	0	13	1	0	0	0	22	0	4	0	23	15	0	2
TOTAL	**0**	**0**	**49**	**213**	**10**	**0**	**2**	**113**	**9**	**3**	**0**	**12**	**130**	**0**	**16**	**0**	**317**	**116**	**0**	**30**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	0	16	44	2	0	0	0	0	0	0	0	21	0	4	0	30	6	0	1
4:15 PM - 4:30 PM	0	0	12	37	1	0	0	0	0	0	0	1	12	0	0	0	40	22	1	6
4:30 PM - 4:45 PM	0	0	10	52	2	0	0	0	0	0	0	2	9	1	0	0	39	12	0	1
4:45 PM - 5:00 PM	0	0	17	49	5	0	0	0	0	0	0	1	13	0	2	0	35	14	0	4
5:00 PM - 5:15 PM	0	0	5	37	1	0	0	0	0	0	0	1	20	0	0	0	42	16	0	4
5:15 PM - 5:30 PM	0	0	27	49	1	0	0	0	0	0	0	0	11	0	1	0	30	8	0	0
5:30 PM - 5:45 PM	0	0	15	37	0	0	0	0	0	0	0	1	8	0	3	0	29	6	0	2
5:45 PM - 6:00 PM	0	0	21	28	1	0	0	0	0	0	0	0	13	0	2	0	26	7	0	3
TOTAL	**0**	**0**	**123**	**333**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**107**	**1**	**12**	**0**	**271**	**91**	**1**	**21**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:15 AM - 8:15 AM	0	0	24	141	5	0	1	66	4	1	0	9	60	0	7	0	202	65	0	16
4:15 PM - 5:15 PM	0	0	44	175	9	0	0	0	0	0	0	5	54	1	2	0	156	64	1	15

	PHF	Trucks
AM	0.846	5.1%
PM	0.969	5.2%



Turning Movement Report

Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Prepared For:

Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

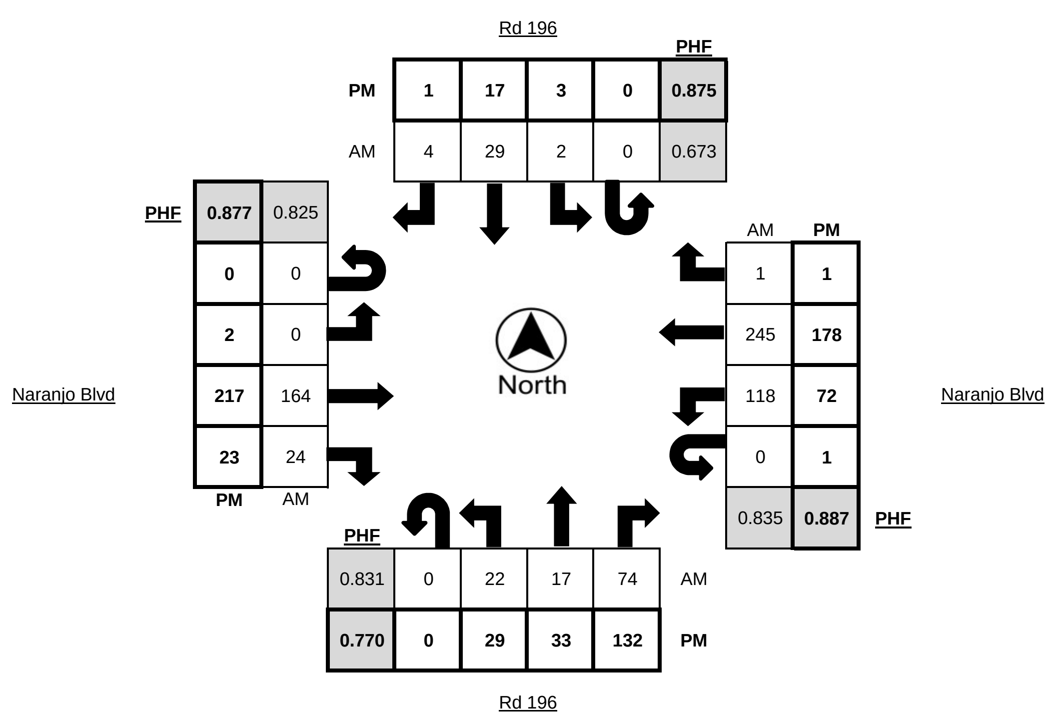
LOCATION	Naranjo Blvd @ Rd 196	**LATITUDE**	36.4138
COUNTY	Tulare	**LONGITUDE**	-119.1347
COLLECTION DATE	Tuesday, May 24, 2022	**WEATHER**	Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:00 AM - 7:15 AM	0	10	4	12	4	0	0	7	0	1	0	0	29	4	2	0	22	43	0	2
7:15 AM - 7:30 AM	0	6	6	13	2	0	1	6	0	1	0	0	39	11	1	0	25	54	0	3
7:30 AM - 7:45 AM	0	6	3	25	2	0	0	13	0	0	0	0	51	6	6	0	37	72	0	0
7:45 AM - 8:00 AM	0	4	3	18	3	0	0	5	3	0	0	0	46	5	2	0	25	57	1	6
8:00 AM - 8:15 AM	0	6	5	18	5	0	1	5	1	0	0	0	28	2	2	0	31	62	0	4
8:15 AM - 8:30 AM	0	7	5	14	4	0	1	7	0	0	0	0	33	5	2	0	12	39	1	5
8:30 AM - 8:45 AM	0	2	3	10	0	0	0	8	0	0	0	0	37	9	3	0	17	35	1	3
8:45 AM - 9:00 AM	0	7	3	18	6	0	0	1	0	0	0	0	28	14	7	0	18	28	0	5
TOTAL	**0**	**48**	**32**	**128**	**26**	**0**	**3**	**52**	**4**	**2**	**0**	**0**	**291**	**56**	**25**	**0**	**187**	**390**	**3**	**28**

	Northbound					Southbound					Eastbound					Westbound				
Time	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	4	4	33	0	0	0	4	1	0	0	1	59	9	8	1	21	43	0	2
4:15 PM - 4:30 PM	0	12	11	25	10	0	0	5	0	0	0	0	43	3	1	0	18	52	1	2
4:30 PM - 4:45 PM	0	6	13	44	1	0	2	4	0	0	0	0	55	4	0	0	18	43	0	0
4:45 PM - 5:00 PM	0	7	5	30	6	0	1	4	0	0	0	1	60	7	6	0	15	40	0	1
5:00 PM - 5:15 PM	0	6	8	23	4	0	1	5	0	0	0	0	58	2	2	0	19	47	1	2
5:15 PM - 5:30 PM	0	3	8	23	0	0	0	4	0	0	0	1	57	2	2	0	11	34	0	0
5:30 PM - 5:45 PM	0	0	4	21	1	0	1	8	0	0	0	0	43	4	3	0	18	25	0	3
5:45 PM - 6:00 PM	0	4	7	18	3	0	1	5	0	0	0	0	39	4	3	0	16	31	1	1
TOTAL	**0**	**42**	**60**	**217**	**25**	**0**	**6**	**39**	**1**	**0**	**0**	**3**	**414**	**35**	**25**	**1**	**136**	**315**	**3**	**11**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks	U-Turn	Left	Thru	Right	Trucks
7:15 AM - 8:15 AM	0	22	17	74	12	0	2	29	4	1	0	0	164	24	11	0	118	245	1	13
4:00 PM - 5:00 PM	0	29	33	132	17	0	3	17	1	0	0	2	217	23	15	1	72	178	1	5

	PHF	Trucks
AM	0.822	5.3%
PM	0.938	5.2%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

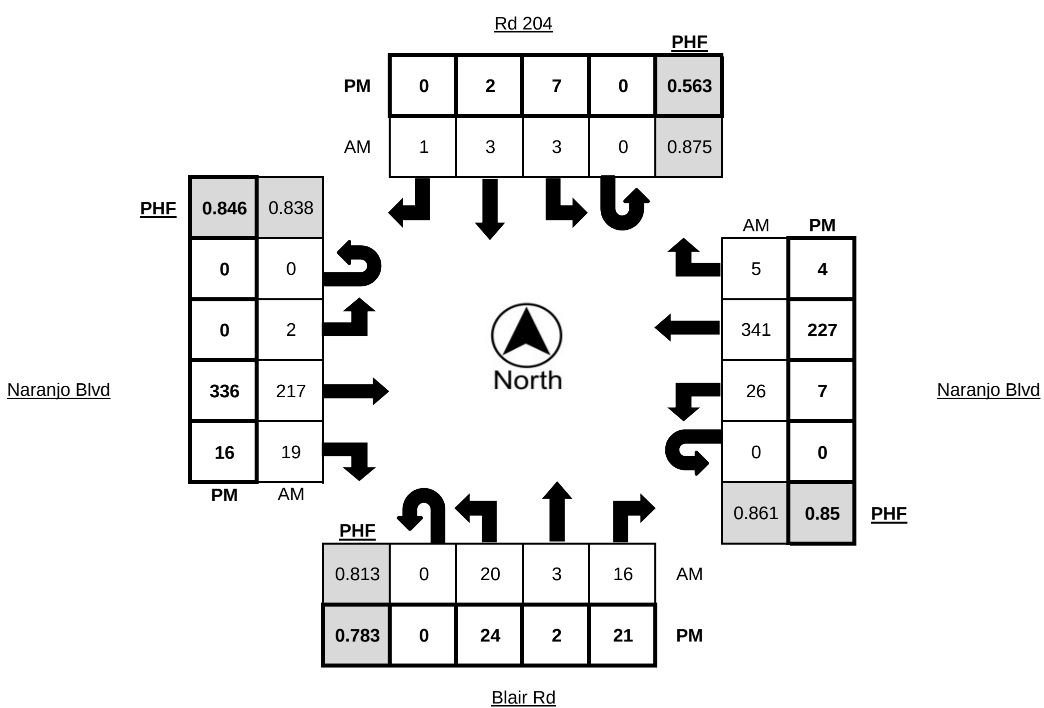
LOCATION Rd 204 / Blair Rd @ Naranjo Blvd
LATITUDE 36.4138
COUNTY Tulare
LONGITUDE -119.1168
COLLECTION DATE Tuesday, May 24, 2022
WEATHER Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	0	4	0	4	2	0	0	0	1	0	0	1	29	7	1	0	3	59	0	2
7:15 AM - 7:30 AM	0	4	0	5	1	0	0	1	1	0	0	0	49	6	3	0	7	76	1	2
7:30 AM - 7:45 AM	0	4	1	3	0	0	1	1	0	1	0	1	65	5	3	0	5	102	1	1
7:45 AM - 8:00 AM	0	7	0	3	0	0	2	0	0	0	0	0	66	5	1	0	7	86	0	5
8:00 AM - 8:15 AM	0	5	2	5	4	0	0	1	0	1	0	1	37	3	1	0	7	77	3	2
8:15 AM - 8:30 AM	0	2	0	5	1	0	2	0	2	0	0	0	43	9	3	0	6	47	0	4
8:30 AM - 8:45 AM	0	9	1	7	2	0	0	0	2	0	0	0	36	8	2	0	7	42	0	3
8:45 AM - 9:00 AM	0	6	0	6	3	0	4	0	0	0	0	1	36	8	7	0	6	35	2	3
TOTAL	**0**	**41**	**4**	**38**	**13**	**0**	**9**	**3**	**6**	**2**	**0**	**4**	**361**	**51**	**21**	**0**	**48**	**524**	**7**	**22**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	8	0	6	0	0	1	1	0	1	0	0	90	5	4	0	2	55	0	3
4:15 PM - 4:30 PM	0	3	1	2	1	0	1	0	0	0	0	0	64	6	4	0	3	64	3	1
4:30 PM - 4:45 PM	0	8	1	6	0	0	4	0	0	0	0	0	101	3	0	0	2	55	1	0
4:45 PM - 5:00 PM	0	5	0	7	0	0	1	1	0	0	0	0	81	2	4	0	0	53	0	2
5:00 PM - 5:15 PM	0	2	0	1	0	0	2	0	0	0	0	0	96	0	4	0	1	63	3	2
5:15 PM - 5:30 PM	0	1	0	2	0	0	0	0	0	0	0	0	89	0	1	0	0	54	1	0
5:30 PM - 5:45 PM	0	1	0	3	2	0	2	0	0	0	0	0	57	0	1	0	1	59	1	2
5:45 PM - 6:00 PM	0	1	0	0	0	0	1	0	0	0	0	1	63	0	1	0	1	49	3	2
TOTAL	**0**	**29**	**2**	**27**	**3**	**0**	**12**	**2**	**0**	**1**	**0**	**1**	**641**	**16**	**19**	**0**	**10**	**452**	**12**	**12**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	0	20	3	16	5	0	3	3	1	2	0	2	217	19	8	0	26	341	5	10
4:00 PM - 5:00 PM	0	24	2	21	1	0	7	2	0	1	0	0	336	16	12	0	7	227	4	6

	PHF	Trucks
AM	0.868	3.8%
PM	0.892	3.1%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:

Ruettgers & Schuler Civil Engineers
1800 30th St, Ste 260
Bakersfield, CA 93301

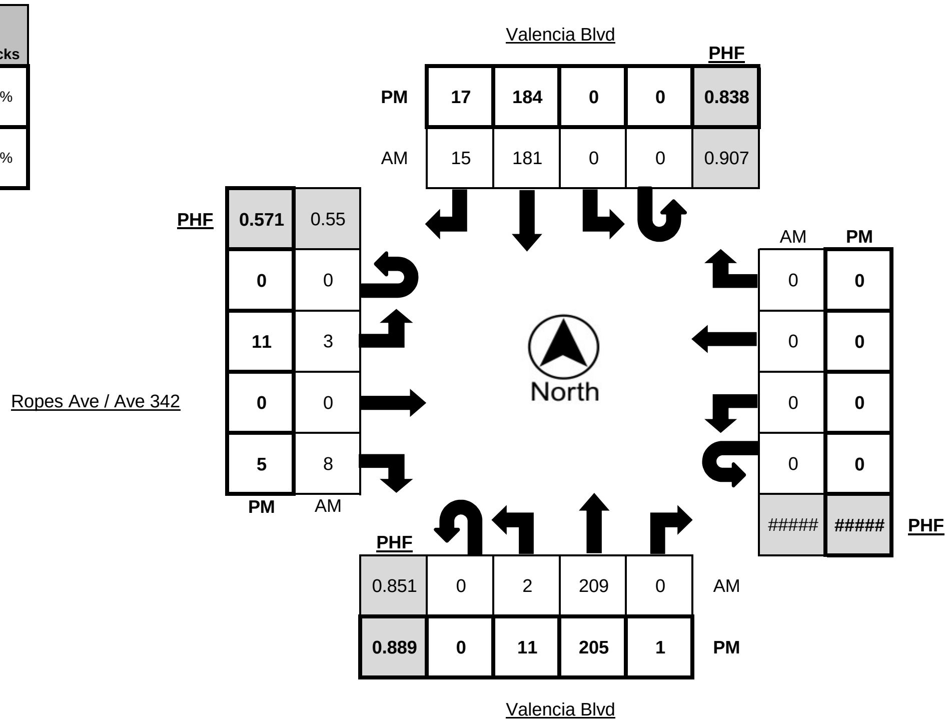
LOCATION	Valencia Blvd @ Ropes Ave	**LATITUDE**	36.4101
COUNTY	Tulare	**LONGITUDE**	-119.0989
COLLECTION DATE	Tuesday, May 24, 2022	**WEATHER**	Clear

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	0	0	27	0	1	0	0	33	1	2	0	1	0	1	1	0	0	0	0	0
7:15 AM - 7:30 AM	0	1	42	0	4	0	0	40	4	2	0	1	0	0	1	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	62	0	6	0	0	48	1	1	0	1	0	4	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	62	0	2	0	0	45	4	2	0	1	0	2	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	1	43	0	3	0	0	48	6	2	0	0	0	2	1	0	0	0	0	0
8:15 AM - 8:30 AM	0	2	34	0	4	0	0	33	0	2	0	2	0	4	1	0	0	0	0	0
8:30 AM - 8:45 AM	0	3	21	0	3	0	0	34	2	4	0	5	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	1	30	0	5	0	0	24	2	1	0	2	0	0	0	0	0	0	0	0
TOTAL	**0**	**8**	**321**	**0**	**28**	**0**	**0**	**305**	**20**	**16**	**0**	**13**	**0**	**13**	**4**	**0**	**0**	**0**	**0**	**0**

	Northbound					Southbound					Eastbound					Westbound				
Time	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	3	52	1	0	0	0	54	6	1	0	2	0	1	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	1	56	0	0	0	0	48	2	0	0	1	0	2	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	4	39	0	0	0	0	44	7	2	0	6	0	1	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	3	58	0	0	0	0	38	2	1	0	2	0	1	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	1	50	0	1	0	0	43	0	0	0	3	0	2	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	1	53	0	0	0	0	53	5	0	0	0	0	1	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	5	55	0	2	0	0	42	3	0	0	4	0	1	1	0	0	0	0	0
5:45 PM - 6:00 PM	1	4	48	0	0	0	0	39	3	3	0	3	0	3	0	0	0	0	0	0
TOTAL	**1**	**22**	**411**	**1**	**3**	**0**	**0**	**361**	**28**	**7**	**0**	**21**	**0**	**12**	**1**	**0**	**0**	**0**	**0**	**0**

	Northbound					Southbound					Eastbound					Westbound				
PEAK HOUR	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**	**U-Turn**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	0	2	209	0	15	0	0	181	15	7	0	3	0	8	2	0	0	0	0	0
4:00 PM - 5:00 PM	0	11	205	1	0	0	0	184	17	4	0	11	0	5	0	0	0	0	0	0

	PHF	Trucks
AM	0.901	5.7%
PM	0.912	0.9%



Turning Movement Count Report AM

Location ID: 5
North/South: Rd 204
East/West: Ropes Avenue

Date: 09/04/19
City: Woodlake, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:30	0	9	2	1	0	9	4	7	0	0	0	0	32
7:45	0	7	5	1	0	3	8	5	0	0	0	0	29
8:00	0	5	3	2	0	9	9	7	0	0	0	0	35
8:15	0	2	4	5	0	7	5	2	0	0	0	0	25

Total Volume:	0	23	14	9	0	28	26	21	0	0	0	0	121
Approach %	0%	62%	38%	24%	0%	76%	55%	45%	0%	0%	0%	0%	

Peak Hr Begin:	7:30												
PHV	0	23	14	9	0	28	26	21	0	0	0	0	121
PHF		0.771			0.771			0.734			0.000		0.864

Turning Movement Count Report PM

Location ID: 5
North/South: Rd 204
East/West: Ropes Avenue

Date: 09/04/19
City: Woodlake, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
16:30	0	9	4	1	0	4	5	4	0	0	0	0	27
16:45	0	1	2	1	0	5	4	5	0	0	0	0	18
17:00	0	3	1	4	0	9	4	7	0	0	0	0	28
17:15	0	0	1	3	0	3	8	5	0	0	0	0	20
Total Volume:	0	13	8	9	0	21	21	21	0	0	0	0	93
Approach %	0%	62%	38%	30%	0%	70%	50%	50%	0%	0%	0%	0%	

Peak Hr Begin:	16:30												
PHV	0	13	8	9	0	21	21	21	0	0	0	0	93
PHF	0.404			0.577			0.808			0.000			0.830

This page intentionally left blank.

Appendix E

Land Evaluation and Site Assessment Analysis Worksheets

NOTES

Calculation of the Land Evaluation (LE) Score

Part 1. Land Capability Classification (LCC) Score:

(1) Determine the total acreage of the project.
(2) Determine the soil types within the project area and enter them in **Column A** of the **Land Evaluation Worksheet** provided on page 2-A.
(3) Calculate the total acres of each soil type and enter the amounts in **Column B**.
(4) Divide the acres of each soil type (**Column B**) by the total acreage to determine the proportion of each soil type present. Enter the proportion of each soil type in **Column C**.
(5) Determine the LCC for each soil type from the applicable Soil Survey and enter it in **Column D**.
(6) From the LCC Scoring Table below, determine the point rating corresponding to the LCC for each soil type and enter it in **Column E**.

LCC Scoring Table

LCC Class	**I**	**IIe**	**IIs,w**	**IIIe**	**IIIs,w**	**IVe**	**IVs,w**	**V**	**VI**	**VII**	**VIII**
Points	**100**	**90**	**80**	**70**	**60**	**50**	**40**	**30**	**20**	**10**	**0**

(7) Multiply the proportion of each soil type (**Column C**) by the point score (**Column E**) and enter the resulting scores in **Column F**.
(8) Sum the LCC scores in **Column F**.
(9) Enter the LCC score in box <1> of the **Final LESA Score Sheet** on page 10-A.

Part 2. Storie Index Score:

(1) Determine the Storie Index rating for each soil type and enter it in **Column G**.
(2) Multiply the proportion of each soil type (**Column C**) by the Storie Index rating (**Column G**) and enter the scores in **Column H**.
(3) Sum the Storie Index scores in **Column H** to gain the Storie Index Score.
(4) Enter the Storie Index Score in box <2> of the **Final LESA Score Sheet** on page 10-A.

Land Evaluation Worksheet

Land Capability Classification (LCC) and Storie Index Scores

A Soil Map Unit	B Project Acres	C Proportion of Project Area	D LCC	E LCC Rating	F LCC Score	G Storie Index	H Storie Index Score
153	6.6	0.1048	1	100	10.48	90	9.432
154	35.4	0.5619	3s	60	33.714	30	16.857
155	6.2	0.0984	3e	70	6.888	30	2.952
176	14.7	0.2334	2s	80	18.672	90	21.006
143	0.1	0.0016	1	100	0.16	90	0.144
Totals	63	(Must Sum to 1.0)		***LCC Total Score***	69.914	***Storie Index Total Score***	50.391

Site Assessment Worksheet 1.

Project Size Score

	I LCC Class I - II	J LCC Class III	K LCC Class IV - VIII
	6.6	35.4	
	14.7	6.2	
	0.1		
Total Acres	21.4	41.6	
Project Size Scores	50	60	

Highest Project Size Score 60

Updated 2011

NOTES

Calculation of the Site Assessment (SA) Score

Part 1. Project Size Score:.

(1) Using **Site Assessment Worksheet 1** provided on page 2-A, enter the acreage of each soil type from **Column B** in the **Column - I, J or K** - that corresponds to the LCC for that soil. (Note: While the Project Size Score is a component of the Site Assessment calculations, the score sheet is an extension of data collected in the Land Evaluation Worksheet, and is therefore displayed beside it).
(2) Sum **Column I** to determine the total amount of class I and II soils on the project site.
(3) Sum **Column J** to determine the total amount of class III soils on the project site.
(4) Sum **Column K** to determine the total amount of class IV and lower soils on the project site.
(5) Compare the total score for each LCC group in the Project Size Scoring Table below and determine which group receives the highest score.

Project Size Scoring Table

Class I or II		Class III		Class IV or Lower	
Acreage	Points	Acreage	Points	Acreage	Points
>80	100	>160	100	>320	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19	30	40-59	60	40-99	20
10<	0	20-39	30	40<	0
		10-19	10		
		10<	0		

(6) Enter the **Project Size Score** (the highest score from the three LCC categories) in box <3> of the **Final LESA Score Sheet** on page 10-A.

NOTES

Part 2. Water Resource Availability Score:

(1) Determine the type(s) of irrigation present on the project site, including a determination of whether there is dryland agricultural activity as well.

(2) Divide the site into portions according to the type or types of irrigation or dryland cropping that is available in each portion. Enter this information in **Column B** of **Site Assessment Worksheet 2. - Water Resources Availability**.

(3) Determine the proportion of the total site represented for each portion identified, and enter this information in **Column C**.

(4) Using the Water Resources Availability Scoring Table, identify the option that is most applicable for each portion, based upon the feasibility of irrigation in drought and non-drought years, and whether physical or economic restrictions are likely to exist. Enter the applicable Water Resource Availability Score into **Column D**.

(5) Multiply the Water Resource Availability Score for each portion by the proportion of the project area it represents to determine the weighted score for each portion in **Column E**.

(6) Sum the scores for all portions to determine the project's total Water Resources Availability Score

(7) Enter the Water Resource Availability Score in box <4> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 2. - Water Resources Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	Groundwater	1	65	65
2				
3				
4				
5				
6				
		(Must Sum to 1.0)	***Total Water Resource Score***	65

Updated 2011

Water Resource Availability Scoring Table

Option	Non-Drought Years			Drought Years			WATER RESOURCE SCORE
	RESTRICTIONS			RESTRICTIONS			
	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	
1	YES	NO	NO	YES	NO	NO	100
2	YES	NO	NO	YES	NO	YES	95
3	YES	NO	YES	YES	NO	YES	90
4	YES	NO	NO	YES	YES	NO	85
5	YES	NO	NO	YES	YES	YES	80
6	YES	YES	NO	YES	YES	NO	75
7	YES	YES	YES	YES	YES	YES	65
8	YES	NO	NO	NO	-- --	-- --	50
9	YES	NO	YES	NO	-- --	-- --	45
10	YES	YES	NO	NO	-- --	-- --	35
11	YES	YES	YES	NO	-- --	-- --	30
12	Irrigated production not feasible, but rainfall adequate for dryland production in both drought and non-drought years						25
13	Irrigated production not feasible, but rainfall adequate for dryland production in non-drought years (but not in drought years)						20
14	Neither irrigated nor dryland production feasible						0

Updated 2011

NOTES

Part 3. Surrounding Agricultural Land Use Score:

(1) Calculate the project's Zone of Influence (ZOI) as follows:

(a) a rectangle is drawn around the project such that the rectangle is the smallest that can completely encompass the project area.

(b) a second rectangle is then drawn which extends one quarter mile on all sides beyond the first rectangle.

(c) The ZOI includes all parcels that are contained within or are intersected by the second rectangle, less the area of the project itself.

(2) Sum the area of all parcels to determine the total acreage of the ZOI.

(3) Determine which parcels are in agricultural use and sum the areas of these parcels

(4) Divide the area in agriculture found in step (3) by the total area of the ZOI found in step (2) to determine the percent of the ZOI that is in agricultural use.

(5) Determine the Surrounding Agricultural Land Score utilizing the Surrounding Agricultural Land Scoring Table below.

Surrounding Agricultural Land Scoring Table

Percent of ZOI in Agriculture	Surrounding Agricultural Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

(5) Enter the Surrounding Agricultural Land Score in box <5> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 3.
Surrounding Agricultural Land and Surrounding Protected Resource Land

A	B	C	D	E	F	G
Zone of Influence					Surrounding Agricultural Land Score (From Table)	Surrounding Protected Resource Land Score (From Table)
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)		
349.8	193.5	177.5	55.32	50.74%	40	30

NOTES

Part 4. Protected Resource Lands Score:

The Protected Resource Lands scoring relies upon the same Zone of Influence information gathered in Part 3, and figures are entered in Site Assessment Worksheet 3, which combines the surrounding agricultural and protected lands calculations.

(1) Use the total area of the ZOI calculated in Part 3. for the Surrounding Agricultural Land Use score.
(2) Sum the area of those parcels within the ZOI that are protected resource lands, as defined in the California Agricultural LESA Guidelines.
(3) Divide the area that is determined to be protected in Step (2) by the total acreage of the ZOI to determine the percentage of the surrounding area that is under resource protection.
(4) Determine the Surrounding Protected Resource Land Score utilizing the Surrounding Protected Resource Land Scoring Table below.

Surrounding Protected Resource Land Scoring Table

Percent of ZOI Protected	Protected Resource Land Score
90-100	100
80-89	90
75-79	80
70-74	70
65-69	60
60-64	50
55-59	40
50-54	30
45-49	20
40-44	10
<40	0

(5) Enter the Protected Resource Land score in box <6> of the **Final LESA Score Sheet** on page 10-A.

NOTES

Final LESA Score Sheet

Calculation of the Final LESA Score:

(1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column.
(2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project.
(3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project.
(4) Sum the total LE and SA scores to determine the Final LESA Score for the project.

	Factor Scores	**Factor Weight**	**Weighted Factor Scores**
LE Factors			
Land Capability Classification	*<1>* 69.914	0.25	17.48
Storie Index	*<2>* 50.391	0.25	12.6
LE Subtotal		***0.50***	30.08
SA Factors			
Project Size	*<3>* 60	0.15	9
Water Resource Availability	*<4>* 65	0.15	9.75
Surrounding Agricultural Land	*<5>* 40	0.15	6
Protected Resource Land	*<6>* 30	0.05	1.5
SA Subtotal		***0.50***	26.25
		Final LESA Score	56.33

For further information on the scoring thresholds under the California Agricultural LESA Model, consult Section 4 of the Instruction Manual.

This page intentionally left blank.