Gill Medical Center Project

Draft Environmental Impact Report

SCH# 2020010176

Lead Agency:

County of San Joaquin
1810 East Hazelton Avenue
Stockton, California 95205

June 2022

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Gill Medical Center Project

DRAFT

ENVIRONMENTAL IMPACT REPORT

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State Clearinghouse Number: 2020010176

Prepared for:

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LIST OF ACRONYMS AND ABBREVIATIONS

Acronym	Definition
$\mu g/m^3$	micrometers per cubic meter over
AB	Assembly Bill
ABC	Alternative Birthing Services
ACEP	Agricultural Conservation Easement Program
ADA	Americans With Disabilities Act
AF	Acre-feet
AFT	American Farmland Trust
AFY	Acre-feet per year
AIA	Air Impact Assessment
APN	Assessor's Parcel Number
BA	Biological Assessment
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BAU	Business-As-Usual
BCC	Bird of Conservation Concern
BLM	Bureau of Land Management
BMP	Best Management Practices
BO	Biological Opinion
BP	Before Present
BPS	Best Performance Standards
BRA	Biological Resources Assessment
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Office of Emergency Services
CalEEMod	California Emissions Estimator Model
CalGEM	California Geologic Energy Management
Caltrans	California Department of Transportation, District 3
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Council
CCAA	California Clean Air Act
CCIC	Central California Information Center
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act

Acronym	Definition
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, A.K.A. Superfund
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historical Resources Information Center
CI	*Coccidioides immitis*
CMU	Concrete Masonry Unit
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
COG	Look for this and change to SJCOG
COSMUD	City of Stockton Municipal Utilities Department
COVID-19	SARS-CoV-2 Virus
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CTG	Control Techniques Guidance
CTR	California Toxics Rule
CVFPB	Central Valley Flood Protection Board
CVP	Central Valley Plan
CVRWQCB	Central Valley Water Quality Control Board
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted Decibel
DBH	Diameter at Breast Height
DDW	Division of Drinking Water
DEIR	Draft Environmental Impact Report
DNL	Day/Night Noise Level
DOC	California Department of Conservation
DPM	diesel particulate matter
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
DWQ	Department of Water Quality
DWR	Department of Water Resources
EHD	Environmental Health Department
EIR	Environmental Impact Report

Acronym	Definition
EMFAC	EMission FACtor
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
ERAM	En Route Automation Modernization
ESA	Endangered Species act
ESJGA	Eastern San Joaquin Groundwater Authority – define on first use just before figure 4.12-1
ESLGA	Eastern San Joaquin Groundwater Authority
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulation
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Agency
FICON	Federal Interagency Committee on Noise
FLPMA	Federal Land Policy and Management Act
FMMP	Farmland Mapping and Monitoring Program
FR	Federal Register
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GLO	General Land Office
gpd	Gallons per day
GSP	Groundwater Sustainability Plan
HCAI	Health Care Access and Information
HCVP	Housing Choice Voucher Program
HMBP	a Hazardous Materials Business Plan
HMMH	Harris, Miller, Miller and
in/sec	Inches per second
IPCC	Intergovernmental Panel on Climate Change
kF	Erosion factor
kV	Kilovolt
kWh	Kilowatt hour
LAFCO	Local Agency Formation ???
LCC	Land Capacity Classification
Ldn	Day/Night Noise Level
LE	Land Evaluation
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
L_{eq}	Equivalent Noise Level
LESA	Land Evaluation and Site Assessment
LOS	Level of Service
LRA	Local Responsibility Area

Acronym	Definition
LTS	Less than Significant
LTSMI	Less than Significant with Mitigation Incorporated
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MFL	Millions of Fibers per Liter over 10 µm in length
MLD	Most Likely Descendant
MOB	Medical Office Building
mph	Miles per Hour
MPN	Most Probable Number per 100 Milliliter
MRZ	Mineral Resource Zone
MSL	Mean sea level
MW	Megawatt
MWMP	Medical Waste Management Plan
N_2O	Nitrous Oxides
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NALMS	North American Land Mammal Stage
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety & Health
NMFS	National Marine Fisheries Services
NO	Nitrogen Oxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	Nitric oxide
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTR	National Toxics Rule
O_3	Ozone
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OSHPD	Office of Statewide Health Planning and Development
PA	Potentially Active
PACE	Property Assessed Clean Energy
PFF	Public Facility Fees
PG&E	Pacific Gas and Electric Company
PM	Particulate Matter

Acronym	Definition
PM_{10}	Particulate Matter less than 10 microns in diameter size
$PM_{2.5}$	Particulate Matter less than 2.5 microns in diameter size
ppm	Parts Per Million
PPV	peak particle velocity
PRC	Public Resources code
PRPA	Paleontological Resources Preservation Act
PVC	Polyvinyl chloride
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Practitioner
RACT	Reasonably Available Control Technology
RMS	Root Mean Square
ROG	Reactive Organic Gases
RTD	Regional Transit District
RTIF	Regional Transportation Impact Fee
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SA	Site Assessment
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act of 2014
SIP	State Implementation Plan
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin County Multi Species Conservation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMARA	Surface Mining and Reclamation Act
SO_2	Sulfur dioxide
So_x	Sulfur oxides
SPWS	Small Public Water System
SR	State Route
SSC	Species of Special Concern
STC	Sound Transmission Class
Superfund	Comprehensive Environmental Response, Compensation, and Liability Act, A.K.A. CERCLA
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic air contaminants
TCR	Tribal Cultural Resources
UAIC	United Auburn Indian Community

Acronym	Definition
UCMP	University of California Museum of Paleontology
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds
WDR	Waste Discharge Requirements
WEAL	Western Electro-Acoustic Laboratory, Inc.
WRCC	Western Regional Climate Center
WSA	Water Supply Assessment
$\mu g/m^3$	micrograms per cubic meter

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1.0 INTRODUCTION

This Draft Environmental Impact Report (Draft EIR or EIR) identifies and evaluates the potential environmental impacts associated with implementation of the Gill Medical Center Project (Project) proposed in San Joaquin County, north of the City of Stockton. The proposed Project entails development of a ±42.4-acre health center and hospital campus built to California Department of Health Care Access and Information (HCAI) 1 Standards (formerly the Office of Statewide Health Planning and Development), in two phases. Phase 1 includes a 36,000-square-foot single story 12-bed hospital including emergency room, labor, delivery, emergent medicine, and outpatient surgery services. Phase 2 includes an additional three-story 140,000-square-foot 100-bed full-service hospital with emergency helistop landing area, and a two-story 60,000-square-foot medical office building. The Project includes landscaping, circulation, parking and onsite water, wastewater and stormwater utility improvements commensurate with phased development. Phase 1 construction is planned for 2024 and Phase 2 for 2030.

The Project seeks the following entitlements/approvals from San Joaquin County:

- Site Approval (application number PA-1900240);
- Development Agreement (application number PA-2000019);
- Lot Line Adjustment (application to be submitted;
- Eight Mile Road Precise Road Plan Amendment to allow proposed Phase 2 driveway access to Eight-Mile Road (application to be submitted); and
- Water Supply Assessment approval pursuant to Senate Bill 610 and California Water Code Section 10910 (application to be submitted).

1.1 Purpose and Use of the EIR

This EIR was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000-21177) and the Guidelines for the Implementation of CEQA (California Code of Regulations §15000 et seq.). San Joaquin County has primary approval authority over the Project and is therefore the designated Lead Agency with responsibility for considering the Project's environmental effects in accordance with the California Environmental Quality Act (CEQA).

CEQA requires that the potential environmental impacts of a project be identified and that feasible mitigation measures be adopted to reduce significant impacts. CEQA requires the Lead Agency, in this case the County, to consider the information contained in the EIR prior to taking any discretionary action. This EIR may also be used by other public agencies that must take discretionary actions related to the Project.

This EIR is intended to provide information to the County, other public agencies, and the general public regarding the potential significant direct, indirect, and cumulative environmental impacts associated with the Project. The EIR process also requires investigation and development of feasible mitigation measures to reduce significant adverse environmental effects of the Project to levels below significance. CEQA

requires a Lead Agency neither approve nor implement a project unless significant environmental impacts have been reduced (CEQA Guidelines Section 15091), or, if a Lead Agency approves the Project even though significant impacts identified in the EIR cannot be fully mitigated, the Lead Agency must state in writing the reasons for its action by adopting Findings and a Statement of Overriding Considerations (CEQA Guidelines Section 15093).

The EIR for the Gill Medical Center Project is a Project EIR. A Project EIR examines the environmental effects of a specific development project. According to the State CEQA Guidelines, a Project 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 (CEQA Guidelines Section 15161).

This EIR may also be used by other public agencies to issue approvals and permits related to the Project. A list of the anticipated agency approvals required to implement the Project is provided in Section 3.0 Project Description (see Table 3-6). The types of actions that responsible agencies may take in connection with this EIR include, but may not be limited to:

- Approve, adopt, or amend applicable plans, policies, or programs
- Make findings of consistency
- Approve and issue permits
- Approve agreements
- Provide service

1.2 Known Responsible and Trustee Agencies

For the purposes of CEQA, the term "Responsible Agency" includes all public agencies (other than federal agencies) beyond the Lead Agency that have discretionary approval power over the project (CEQA Guidelines Section 15381). Discretionary approval power may include such actions as issuance of a permit, authorization, or easement needed to complete some aspect of the proposed project. Responsible Agencies may include, but are not limited to, the following:

- **California Department of Transportation (Caltrans):** Encroachment permits for placement of encroachments within, under, or over the state highway rights of way if improvements are required at freeway interchanges.
- **California Department of Transportation (Caltrans) – Division of Aeronautics:** Approval of helistop-related permits.

- **California Department of Health Care Access and Information (HCAI)** (formerly the Office of Statewide Health Planning and Development [OSHPD])**1:** Approval and construction inspection of proposed hospital buildings as HCAI 1 facilities.
- **California Department of Public Health, Licensing, and Certification:** Licensing and certification of healthcare facilities.
- **Central Valley Regional Water Quality Control Board (CVRWQCB):** Clean water quality certification, National Pollutant Discharge Elimination System permitting with Waste discharge Requirements (WDR).
- **State Water Resources Control Board, Division of Drinking Water**: Small Public Water System Approval/Concurrence for County EHD permitting.
- **San Joaquin County Department of Environmental Health:** Small Public Water System Permitting, Inspection and Enforcement.
- **San Joaquin Valley Air Pollution Control District (SJVAPCD):** Authority to construct and permit to operate.
- **San Joaquin Council of Governments:** Approval of participation and certificate of payment confirming participation in the San Joaquin Multi-Species and Habitat Conservation Plan.
- **Union Pacific Railroad (UPRR):** Encroachment permit for placement of encroachments within, under, or over the UPRR rights-of-way.

In addition to the above Responsible Agencies, Trustee Agencies, which do not have permit authority but may provide Draft EIR comment on resources under their jurisdiction, include but are not limited to:

- California Department of Fish and Wildlife
- State Water Resources Control Board
- California Department of Health Care Services
- State Air Resources Board
- California Highway Patrol
- Caltrans District 10
- Department of Food and Agriculture
- California State Office of Historic Preservation

1 Because HCAI changed its name following the filing of the Project application but prior to completion of this DEIR, any reference to "OSHPD" in application materials, supporting documents, or elsewhere in the record should be read to refer to HCAI.

1.3 Environmental Impact Report Organization

This EIR is organized as follows:

Chapter 1.0 provides an introduction to the Project, the purpose of the EIR, a description of the organization of the EIR, the intended uses of the EIR, and an overview of the public environmental review process.

Chapter 2.0 provides a summary of the EIR.

Chapter 3.0 provides the project description.

Chapter 4.0 provides the environmental analysis of the Project. This includes a description of the regulatory and environmental setting, the analysis of environmental impacts, and a discussion of mitigation measures to reduce or eliminate any significant environmental impacts. A cumulative analysis is also provided in this chapter.

Chapter 5.0 addresses other required CEQA analysis including growth-inducing impacts, significant environmental effects, significant unavoidable impacts, and significant irreversible environmental effects and urban decay.

Chapter 6.0 provides an analysis of Project alternatives.

Chapter 7.0 provides a list of the EIR preparers.

The Notice of Preparation (NOP) and responses received during the scoping period are presented in Appendix A. Technical reports for some resource areas are also provided in the appendices.

1.4 Environmental Review Process

1.4.1 Notice of Preparation

In accordance with the CEQA Guidelines, the County, as Lead Agency, prepared a Notice of Preparation (NOP) for an EIR addressing the Project. A copy of the NOP is provided in Appendix A. The NOP was distributed by the County to responsible agencies, trustee agencies, & interested persons for a 30-day review and comment period from January 15, 2020 to February 14, 2020. Letters/comments received from agencies and the public during the scoping period are provided in Appendix A.

During the scoping period, 2 scoping meetings were held on February 5, 2020. The first meeting was held from 3:30 to 5:00p.m. and the second from 5:30 to 7:00p.m. Both meetings were held at the San Joaquin County Public Health Auditorium. Comments received at these meetings are also provided in Appendix A.

As indicated in the NOP, this EIR analyzes in detail the environmental impacts of the Project on the following environmental resource and topic areas:

- Aesthetics
- Agriculture and Forestry 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

The following topics are also addressed in this EIR:

- Cumulative impacts
- Growth Inducement
- Significant environmental effects
- Significant and unavoidable impacts
- Significant irreversible environment effects
- Economic Impacts and Urban Decay
- Project Alternatives

1.4.2 Draft EIR

Notice of availability of this Draft EIR for review and comment is being made to the same public agencies and interested groups and individuals as the NOP, in addition to any others that have requested to be on the Project mailing list. The Draft EIR is available for review and comment electronically via the San Joaquin County web site using the following link: https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/APD%20Documents/PA-1900240/EIR%20Pt1.pdf

1.4.3 Public Notice/Public Review

This Draft EIR is available for a 45-day public review and comment period from **June 7, 2022, to July 22, 2022**. Agencies, organizations, and individuals are invited to comment on the information presented in the Draft EIR during this period. Specifically, comments are requested on the scope and adequacy of the environmental analysis presented herein. All comments on the Draft EIR should be sent to the following County contact:

Stephanie Stowers, Senior Planner
San Joaquin County, Community Development Department
1810 E. Hazelton Avenue
Stockton, CA 95205
209-468-9653Sstowers@sjgov.org

1.4.4 Response to Comments/Final EIR Certification

Following the 45-day public review period, the County will prepare responses to all comments and will compile these comments and responses into a Final EIR. The County's Planning Commission and Board of Supervisors will consider the information in the Draft and Final EIR during project review and when making any decisions or recommendations to approve or deny the Project. Because the Project involves the approval of a Development Agreement pursuant to Cal. Gov't Code § 65864, a legislative action, the Final EIR will need to be certified as adequate and complete by the Board of Supervisors prior to making a decision to approve or deny the Project.

1.4.5 Mitigation Monitoring and Reporting Program

A Mitigation Monitoring and Reporting Program that identifies required mitigation measures, implementation responsibility, and timing will be prepared and incorporated with the Final EIR.

2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

This Executive Summary has been prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123(b), which states that an Environmental Impact Report (EIR) should contain a brief summary of the proposed project and its consequences, and should identify the following:

1. Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect;

2. Areas of public controversy known to the lead agency, including issues raised by the agencies and the public; and

3. Issues to be resolved, including the choice among alternatives and how to mitigate the significant effects.

The Gill Medical Center Project (Project) proposed by Gill Women's Medical Center, LLC, (Applicant) is the proposed Project evaluated in this Draft EIR. San Joaquin County is serving as the CEQA Lead Agency. San Joaquin County determined preparation of an Environmental Impact Report (EIR) was appropriate to meet its obligation for environmental review under CEQA. A Notice of Preparation (NOP) for the Draft EIR was circulated for public review in January 2020. CEQA requires that the Lead Agency consider the information contained in the EIR prior to taking any discretionary action on the Project. This EIR may also be used by other public agencies that must make discretionary actions related to the Project.

2.2 PROJECT LOCATION AND SETTING

The Project site is located in the southwest quarter (SW ¼) of Section 35, Township 3 North, Range 6 East, Mount Diablo Base and Meridian, approximately 500 feet north of the current boundaries of the City of Stockton in unincorporated San Joaquin County, California (see *Figure 31. Regional Location Map)*. As shown in *Figure 32. Local Vicinity Map*, the proposed 42.4-acre Project site is located at 11000 North West Lane and encompasses all or portions of three existing legal parcels totaling 60.8 acres; Assessor's Parcel Numbers (APN): 059-080-07, 059-080-29, & 059-080-30. The Project site fronts portions of West Lane, Eight Mile Road, and Ham Lane.

The Project site is designated General Agricultural (A/G) by the San Joaquin County 2035 General Plan (San Joaquin County, December 2016), and A/G-40 by Title 9 of the Ordinance Code of San Joaquin County (i.e., the Development Title or zoning designation) (San Joaquin County, August 2021).

Existing Project site land use and improvements are shown in *Figure 3-3. Existing Site Conditions*. As shown, with the exception a ±10-acre rectangular-shaped field on the east side, most of the Project site is currently in agricultural production. Site improvements include vineyards, a dilapidated corral and cattle chute, and a former gas well converted to a water well. An overhead electric line extends approximately 1,430 feet along the south side of an existing farm road from North Ham Lane to the well site. A farm road also extends north from the well site to the northern property boundary, where it connects with a

perimeter farm road that runs along the northern, eastern and western site boundaries. The Woodbridge Irrigation District canal is located onsite along the northwestern site boundary.

Surrounding land uses are shown in Figure 3-2 and include a mixture of agriculture, light industrial, and residential. The western half of the site's northern boundary is defined by the centerline of the existing Woodbridge Irrigation District (WID) agricultural canal. Active agriculture and scattered residences exist north of the site. East of the site is active agriculture, Ham Lane and scattered residences. The Union Pacific Railroad is located approximately 0.5 mile east followed by State Route (SR) 99 located approximately 1.5 miles east of the site. The southern site boundary abuts the rear of existing non-conforming industrial and residential uses that front Eight Mile Road between West Lane and Ham Lane within the A/G zone. Eight Mile Road is located approximately 500 feet south of the southern site boundary and provides driveway access to these existing non-conforming uses. Lands south of Eight Mile Road are within the City of Stockton, are currently in active agriculture, and include the recently approved but undeveloped 341-acre Tra Vigne development project. West Lane defines the site's western boundary. The WID agricultural canal lies immediately west of West Lane, followed by active agriculture. The City of Stockton lies approximately 0.75 miles west, followed by the Union Pacific Railroad (Sacramento) at approximately 1.5 miles, and Interstate 5 at approximately 4 miles west.

2.3 PROJECT SUMMARY

The Gill Medical Center Project (Project) is a proposal by Gill Women's Medical Center, LLC for development of a ±42.4-acre health center and hospital campus in San Joaquin County, just north of the City of Stockton. The Project is proposed consistent with California Department of Health Care Access and Information (HCAI) 1 Standards and would be constructed in two phases. Phase 1 includes a 36,000-square-foot single story 12-bed hospital (Phase 1 Hospital) including emergency room, labor, delivery, emergent medicine, and outpatient surgery services. Phase 2 includes an additional three-story 140,000-square-foot 100-bed full-service hospital (Phase 2 Main Hospital) with emergency helistop landing area, and a related two-story 60,000-square-foot medical office building. The Project includes landscaping, circulation, parking and onsite water, wastewater and stormwater utility improvements consistent with phased development. Phase 1 construction is planned for 2024 and Phase 2 for 2030.

2.3.1 Requested Entitlements

The Project seeks the following entitlements/approvals from San Joaquin County:

- Site Approval (application number PA-1900240);
- Development Agreement (application number PA-2000019);
- Lot Line Adjustment (application to be submitted);
- Eight Mile Road Precise Road Plan Amendment to allow proposed Phase 2 driveway access to Eight-Mile Road (application to be submitted).
- Water Supply Assessment approval pursuant to Senate Bill 610 and California Water Code Section 10910 (application to be submitted)

Following review of the Site Approval Application, County staff determined the principal proposed Project use is for a hospital and medical center campus and is properly classified under the Use Type Public Services-Essential, which includes hospitals (see San Joaquin County Development Title section 9-115.525 (b). Because the Project is consistent with the Public Services-Essential use type it is a conditionally permitted use within the General Agricultural A/G-40 zone and a Site Approval application is the appropriate requested entitlement for the Project (see San Joaquin County Development Title TABLE 9-605.2 - USES IN AGRICULTURAL ZONES). This means no Development Title Zone Reclassification or General Plan Map Amendment is required.

2.3.2 Project Components

Figure 3-5. *Site Plan* identifies the major Project components and phasing areas and Table 2-1 below lists the proposed buildings, structures and parking. As shown in Figure 3-5, consistent with County policy and applicable development standards, the Project includes access, circulation, parking, landscaping, perimeter walls, signage and a buffer along the existing Woodbridge Irrigation District Canal. Reflecting ponds are also proposed adjacent the Phase 1 Hospital. Finally, a helistop is proposed as part of Phase 2 improvements should the Phase 2 Main Hospital pursue and obtain a trauma designation in the future. Refer to Draft EIR Chapter 3.0 Project Description for additional details concerning proposed site improvements.

Table 2-1. Proposed Buildings, Structures and Parking

Site Plan Keynote	Use	Proposed Parking (spaces)	Square Feet/Beds	Phase	Height/Story
A	Phase 1 Hospital Building	282	36,000/12	PHASE 1	25FT/1 Story
B	Water Treatment Facility		2,000	PHASE 2	25 FT/1 Story
C	Wastewater Treatment Facility		6,000	PHASE 2	25 FT/1 Story
D	Medical Office Building		60,000	PHASE 2	45 FT/2 Story
E	Phase 2 Hospital Building	1,035	140,000/100	PHASE 2	55 FT/3 Story
F	Helistop Pad		20,000	PHASE 2	N/A
G	Physical Plant		4,000	PHASE 2	35 FT/1 Story
Totals	N/A	1,317	268,000/112	N/A	N/A

2.3.3 Onsite Utilities

The Project site is not currently served by public water, sewer, or storm drain utilities (collectively referred to as "Utilities" in this Draft EIR). The Project requested public Utility services from the City of Stockton, however the request was denied based on a purported inconsistency with City of Stockton policy (See Appendix K for service request and response letters). Therefore, the Project proposes construction and phased expansion of onsite Utilities.[1] For potable water, this includes an onsite Small Public Water System (SPWS) with groundwater serving as the source supply. For wastewater, an onsite advanced "package plant" treatment system would be utilized. The package plant would be specially designed to treat/remove hospital generated liquid medical waste. The system would be capable of treating wastewater to a level suitable for National Pollutant Discharge Elimination System (NPDES) permitting by the Regional Water Quality Control Board with Waste Discharge Requirements (WDR). Treatment to this level would produce "recycled water" suitable for use in proposed onsite outdoor reflecting ponds, as landscape irrigation, or for agricultural production. Storm water runoff would be collected via drop inlets and underground piping and conveyed to onsite retention basins where it would undergo pre-treatment and be allowed to infiltrate and evaporate.

2.3.4 Project Schedule

Phase 1 construction is anticipated to begin in 2024 and take approximately 12 months to complete. The Phase 1 Hospital is expected to begin operations in 2025. Phase 2 construction is scheduled to begin in 2030 and take approximately 20 months to complete. The Phase 2 Main Hospital and other support uses are expected to begin operation in 2032.

2.4 PROJECT OBJECTIVES

CEQA Guidelines Section 15124(b) requires that an EIR provide a description of the basic objectives of the proposed project and includes the following reasoning:

> (b) A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project and may discuss the project benefits.

The Project seeks to develop a medical center consistent with the following stated objectives:

1. Develop a health center and hospital campus built to HCAI 1 standards, in two phases including a Phase 1, 36,000± square-foot (SF) 12-bed single story full-service hospital with emergency room and alternative birthing services, and a

[1]Because the Applicant engaged in substantial preliminary investigation of the alternative of connecting to City of Stockton public Utilities, impacts resulting from such connection are addressed in the Alternatives Section (Chapter _) of this EIR.

Phase 2, 140,000± SF 100-bed hospital with emergency room, helistop and an associated 60,000± SF medical office building.

2. Utilize land currently owned by the Applicant/related entities as the development site for the Project.
3. Provide emergent care and hospital services readily accessible from the eastern region of San Joaquin County including, Linden, Lockeford, Acampo, Woodbridge and Clements, while also providing increased hospital services to the existing and urbanizing areas of Stockton and Lodi.
4. Provide improved local access to hospital emergency room services.
5. Develop a facility that will provide state-of-the-art health care, labor, delivery, and obstetrics care on par with that found in larger metropolitan areas to such as Sacramento and the Bay Area
6. Provide an attractive and cohesive hospital campus setting through development of a phased plan and cohesive architectural theme.
7. Retain the Eight Mile Road/Ham Lane intersection future traffic signal as identified in the Eight Mile Road Precise Road Plan to ensure adequate site access at full build out.
8. Provide an onsite buffer along the northern project boundary to protect existing adjacent agricultural operations and opportunities for habitat enhancement.
9. Retain a portion of the Project site for continued agricultural (vineyard) operations.
10. Have the Phase 1 Hospital operating within five years of approval and Phase 2 Hospital and Medical Office Building fully operating within ten years of Project approval.

2.5 PROJECT ALTERNATIVES

CEQA requires an evaluation of the comparative effects of a reasonable range of alternatives to the Project that would feasibly attain most of the project's basic objectives and that would avoid or substantially lessen any of the significant impacts of the Project. For purposes of this Draft EIR, four alternatives to the Project were selected for further analysis, including the No Project Alternative.

The alternatives selected for further analysis include the following:

- Alternative 1: No Project Alternative
- Alternative 2: Reduced Project - Phase 1 Hospital Only
- Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water
- Alternative 4: Alternative Location - Stockton Economic and Education Enterprise Zone at I-5 and Eight Mile Road

Table 2-2 provides a comparison of anticipated impacts of the alternatives with the proposed Project. For reasons outlined in Draft EIR Chapter 6.0 Alternatives and summarized in Table 2-2 below, the No Project Alternative is considered the environmentally superior alternative. CEQA Guidelines Section 15126.6(e)(2)

states in relevant part that, "If the environmentally superior alternative is identified as the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Among the remaining alternatives, Alternative 2: Reduced Project is considered the environmentally superior alternative. Compared to the proposed Project, the Reduced Project Alternative eliminates the significant and unavoidable noise impact associated with Phase 2 helistop operations (should the Phase 2 Project receive a Trauma designation) and results in 7,306 tons per year less CO_2e, a 76 percent reduction in VMT and related GHG emissions compared to the proposed Project. Thus, Alternative 2 reduces VMT and GHG significant unavoidable impacts of the proposed Project (although not to a less than significant level). The Reduced Project Alternative also has the effect of eliminating the Project's potentially significant and unavoidable Phase 2 Helistop operational noise impact should the Project propose and receive approval of a Phase 2 Trauma designation.

As shown in Table 2-2, due to its reduced development footprint, Alternative 2 also further reduces all significant but mitigable impacts of the proposed Project and is either similar to or further reduces draft EIR identified less than significant impacts.

The primary drawback to Alternative 2 is that as a reduced project it doesn't address the long term need for medical services in the north Stockton Area. Without development of additional new strategically located medical facilities in the medically underserved north Stockton area, in the long term patients and medical workers would continue to travel to other existing hospitals in the greater Sacramento and Bay Areas. Compared to the proposed Project, this would contribute to greater medical service sector area wide VMT, and transportation related air and GHG emission impacts over the long term.

Alternative 2 is considered superior to Alternative 3 because connection to City of Stockton utilities would result in greater construction related VMT and GHG impacts than that of the proposed Project. This is primarily due to the length of pipeline construction (approximately 4 miles total) required to connect the project site with the nearest existing utilities. Furthermore, in August 2020 the Project applicant formerly requested water, wastewater and storm water service from the City of Stockton but was denied service based on inconsistency with Stockton Council Policy No. 900-1 and because the City of Stockton Community Development Department determined the proposed use does not conform to the City of Stockton's General Plan (See Appendix K for the City's response letter).

Alternative 2 is considered superior to Alternative 4 because Alternative 4 still requires a substantial comprehensive planning and annexation process to ready the site for development and thus it's not expected to be available within a time frame consistent with the Project schedule. Finally, Alternative 4 is inconsistent with the stated Project objective to utilize land owned by the applicant to ensure project feasibility.

Table 2-2. Comparison of Impacts for Alternatives with Proposed Project Category

Category	Alt 1: No Project	Alt 2: Reduced Project	Alt 3: Connect to Public Utilities	Alt 4: Alternative Location
Comparison to Proposed Project Significant Unavoidable Impacts				
Transportation/VMT	–	–	■	■
Greenhouse Gas	–	–	✚	■
Noise	–/□	–	■	■
Comparison to Proposed Project Significant but Mitigable Impacts				
Agriculture and Forestry	–	–	–	–
Air Quality	–	–	✚	■
Biological Resources	–	–	–	–
Cultural Resources	–	–	✚	–
Geology and Soils	–	–	✚	–
Hazards and Hazardous Materials	–	–	✚	–
Hydrology and Water Quality	–	–	✚	✚
Tribal Cultural Resources	–	–	✚	–
Comparison to Proposed Project Less Than Significant Impacts				
Aesthetics	■	■	■	■
Energy	–	–	✚	■
Land Use and Planning	■	■	✚	✚
Mineral Resources	■	■	■	■

Table 2-2. Comparison of Impacts for Alternatives with Proposed Project Category

Category	Alt 1: No Project	Alt 2: Reduced Project	Alt 3: Connect to Public Utilities	Alt 4: Alternative Location
Population and Housing	–	–	■	■
Public Services	–	–	■	■
Recreation	■	–	■	■
Utilities and Service Systems	–	–	■	■
Wildfire	–	–	■	■

Notes:
✚ = Impacts would be greater than the Proposed Project
■ = Impacts would be similar to the Proposed Project
– = Impacts would be less than the Proposed Project

2.6 PROJECT SCOPING AND NOTICE OF PREPARATION

2.6.1 Notice of Preparation

In accordance with the CEQA Guidelines, the County, as Lead Agency, prepared a Notice of Preparation (NOP) for an EIR addressing the Project. A copy of the NOP is provided in Appendix A. The NOP was distributed by the County to responsible agencies, trustee agencies, and interested persons for a 30-day review and comment period from January 15, 2020 to February 14, 2020. Letters/comments received from agencies and the public during the scoping period are provided in Appendix A.

2.6.2 Scoping Meeting

During the scoping period, two scoping meetings were held on February 5, 2020 to allow early public/agency input and comments about the Project. The meeting included a description of the Project and an overview of the upcoming environmental review process. The first meeting was held from 3:30 to 5:00p.m. and the second from 5:30 to 7:00p.m. Both meetings were held at the San Joaquin County Public Health Auditorium. Comments received at these meetings are also provided in Appendix A.

2.7 AREAS OF CONTROVERSY

CEQA requires a Draft EIR to identify areas of controversy or public interest. As noted, an NOP for this Draft EIR was circulated for review in January 2020 to all potential Responsible and Trustee Agencies under CEQA, the State Clearinghouse, and other interested parties for a 30-day scoping period. In summary, concerns or controversy expressed in NOP comment letters include the following:

- The Project proposes development north of the City of Stockton urban services boundary.
- Although it is a permitted use as a Public Services-Essential use type, the Project is proposed within the General Agricultural zone and may be incompatible with surrounding agricultural practices.
- Potential hazards associated with an abandoned former onsite gas well.
- Significant and unavoidable noise impacts associated with helistop helicopter operations should a Phase 2 Trauma designation be pursued and approved as part of future actions.

2.8 ISSUES TO BE RESOLVED BY THE LEAD AGENCY

The major issues to be resolved by San Joaquin County as Lead Agency include the following:

- Whether the Draft EIR adequately describes the environmental impacts of the Proposed Project.
- Whether the recommended mitigation measures are feasible and/or should be modified/adopted.
- If the Project as proposed should be recommended for approval.
- Participation in the San Joaquin County Multi-Species Conservation Plan.
- Details related to proposed agricultural land mitigation.
- Provision of public transit to the Project site.

2.9 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 2-3 presents a summary of environmental impacts analyzed in this Draft EIR, the mitigation measures proposed for those impacts (if required), and the level of significance after mitigation.

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Aesthetics			
Impact 4.3-1: Implementation of the proposed project would have a substantial adverse effect on scenic vista.	NI	None required	NI
Impact 4.3-2: Project implementation would substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.	NI	None required	NI
Impact 4.3-3: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point.). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.	LTS	None required	LTS
Impact 4.3-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area.	LTS	None required	LTS

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Agricultural Resources			
Impact 4.4-1: The proposed project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use and preserve an equal amount of Farmland by Conservation Easement.	LTS	None required	LTS
Impact 4.4-2: The proposed project would conflict with current zoning for agricultural use or a Williamson Act contract.	LTS	None required	LTS
Impact 4.4-3: The proposed project would conflict with current zoning for forest use.	NI	None required	NI
Impact 4.4-4: The proposed project would not convert land designated as forest to non-forest use.	NI	None required	NI
Impact 4.4-5: The proposed project would directly or indirectly convert any other farmland to non-agricultural use or forestland to non-forest-use.	NI	None required	NI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Air Quality			
Impact 4.5-1: Air pollutant emissions associated with the proposed project could conflict with applicable air quality plans.	LTS	None required	LTS
Impact 4.5-2: Construction and operation of the proposed project would result in the emission of criteria pollutants.	PS	**4.5-2a: Prepare Air Impact Assessment to Reduce Construction NO_x Emissions** In accordance with SJVAPCD Rule 9510, a detailed air impact assessment (AIA) shall be prepared detailing the specific construction requirement (i.e., equipment required, hours of use). In accordance with this rule, emissions of NO_x from construction equipment greater than 50 horsepower used or associated with the development Project shall be reduced by 20 percent from baseline (unmitigated) emissions and PM10 shall be reduced by 45 percent. The Project shall demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit. While the specific emission reduction measures will be developed to the satisfaction of the SJVAPCD, the following measures would reduce short-term air quality impacts attributable to the Proposed Project consistent with Rule 9510: • During all construction activities, all diesel-fueled construction equipment including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors shall be California Air Resources Board (CARB) Tier 4 Certified as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations. • All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. Equipment	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		maintenance records shall be kept on-site and made available upon request by the SJVAPCD or the County. • The Project applicant shall comply with all applicable SJVAPCD rules and regulations. Copies of any applicable air quality permits and/or monitoring plans shall be provided to the County. *Timing/Implementation: Prior to the issuance of grading permits* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.5-2b: Prepare Air Impact Assessment to Reduce Operational NOx Emissions** In accordance with SJVAPCD Rule 9510, a detailed air impact assessment shall be prepared detailing the operational characteristics associated with the Proposed Project. In accordance with this rule, operational emissions of NO_x shall be reduced by a minimum of 33.3 percent and operational emissions of PM_{10} must be reduced by a minimum of 50 percent over a period of ten years. (Emissions reductions are in comparison to the Project's operational baseline emissions presented in Table 4.5-6.) The Project would demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit. Based on the findings of the air impact assessment, the applicant shall pay the SJVAPCD a monetary sum necessary to offset the required operational emissions that are not reduced by the emission reduction measures contained in the air impact assessment. The quantity of operational emissions that need to be offset will be calculated in accordance with the methodologies identified in Rule 9510, Indirect Source Review, and approved by the SJVAPCD. Operational emissions reduction methods will be selected under the direction of the	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		SJVAPCD according to the air impact assessment process detailed in, and required by Rule 9510, Indirect Source Review (see Rule 9510, subsection 5). *Timing/Implementation: Prior to the issuance of building permits* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
Impact 4.5-3: Construction and operation of the proposed project could result in exposure of sensitive receptors to project emissions.	LTS	None required	LTS
Impact 4.5-4: The proposed project could create odor emissions affecting a substantial number of people.	LTS	None required	LTS
Biological Resources			
Impact 4.6-1: The proposed project could directly or indirectly affect special-status plant and wildlife species and/or their habitats.	PS	**4.6-1a: Conduct Environmental Awareness Training for Construction Personnel.** Before any construction work occurs on the Project site, including grading, tree and/or vegetation removal (clear and grub), the County shall retain a qualified biologist (familiar with the resources in the area) to conduct a mandatory contractor/worker environmental awareness training for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) prior to beginning construction to brief them on the need to avoid effects on sensitive biological resources adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The biologist will inform all construction personnel about the life	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		history and habitat requirements of special-status species with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of required permit conditions. The environmental training will also cover general restrictions and guidelines that must be followed by all construction personnel to reduce or avoid effects on sensitive biological resources during project construction. *Timing/Implementation: Prior to construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.6-1b: Install Fencing and/or Flagging to Protect Sensitive Biological Resources.** Prior to construction, the construction contractor shall install high-visibility orange construction fencing and/or flagging, as appropriate, along the perimeter of the work area when adjacent to Environmentally Sensitive Areas (ESAs) (e.g., special-status species habitat, and active bird nests, native oaks, and surface water features). The County will ensure that the final construction plans show known locations where fencing will be installed (such as along the Woodbridge Irrigation Canal southern bank). The plans shall also define how to locate appropriate ESA fencing which shall include all locations identified on the plans and additional locations identified by a qualified biologist as part of an initial field walk with the lead contractor. This may result in identification of ESAs within the northern buffer that require protection (based on final planting and drainage plans). The contractor shall ensure ESA fencing is maintained throughout the duration of the construction period. If the fencing is removed, damaged, or otherwise compromised during the construction period, construction activities shall cease until the fencing is repaired or replaced. The project's special provisions package shall provide clear language regarding acceptable fencing material and prohibited construction-related activities, vehicle operation, material	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		and equipment storage, and other surface-disturbing activities within ESAs. All temporary fencing shall be removed upon completion of construction. *Timing/Implementation: Prior to construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.6-1c: Sanford's Arrowhead.** Prior to ground disturbance within the northern boundary proposed 100-foot buffer, the following actions shall be implemented to avoid potential impacts to Sanford's arrowhead. If no ground disturbance occurs within the buffer area, no mitigation is required. • Perform focused plant surveys according to USFWS, CDFW, and CNPS protocols. Surveys should be timed according to the blooming period for target species (May through October) and known reference populations, if available. • The USFWS generally considers plant survey results valid for approximately three years. Therefore, follow-up surveys may be necessary if Project implementation occurs after this three-year window. • If Sanford's arrowhead are found, Environmentally Sensitive Areas (ESAs) shall be established around the plants as necessary to clearly demarcate areas for avoidance consistent with Mitigation Measure **4.6-1b**. Avoidance measures and the specific avoidance zone distance would be determined in coordination with appropriate resource agencies (CDFW and/or USFWS). • If Sanford's arrowhead are found and avoidance of the species is not possible, additional measures such as seed collection and/or translocation may be developed in consultation with the appropriate	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		agencies. • If no Sanford's arrowhead are found, no further measures pertaining to special-status plants are necessary. *Timing/Implementation: Prior to ground disturbance within the norther buffer area* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.6-1d: Western Pond Turtle.** The following actions shall be implemented to avoid impacts to western pond turtle. • A western pond turtle preconstruction survey shall be conducted by a qualified biologist within 14 days prior to the initiation of ground disturbance (e.g., tree/vegetation removal, mass grading). The survey shall consist of the entire Project site, including accessible areas within 100 feet (where feasible). • If individual western pond turtles are found during the preconstruction survey, a qualified biologist with a CDFW Scientific Collecting Permit shall relocate the individuals, with the concurrence of CDFW, to a site with suitable habitat. Relocation methods shall be approved by CDFW. *Timing/Implementation: Prior to construction ground disturbance* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		4.6-1e: Protect Water Quality and Minimize Sedimentation Runoff to Non-Wetland Waters (Woodbridge Irrigation Canal). Project construction shall comply with all construction site BMPs specified in the Storm Water Pollution Prevention Plan, and any other permit conditions to minimize the introduction of construction-related contaminants and mobilization of sediment to non- wetland waters in and adjacent to the project area. These BMPs will address soil stabilization, sediment control, wind erosion control, vehicle tracking control, non-stormwater management, and waste management practices. The BMPs will be based on the best conventional and best available technology. *Timing/Implementation: Prior to and during construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.6-1f: Giant Garter Snake.** Prior to ground disturbance within 200 feet of the Woodbridge Irrigation District canal, consistent with the SJMSCP, the following actions shall be implemented to avoid potential impacts to giant garter snake: • Construction shall occur during the active period for the snake, between May 1 and October 1. SJCOG, with concurrence of the permitting Agencies, shall determine if additional measures are necessary to minimize and avoid take for construction between October 2 and April 30. • Limit vegetation clearing within 200 feet of the banks of the Woodbridge Irrigation District canal to the minimum necessary. • Where feasible, confine movement of heavy equipment within 200 feet of the banks of the Woodbridge Irrigation District canal to	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		existing farm roads to minimize habitat disturbance. • Prior to ground disturbance, all onsite construction personnel shall be given instruction regarding the presence of SJMSCP Covered Species and the importance of avoiding impacts to these species and their habitats (Per Mitigation Measure **4.6-1a**). • Install temporary fencing at the edge of the construction area and the adjacent Woodbridge Irrigation District canal southern bank (Per Mitigation Measure **4.6-1b)**. • Restrict working areas, spoils and equipment storage and other project activities to areas outside of the proposed northern buffer area. • Maintain water quality and limit construction runoff into the irrigation ditch through best-management-practices (Per Mitigation Measure **4.6-1e**). • A preconstruction survey for giant garter snake shall occur prior to construction activities and within 24 hours of ground disturbance. *Timing/Implementation: Prior to ground disturbance within 200 feet of the Woodbridge Irrigation District canal,* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.6-1g: Conduct Preconstruction Surveys for Nesting Migratory Birds and Raptors.** The Project Area supports suitable nesting habitat for a variety of special-status birds and birds protected under the MBTA. To minimize impacts to protected bird and active nests during construction, the following measures are required: • Conduct a pre-construction nesting raptor and bird survey of all suitable habitat on the Project site within 14 days of the	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		commencement ground disturbance (e.g., tree/vegetation removal, mass grading) during the nesting season (February 1 – August 31). Where accessible, surveys shall also be conducted within 100 feet of the Project site. • If active nests are found, a no-disturbance buffer around the nest shall be established. Per the SJMSCP, a 100-foot buffer shall be established and maintained during the nesting season for white-tailed kite, Cooper's hawk, loggerhead shrike, yellow-billed magpie, and other birds protected under the MBTA. • The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. In addition to the above, the following SJMSCP Incidental Take Minimization Measure shall be implemented should a known Swainson's hawk nest tree (i.e., trees that hawks are known to have nested in within the past three years or trees, such as large oaks, which the hawks prefer for nesting) become occupied by a Swainson's hawk during construction activities: • If a nest tree becomes occupied during construction activities, then all construction activities shall remain a distance of two times the dripline of the tree, as measured from the nest. • If the Applicant elects to remove a nest tree, the nest trees may be removed between September 1 and February 15, when the nests are unoccupied. *Timing/Implementation: Prior to construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		4.6-1h: Burrowing Owl. Prior to site grading/ground disturbance, the project site shall be surveyed for burrowing owl. Should it be determined that burrowing owl are present, the following shall be implemented: • During the non-breeding season (September 1 through January 31) burrowing owls occupying the Project site should be evicted from the Project site by passive relocation as described in the CDFW's Staff Report on Burrowing Owls (CDFG 2012). Passive relocation is a technique of installing one-way doors in burrow openings to temporarily or permanently evict burrowing owls and prevent burrow re-occupation (CDFG 2012). • During the breeding season (February 1 through August 31) occupied burrows shall not be disturbed and shall be provided with a 75-meter protective buffer until and unless SJCOG, with concurrence of the permitting Agencies, or unless a qualified biologist approved by the permitting Agencies, verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed. *Timing/Implementation: Prior to site grading/ground disturbance* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Impact 4.6-2: The proposed project could affect riparian habitat or sensitive natural communities	NI	No mitigation is required.	NI
Impact 4.6-3: The proposed project would not require construction or fill within waters of the U.S. and waters of the state.	NI	No mitigation is required.	NI
Impact 4.6-4: The proposed project could affect wildlife and/or fish movement and/or migration.	LTS	No mitigation is required.	LTS
Impact 4.6-5: The proposed project is consistent with local policies and ordinances associated with protection of biological resources.	LTS	No mitigation is required.	LTS
Impact 4.6-6: The proposed project is consistent with HCPs, NCCPs, or other conservation plans.	LTS	No mitigation is required.	LTS
Cultural Resources			
Impact 4.7-1: Potential for Impacts to Historical Resources.	PS	**4.7-1a: Unanticipated Discovery** If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find: • If the professional archaeologist determines that the find does not represent a cultural resource, then work may resume immediately and no agency notifications are required. • If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, then he or she shall immediately notify the County and lead federal agency. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be eligible for inclusion in the NRHP or CRHR. Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to their satisfaction. *Timing/Implementation: During the construction period* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
Impact 4.7-2: Potential for Impacts to Archaeological Resources.	PS	Implement **Mitigation Measure 4.7-1a**	LTSMI
Impact 4.7-3: Potential for Impacts to Human Remains.	PS	**4.7-3a: Human Remains Discovery** If human remains, or remains that are potentially human, are discovered, the Applicant shall ensure reasonable protection measures are taken to protect the discovery from disturbance (Assembly Bill [AB] 2641). The archaeologist shall	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		notify the San Joaquin County Coroner (as per § 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction. *Timing/Implementation: During the construction period* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
ENERGY			
Impact 4.8-1: Wasteful or Inefficient Energy Use.	LTS	No mitigation is required.	LTS
Impact 4.8-2: Potential Conflicts with Energy Use Plans.	LTS	No mitigation is required.	LTS

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Geology, Soils, and Paleontological Resources			
Impact 4.9-1: The proposed project could expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including landslides	LTS	No mitigation is required.	LTS
Impact 4.9-2: The proposed project could result in soil erosion or the loss of topsoil.	LTS	No mitigation is required.	LTS
Impact 4.9-3: The project could be located on a geologic unit, expansive soils, or soil that is unstable or would become unstable.	LTS	No mitigation is required.	LTS
Impact 4.9-4: The project could be located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. Impact Determination: *No Impact*	NI	No mitigation is required.	NI
Impact 4.9-5: The project could be located in an area that contains subsurface unique paleontological resources or geologic features.	PS	**4.9-5a: Worker Awareness Training** A professional paleontologist shall provide the construction crew with a pre-construction orientation and training on the significant paleontological resources that may be encountered and the appropriate procedures to follow should any be unearthed.	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		Timing/Implementation: Prior to construction *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.9-5b: Unanticipated Discovery of Paleontological Resources.** If subsurface deposits believed to be paleontological in origin are discovered during construction, all work shall halt within a 50-foot radius of the find until a professional paleontologist has assessed it and, if deemed significant, salvaged the fossil(s) in a timely manner. A plan for monitoring and fossil recovery must be completed and implemented before ground-disturbing activities can recommence in the area of the fossil find to allow for the recovery of the find. Salvaged fossils shall be deposited in an appropriate repository, such as the UCMP, where they will be properly curated and made available for future research. *Timing/Implementation: During construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
Greenhouse Gas Emissions			
Impact 4.10-1: Proposed project GHG emissions and compliance with GHG plan, policy, or regulation.	PS	**4.10-1a: Provide Onsite Renewable Energy Production** The Project shall provide onsite renewable energy production generation comprising at least 20 percent of the Project energy demand. The County shall verify compliance with this measure within the Project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of this measure prior to the issuance of Certificate(s) of Occupancy.	SU

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		Timing/Implementation: During the construction period *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.10-1b: Provide Electric Vehicle Charging Stations** The Project shall meet the charging installation/charging ready requirements of the CALGreen Code. The Project Proponent shall include EV charging accommodations as specified in the CALGreen Code in building plans for review and approval by the County, prior to commencement of Project construction. *Timing/Implementation: Prior to and during construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
Hazards and Hazardous Materials			
Impact 4.11-1: The project would require the transport, storage, use and disposal of hazardous materials which could result in a significant hazard to the public or the environment.	PS	**4.11-1a: Hazardous Substance Management, Handling, Storage, Disposal, and Emergency Response Plan.** In order to reduce the risk of accidental release of hazardous materials during construction activities at the site, which release is not foreseeable or anticipated, the applicant shall prepare and implement during all construction activities a hazardous substance management, handling, storage, disposal, and emergency response plan. A hazardous materials spill kit shall be maintained on site for small spills. Additionally, the applicant shall monitor all contractors for compliance with applicable regulations, including regulations regarding hazardous materials and hazardous wastes, including disposal. Hazardous materials shall not be disposed of or released on the ground, in the underlying groundwater, or any	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		surface water. Totally enclosed containment shall be provided for all trash. All construction waste, including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials, will be removed to a waste facility permitted to treat, store, or dispose of such materials. *Timing/Implementation: Prior to Construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
Impact 4.11-2: The Project could 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 due to the presence of a former onsite gas well.	PS	**4.11-2a. Maintain Appropriate Setbacks from the "North Stockton Unit A" 1 Well, Confirm the Integrity of Existing Abandonment, and Monitor the Well in Perpetuity.** Prior to issuance of building permits, the following actions shall be taken to mitigate potential impacts related to the former onsite gas well: The final site plan shall ensure proposed onsite buildings and associated infrastructure are appropriately set back from, and access from the nearest public street is provided to, the existing onsite "North Stockton Unit A" 1 well (API: 0407700519). Setbacks shall be sufficient to allow "rig access" to the well site for any future well abandonment, re-abandonment and/or mitigation of hazards as identified by CalGEM as authorized by Public Resources Code Sections 3208 and 3255(a) (3). A "clear area" of approximately 50' x 20' immediately adjacent the well shall be available for this purpose. Using appropriate specialized equipment as approved by CalGEM, the former gas well shall be surveyed for leaks to confirm the integrity of existing gas well abandonment. Should this work confirm the well is not leaking, and rig access can be maintained to the well site, the project can proceed. If it is determined that	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		the well is leaking, the well shall be re-abandoned to current standards as approved by CalGEM prior to issuance of building permits. The existing "North Stockton Unit A" 1 well (API: 0407700519) shall be monitored for leaks once per year in perpetuity. Should a leak be detected, CalGEM shall be contacted to determine and implement appropriate corrective actions under permits authorized by CalGEM. If, during Project development, any unknown well(s) is/are discovered, CalGEM should be notified immediately so that the newly-discovered well(s) can be incorporated into the records and investigated. CalGEM recommends that any well(s) found in the course of this project, and any pertinent information obtained during the course of the Project, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property. This is to ensure that present and future property owners are aware of (1) the well(s) located on the property, and (2) potentially significant issues associated with any improvements near oil or gas wells. *Timing/Implementation: Prior to Construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
Impact 4.11-3: The Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	NI	No mitigation required	NI
Impact 4.11-4: The Project could be located on a site which is included on a list of hazardous materials sites.	NI	No mitigation required	NI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Impact 4.11-5: The Project could be 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 resulting in a safety hazard for people residing or working in the project area.	LTS	No mitigation required	LTS
Impact 4.11-6: The Project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	NI	No mitigation required	NI
Impact 4.11-7: The Project could expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	LTS	No mitigation required	LTS
Hydrology and Water Quality			
Impact 4.12-1: Construction of the Project could result in runoff that contains pollutants that would degrade water quality.	LTS	No mitigation is required.	LTS
Impact 4.12-2: Discharge of wastewater from the medical facilities could degrade surface water and/or groundwater quality and violate the Basin Plan.	PS	**4.12-1a: Obtain NPDES and WDR permits from the RWQCB** Prior to issuing building permits for Phase I of the Project, including for the wastewater treatment system, the Applicant shall complete the design of the treatment system and obtain the necessary NPDES and WDR permits from RWQCB. The Applicant shall provide copies of the NPDES and WDR permits to the County as part of its building permit application submittals. In addition, the Applicant shall provide copies of all monitoring reports required under the NPDES	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		and WDR permits to the County on the same schedule due to the RWQCB, verifying compliance with the permit standards or identifying corrective actions if any exceedances are identified.	
Impact 4.12-3: The proposed project would modify drainage patterns on the project site and add impervious surfaces that would increase the amount of stormwater runoff, which could increase erosion, siltation, or flooding that may exceed existing stormwater capacity.	LTS	No mitigation is required.	LTS
Impact 4.12-4: The proposed project would use groundwater for its water supply, which could decrease groundwater supplies, impeded sustainable management of the groundwater basin, and conflict with the local groundwater sustainability plan.	NI	No mitigation is required.	NI
Land Use and Planning			
Impact 4.13-1: The proposed project could physically divide an established community.	NI	No mitigation is required.	NI
Impact 4.13-2: The proposed project could conflict with applicable land use plans, policies or regulations adopted to avoid or mitigate an environmental effect.	LTS	No mitigation is required.	LTS

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Mineral Resources			
Impact 4.14-1: Contribution to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	NI	No mitigation is required.	NI
Impact 4.12-2: Contribution to 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.	NI	No mitigation is required.	NI
Noise			
Impact 4.15-1: The proposed project could generate a substantial increase in ambient noise levels in excess of applicable standards identified by the Lead Agency.	PS	No feasible mitigation is available.	SU
Impact 4.15-2: The proposed project would generate groundborne vibrations and groundborne noise during construction.	LTS	No mitigation is required.	LTS
Impact 4.15-3: The proposed project would expose people to excessive airport noise.	LTS	No mitigation is required.	LTS

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Population and Housing			
Impact 4.16-1: The project would induce substantial unplanned population growth in an area	LTS	No mitigation is required.	LTS
Impact 4.16-2: The project would displace substantial numbers of people or existing housing.	NI	No mitigation is required.	NI
Public Services			
Impact 4.17-1: The proposed project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities.	LTS	No mitigation is required.	LTS
Recreation			
Impact 4.18-1: Increased use of existing recreational facilities, resulting in substantial or accelerated physical deterioration	LTS	No mitigation is required.	LTS
Impact 4.18-2: Construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	NI	No mitigation is required.	NI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Transportation			
Impact 4.19-1: Conflict with a program plan, ordinance or policy addressing the circulation system	PS	**4.19-1a: Provide Curb, Gutter and Sidewalk Between the Project Site and Eight Mile Road** The applicant shall construct curb, gutter and sidewalk along the east side of West Lane between the southern edge of the project site and Eight Mile Road. County of San Joaquin staff has determined that County-owned right-of-way is approximately 110 feet wide along this portion of West Lane. A preliminary assessment indicates this right-of-way width is adequate to construct curb, gutter and sidewalk. *Timing/Implementation: During the construction period* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.19-1b: Provide On- and Offsite Bicycle Facilities** The applicant shall implement the following to ensure adequate provision of bicycle facilities. *On-Site Bicycle Facilities.* The applicant shall provide on-site facilities supporting the use of bicycles. These facilities shall include secure bicycle parking in close proximity to proposed structures, and onsite bicycle paths or bicycle lanes connecting to the proposed bicycle facilities on West Lane. *West Lane Driveway Connection.* The connection of the Project site driveway to West Lane shall be designed to facilitate and protect bicycle travel. Design features should include striping to guide bicycles across the driveway and signage to advise motorists of the bicycle crossing (similar to a typical Class II	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		bicycle lane crossing a right turn lane at an intersection). The Project site driveway shall be constructed to provide for future installation of planned bicycle facilities along the west side of West Lane. The project site driveway shall be designed to facilitate the future construction of a buffered Class 2 bicycle lane along the west side of West Lane. *Timing/Implementation: During the construction period* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.19-1c: Conduct improvements to the Eight Mile Road/SR 99 West Frontage Road Intersection** The Project applicant shall provide fair share funding for the following improvements to the Eight Mile Road/SR 99 West Frontage Road intersection. • Signalize the intersection. This intersection meets peak hour signal warrants. • Improve the eastbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane. • Improve the westbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane. *Timing/Implementation: As directed by County of San Joaquin Development Services Division* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.19-1d: Conduct improvements to the Eight Mile Road/SR 99 East Frontage Road Intersection**	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		The Project applicant shall provide fair share funding for the following improvements to the Eight Mile Road/SR 99 East Frontage Road intersection. • Signalize the intersection. This intersection meets peak hour signal warrants. • Improve the eastbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane. • Improve the westbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane. • Change the lanes on the northbound approach. Change the approach lanes from a northbound combined through/left-turn lane and an exclusive northbound-to-eastbound right-turn lane, to an exclusive northbound-to-westbound left-turn lane and a northbound combined through/right-turn lane. *Timing/Implementation: As directed by County of San Joaquin Development Services Division* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.19-1e: Conduct improvements to the segment of Eight Mile Road Between Lower Sacramento Road and West Lane** The Project applicant shall provide fair share funding for the following improvement to the segment of Eight Mile Road Between Lower Sacramento Road and West Lane. • Widen this roadway segment from two lanes to four lanes. *Timing/Implementation: As directed by County of San Joaquin Development Services Division*	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		Monitoring/Enforcement: County of San Joaquin Community Development Department **4.19-1f: Provide a Designated On-Site Public Transit Facility** The applicant shall provide a designated onsite public transit facility. This facility shall be designed to be accessible to public agency vehicles and vehicles operated by private or non-profit entities and social service providers. The onsite public transit facility shall be located near the Phase 2 medical office building and hospital because these facilities generate more than 90 percent of overall Project trips. In addition, the applicant shall coordinate with public, private and non-profit transit organizations to encourage the use of public transit when traveling to the project site. *Timing/Implementation: During the Phase 2 construction period* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.19-1g: Eliminate Sidewalks Along the Ham Lane Driveway** The applicant shall revise the project site plan to eliminate sidewalks along the Ham Lane driveway until such time that sidewalks are provided on Ham Lane between Eight Mile Road and the Ham Lane driveway entrance. Pedestrians should be encouraged to use the West Lane access route until Ham Lane and the Ham Lane entrance driveway sidewalks are constructed. This shall be memorialized in the Development Agreement or as a Condition of Approval. *Timing/Implementation: Prior to and during construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Impact 4.19-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) for Vehicle Miles Traveled (VMT)	PS	Implement Mitigation Measure **4.19-1f.** **4.19-2a: Implement Measures to Increase Ridesharing** The Project applicant shall implement the following to promote ride sharing. • Designate parking spaces for ride sharing vehicles • Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles, and • Provide a web site or message board for coordinating rides. *Timing/Implementation: Prior to and during construction and operation* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.19-2b: Provide Employer-Sponsored Vanpool/Shuttle** The Project applicant shall implement a vanpool/shuttle program for employees that work on the Project site. This would involve purchasing or leasing vans for employee use and subsidizing the cost of at least program administration. The employee/driver typically receives personal use of the van, often for a mileage fee. Scheduling is within the employer's purview, and rider charges are normally set on the basis of vehicle and operating cost. *Timing/Implementation: Prior to Operation* *Monitoring/Enforcement: County of San Joaquin Community Development Department* **4.19-2c: Implement Measures to Encourage Telecommuting**	SU

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		The Project applicant shall work with onsite employers to encourage employee tele-commuting and working at home on a part-time or full-time basis to the degree feasible. Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees. Alternative work schedules could take the form of staggered starting times, flexible schedules, or compressed work weeks. It is recognized that the ability of some employees to telecommute or work remotely is not feasible and therefore this measure shall be implemented to the degree practicable. *Timing/Implementation: Prior to Operation* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
Impact 4.19-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment).	LTS	No mitigation required	LTS
Impact 4.19-4: Result in inadequate emergency access	LTS	No mitigation required	LTS
Tribal Resources			
Impact 4.20-1: Impacts to Tribal Cultural Resources	PS	**4.20-1a: Unanticipated Discovery.** If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the nature of the find. The County shall invite a Tribal Representative from Buena Vista Rancheria of Me-Wuk Indians to make recommendations about whether or not the discovery represents a TCR (PRC	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		§21074) and, if so, to make recommendations for culturally-appropriate treatment. If the find includes human remains, the procedures outlined in Mitigation Measure 4.7-3a: Human Remains Discovery shall be followed. The contractor shall implement any measures determined by the County to be necessary. Work at the discovery location cannot resume until the treatment has been implemented to the satisfaction of the County. *Timing/Implementation: During construction* *Monitoring/Enforcement: County of San Joaquin Community Development Department*	
Utilities and Service Systems: Water Supply			
Impact 4.21-1: Implementation of the proposed Project would 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 would cause significant environmental effects.	PS	Implement the following Mitigation Measures: **4.5-2a: Prepare Air Impact Assessment to Reduce Construction NO_x Emissions** **4.6-1a: Conduct Environmental Awareness Training for Construction Personnel** **4.6-1b: Install Fencing and/or Flagging to Protect Sensitive Biological Resources** **4.6-1c: Sanford's Arrowhead** **4.6-1d: Western Pond Turtle**	LTSMI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		4.6-1e: Protect Water Quality and Minimize Sedimentation Runoff to Non-Wetland Waters (Woodbridge Irrigation Canal) **4.6-1f: Giant Garter Snake** **4.6-1g: Conduct Preconstruction Surveys for Nesting Migratory Birds and Raptors** **4.6-1h: Burrowing Owl** **4.6-5a: Comply with the San Joaquin County Oak Tree Ordinance** **4.7-1a: Unanticipated Discovery** **4.7-3a: Human Remains Discovery** **4.9-5a: Worker Awareness Training** **4.9-5b: Unanticipated Discovery of Paleontological Resources** **4.11-1a: Hazardous Substance Management, Handling, Storage, Disposal, and Emergency Response Plan** **4.11-2a. Maintain Appropriate Setbacks from the "North Stockton Unit A" 1 Well**	

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
		4.20-1a: Unanticipated Discovery	
Impact 4.21-2: Implementation of the proposed Project would not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	LTS	No mitigation required	LTS
Impact 4.21-3: Implementation of the proposed Project would result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	NI	No mitigation required	NI
Impact 4.21-4: Implementation of the proposed Project would 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.	LTS	No mitigation required	LTS
Impact 4.21-5: Implementation of the proposed Project would fail to comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.	LTS	No mitigation required	LTS
Impact 4.21-6: Implementation of the proposed Project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	LTS	No mitigation required	LTS

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Impact 4.21-7: Implementation of the proposed Project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LTS	No mitigation required	LTS
Wildfire			
Impact 4.22-1: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would substantially impair an adopted emergency response plan or emergency evacuation plan.	NI	No mitigation required	NI
Impact 4.22-2: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would, 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.	NI	No mitigation required	NI
Impact 4.22-3: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would 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.	NI	No mitigation required	NI

Table 2-3. Summary of Impacts and Mitigation Measures

Impact	Level of Significance Without Mitigation	Mitigation Measure	Resulting Level of Significance
NI = No Impact, LTS = Less than Significant, PS = Potentially Significant; LTSMI = Less than Significant with Mitigation Incorporated SU = Significant and Unavoidable,			
Impact 4.22-4: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would 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.	NI	No mitigation required	NI

References

San Joaquin County. 2016. *2035 San Joaquin County General Plan*. December.

San Joaquin County. 2019. *San Joaquin County Development Title*. November 5.

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3.0 PROJECT DESCRIPTION

3.1 Project Summary

The Gill Medical Center Project (Project) is a proposal by Gill Medical Center, LLC for development of a ±42.4-acre health center and hospital campus in San Joaquin County, just north of the City of Stockton city limits. The Project is proposed consistent with California Department of Health Care Access and Information (HCAI) 1 Standards (formerly the Office of Statewide Health Planning and Development) and would be constructed in two phases. Phase 1 includes a 36,000-square-foot single story 12-bed hospital (Phase 1 Hospital) including emergency room, labor, delivery, emergent medicine, and outpatient surgery services. Phase 2 includes an additional three-story 140,000-square-foot 100-bed full-service hospital (Phase 2 Main Hospital) with emergency helistop landing area, and a two-story 60,000-square-foot medical office building. The Project includes landscaping, circulation, parking and onsite water, wastewater and stormwater utility improvements consistent with phased development. Phase 1 construction is planned for 2024 and Phase 2 for 2030.

The Project seeks the following entitlements/approvals from San Joaquin County:

- Site Approval (application number PA-1900240)
- Development Agreement (application number PA-2000019)
- Lot Line Adjustment (application to be submitted)
- Eight Mile Road Precise Road Plan Amendment to allow proposed Phase 2 driveway access to Eight-Mile Road (application to be submitted)
- Water Supply Assessment approval pursuant to Senate Bill 610 and California Water Code Section 10910 (application to be submitted)

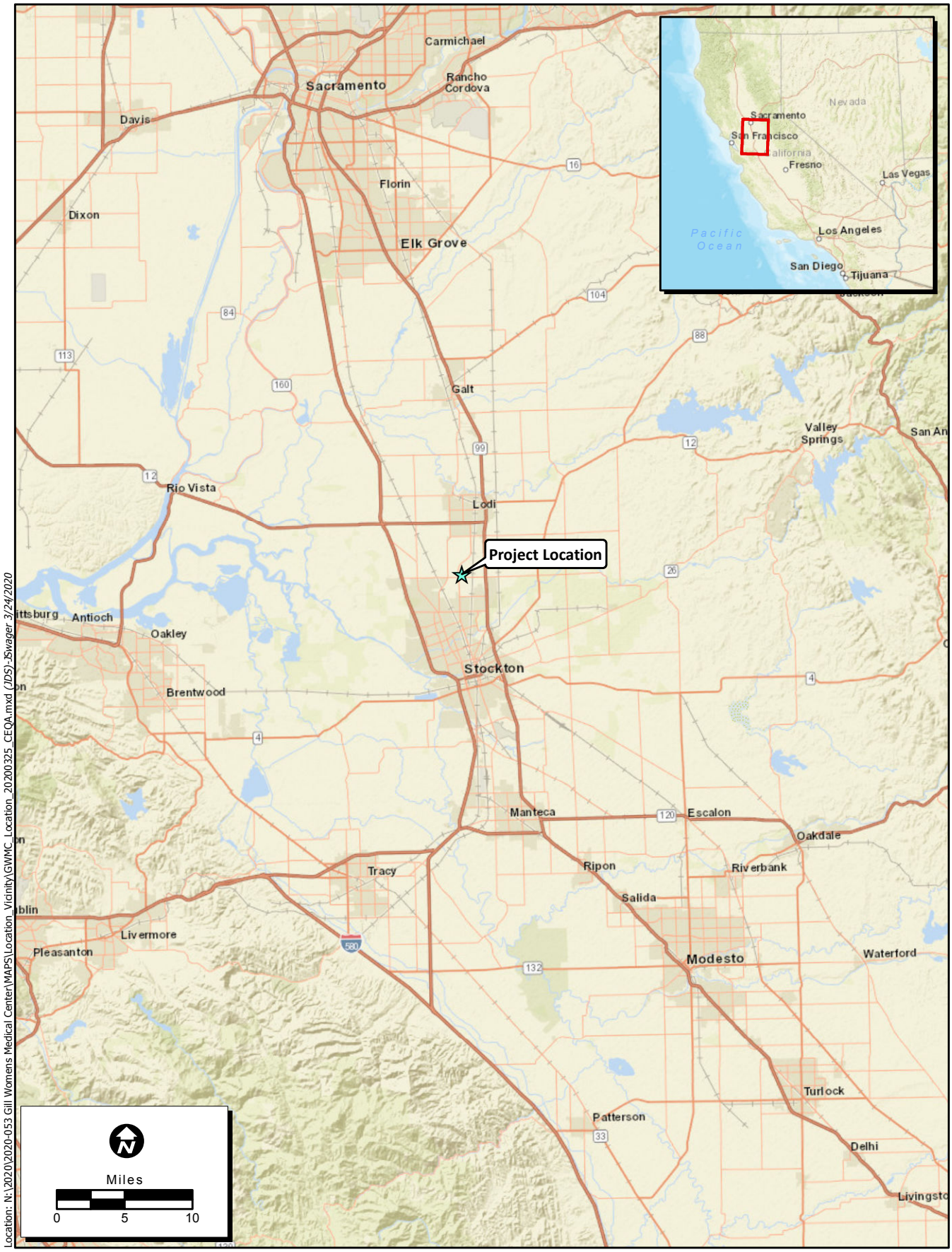
3.2 Project Location and Setting

3.2.1 Project Location

The Project site is located in the southwest quarter (SW ¼) of Section 35, Township 3 North, Range 6 East, Mount Diablo Base and Meridian, approximately 500 feet north of the current boundaries of the City of Stockton in unincorporated San Joaquin County, California (*Figure 3-1. Regional Location Map).* As shown in *Figure 3-2. Local Vicinity Map*, the proposed 42.4-acre Project site is located at 11000 North West Lane and encompasses all or portions of three existing legal parcels totaling 60.8 acres; Assessor's Parcel Numbers (APNs): 059-080-07, 059-080-29, & 059-080-30.

3.2.2 Existing Land Use

Existing Project site land use and improvements are shown in *Figure 3-3. Existing Site Conditions*. As shown, with the exception of a ±10-acre rectangular-shaped field on the east side, most of the Project site is currently in agricultural production.



Location: N:\2020\2020-053 Gill Womens Medical Center\MAPS\Location_Vicinity\GWMC_Location_20200325_CEQA.mxd (JDS) JSwager 3/24/2020

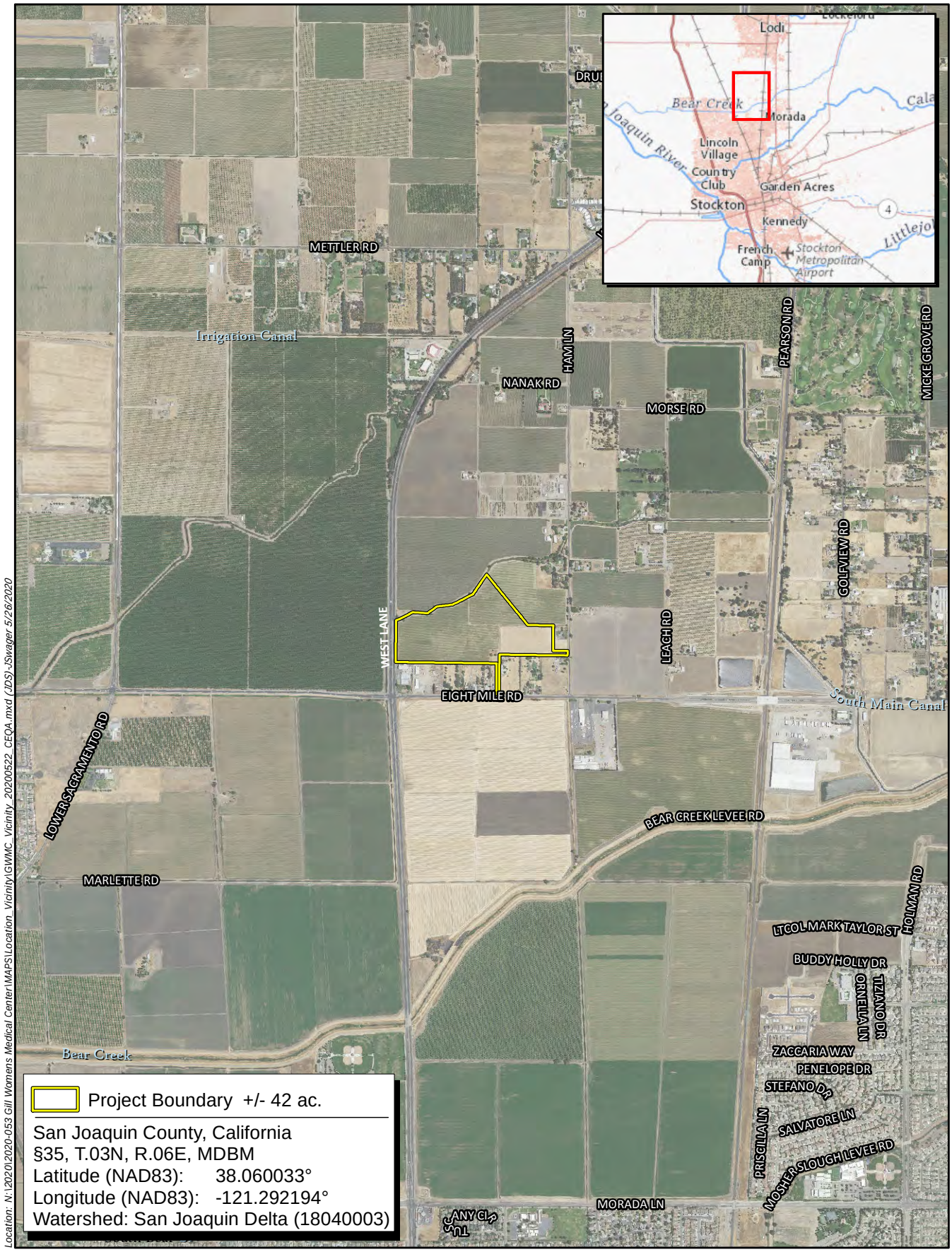
Map Date: 3/24/2020

Sources: ESRI, San Joaquin County

Figure 3-1. Regional Location Map

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2020-053 Gill Medical Center



Location: N:\2020\2020-053 Gill Womens Medical Center\MAPS\Location_Vicinity\GWMC_Vicinity_20200522_CEQA.mxd (JDS) JSwager 5/26/2020

Map Date: 5/26/2020

Sources: ESRI, NAIP (2018), San Joaquin County, NJA Architecture

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Scale in Feet
0 1,000 2,000

Figure 3-2. Local Vicinity Map

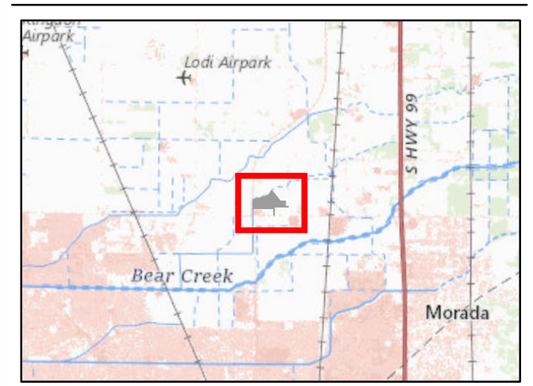
2020-053 Gill Medical Center

Map Features

Project Boundary - +/-42 ac.

Photo Source: NAIP (2018)
Boundary Source: NJA Architecture (Boundary is Approximate)
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

[1] *Subject to U.S. Army Corps of Engineers verification. Feature boundaries have not been legally surveyed and may be subject to adjustments if more accurate locations are required.*



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Map Date: 9/30/2020

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Scale in Feet
0 400

Figure 3-3. Existing Site Conditions

2020-053 Gill Medical Center

Site improvements include vineyards, a dilapidated corral and cattle chute located near the mid-point of the southern site boundary, and a former gas well converted to a water well in the approximate center of the property. This well is referred to as the "North Stockton Unit A" 1 well (API: 0407700519). Well operation is by electric pump. An overhead electric line extends approximately 1,430 feet along the south side of an existing farm road from North Ham Lane to the well site.

A farm road also extends north from the well site to the northern property boundary, where it connects with a perimeter farm road that runs along the northern, eastern and western site boundaries. Finally, the Woodbridge Irrigation District canal is located onsite along the northwestern site boundary.

3.2.3 Surrounding Land Uses

As shown in Figure 3-2, surrounding land uses include a mixture of agriculture, light industrial, and residential as described below.

3.2.3.1 North

The western half of the site's northern boundary is defined by the centerline of the existing Woodbridge Irrigation District (WID) agricultural canal. Active agriculture and scattered residences exist north of the site. Pixley Slough is located approximately 0.5 mile north, and the City of Lodi is located approximately 2.5 miles north of the site.

3.2.3.2 East

The site's eastern boundary is defined by North Ham Lane, followed by active agriculture and scattered residences. The Union Pacific Railroad is located approximately 0.5 mile east followed by State Route (SR) 99 located approximately 1.5 miles east of the site.

3.2.3.3 South

The southern site boundary abuts the rear of existing non-conforming industrial and residential uses that front Eight Mile Road between West Lane and Ham Lane within the AG zone. Eight Mile Road is located approximately 500 feet south of the southern site boundary and provides driveway access to these existing non-conforming uses. Lands south of Eight Mile Road are within the City of Stockton, are currently in active agriculture, and include the recently approved but undeveloped 341-acre Tra Vigne development project. The Tra Vigne project, located south of Eight Mile Road, between West Lane on the west and the Union Pacific Railroad on the east, was annexed to the City of Stockton in February 2021. This City of Stockton master planned community includes development of a mix of land uses including single-family (1,728 units) and high-density residential (680 units), industrial, commercial, school, and traditional and non-traditional parks sites.

3.2.3.4 West

West Lane defines the site's western boundary. The WID agricultural canal lies immediately west of West Lane, followed by active agriculture. The City of Stockton lies approximately 0.75 miles west, followed by

the Union Pacific Railroad (Sacramento) at approximately 1.5 miles, and Interstate 5 at approximately 4 miles west.

3.2.4 General Plan Land Use and Development Title Designations

The Project site is designated General Agricultural (AG) by the San Joaquin County 2035 General Plan (San Joaquin County, December 2016), and AG-40 by Title 9 of Ordinance Code of San Joaquin County (i.e., the Development Title or zoning designation) (San Joaquin County, August 2021). According to the San Joaquin County Development Title, the AG Zone is established to preserve agricultural lands for the continuation of commercial agriculture enterprises. Minimum parcel sizes within the AG Zone are 20, 40, 80 or 160 acres, as specified by the precise zoning. The precise Development Title zone for the Project site parcels is AG-40.

Following review of the Site Approval Application, County staff determined the principal proposed Project use is for a hospital and medical center campus and is properly classified under the Use Type Public Services-Essential, which includes hospitals (see San Joaquin County Development Title section 9-115.525 (b). Because the Project is consistent with the Public Services-Essential use type it is a conditionally permitted use within the General Agricultural AG-40 zone and a Site Approval application is the appropriate requested entitlement for the Project (see San Joaquin County Development Title TABLE 9-605.2 - USES IN AGRICULTURAL ZONES). This means no Development Title Zone Reclassification or General Plan Map Amendment is required.

3.3 Project Background and Purpose

Gill Medical Center, LLC Project principal Dr. Jasbir Gill began practicing obstetrics in San Joaquin County in the 1970s after joining a local physicians group established in 1953. A pioneer in bringing advanced technology to his patients, Dr. Gill made local history when he conducted the first prenatal ultrasound in San Joaquin County on July 20, 1977. In 1983, Dr. Gill was joined in practice by his wife, Param, also a principal in Gill Medical Center, LLC, and their practice group was rechristened "Gill Obstetrics & Gynecology." Their practice is now the largest OB/GYN medical group in the area with offices in Stockton, Lodi, Manteca, and Galt, employing physicians with active privileges at St. Joseph's Hospital, Lodi Memorial Hospital, and Doctor's Hospital of Manteca.

The Project represents a continuation of the Gill Family's mission to provide cutting-edge health care and vitally important medical services to the area in a family-owned and operated setting. The Project is not intended to replace any existing health care services in the area, but rather to supplement what already exists with increased availability and quality of services – including general hospital services.

The Project's service area would include the cities of Stockton and Lodi alongside the surrounding rural communities. According to the *Economic Assessment of Demand and Urban Decay in the Stockton Area for Proposed Gill Medical Center Report* (King et al. 2021) (Appendix I), this population is medically underserved both in comparison to the State overall and national benchmarks for health. Furthermore, the service area also includes populations with extremely low community health markers, which may be improved by increased access to high-quality medical care. Therefore, the Project is intended to relieve

some of the stresses felt by existing medical facilities in San Joaquin County and, in particular, the Project service area. The reader is referred to Draft EIR Appendix I for further discussion of Project need.

The purpose of Phase 1 development is to provide an HCAI 1 full-service hospital for labor and delivery services including Alternative Birthing Services (ABC), which currently do not exist in the San Joaquin County. In addition to these services, Phase 1 would have an in- and outpatient surgery center, emergent care services, radiology center, lab, pharmacy and nursery. The purpose of Phase 2 development is to add to the hospital campus by incorporating an additional HCAI 1 100-bed hospital and medical office building. The Project would add additional value to the medical landscape of San Joaquin County by providing needed medical services during pandemic times like those experienced with COVID-19.

In 1994 Drs. Jasbir and Param Gill purchased the Project site from the City of Colfax. The Project site is now owned by the Jasbir S. Gill Family Limited Partnership. At the time of purchase, and for decades prior, the property was used for cattle grazing. In 1995, the Project site was planted with vineyard and remains planted today.

3.3.1 Site Selection

The proposed Project would provide needed medical infrastructure to San Joaquin County. The Project is centrally located between State Route 99 (SR99) and Interstate-5 (I-5), between Stockton and Lodi, and just northeast of the Eight Mile Road/West Lane intersection. Both Eight Mile Road and West Lane are heavily traveled thoroughfares. West Lane carries traffic between Lodi (where is becomes Hutchins Street in the southern part of the city) and Stockton (where it becomes Airport Way in Stockton, south of Harding Way). Eight Mile Road is a major arterial transporting traffic between SR 99 and I-5 on the northern edge of Stockton.

The project site was selected for several reasons. First, its location between the cities of Lodi and Stockton is ideal to serve residents of the greater Stockton and Lodi area, as well as those in eastern San Joaquin County – which has no hospital services. Second, because the Gill Family, which owns the Applicant LLC also owns the Project site, it can invest capital into the infrastructure necessary for a Project of this magnitude, rather than having to divert capital into land acquisition. Third, the Project site's frontage on three major roadways (West Lane, Eight Mile Road, and a driveway access to Ham Lane) allows several opportunities for public and emergency access to the site. Fourth, its relative proximity to both major north/south freeways in the County enhances public access (State Route 99 is approximately 1.5 miles to the east and Interstate 5 is just over 4 miles to the west). Fifth, as discussed above, while the project site is designated AG-40, the proposed hospital campus use is consistent with the Development Title "Public Services – Essential" zone use type and, as such, the Project can be conditionally permitted without the need for a zone reclassification and/or General Plan amendment. Finally, while located in unincorporated San Joaquin County, the properties to the south include the recently approved and annexed City of Stockton Tra Vigne development project, a mixed use project that extended the City limits north to Eight Mile Road. Thus, the Project would occur within a developing area in the region.

3.4 Project Objectives

The Project objectives include the following:

1. Develop a health center and hospital campus built to HCAI 1 standards, in two phases including a Phase 1, 36,000± square-foot (SF) 12-bed single story full-service hospital with emergency room and ABC services, and Phase 2, 140,000± SF 100-bed hospital with emergency room, helistop and an associated 60,000± SF medical office building.
2. Utilize land currently owned by the applicant/related entities as the development site for the Project.
3. Provide emergent care and hospital services readily accessible from the eastern region of San Joaquin County including, Linden, Lockeford, Acampo, Woodbridge and Clements, while also providing increased hospital services to the existing and urbanizing areas of Stockton and Lodi.
4. Provide improved local access to hospital emergency room services.
5. Develop a facility that will provide state-of-the-art health care, labor, delivery, and obstetrics care.
6. Provide an attractive and cohesive hospital campus setting through development of a phased master plan and cohesive architectural theme.
7. Retain the Eight Mile Road/Ham Lane intersection future traffic signal as identified in the Eight Mile Road Precise Road Plan to ensure adequate site access at full build out.
8. Provide an onsite buffer along the northern project boundary to protect existing adjacent agricultural operations and opportunities for habitat enhancement.
9. Retain a portion of the Project site for continued agricultural (vineyard) operations.
10. Have the Phase 1 Hospital operating within five years of approval and Phase 2 Hospital and Medical Office Building fully operating within ten years of Project approval.

3.5 Project Characteristics

The Project includes phased construction of a ±42.4-acre medical center campus consisting of two hospital buildings, a medical office building and supporting amenities including internal circulation, parking lots, landscaping and onsite water, wastewater and stormwater utilities (collectively referred to as Utilities).

The Phase 1 development area would be accessed from West Lane, occupy 12.5 acres and include a smaller single story 12-bed hospital (Phase 1 Hospital) with associated parking, landscaping and onsite utilities. The Phase 1 Hospital would provide emergency room, labor, delivery, emergent medicine, and outpatient surgery services. The Phase 2 development area would add access driveways from Ham Lane and Eight Mile Road, would occupy 29.9 acres and would include a larger 100-bed three-story full-service Hospital (Phase 2 Hospital) with emergency helistop landing/take off area. Both hospitals would be permitted and licensed by HCAI as HCAI 1 general acute-care full-service hospitals with a duly constituted governing body with overall administrative and professional responsibility. The hospitals would be staffed to provide 24-hour inpatient care, including emergency room and basic services. Per County Health and Safety Policy PHS-3.3: Emergency Service Facilities, the proposed hospital buildings would also be considered Essential Services Buildings. As such they would be designed to withstand earthquakes consistent with California Building Code, Chapter 16, Volume 2 to ensure they remain operational during

earthquake emergency response. Although not a requirement, an additional design goal for Project buildings is to meet LEED Silver certification requirements for energy conservation.

Both project phases would be served by onsite Utilities mostly located within the Phase 2 development area. Utilities would be initially sized to serve Phase 1 development and would be expanded as necessary to serve full development as part of Phase 2 construction.

Figure 3-4. Project Renderings provides a computer-generated conceptual aerial rendering of the Project as viewed from the West Lane main entrance looking east and *Figure 3-5. Site Plan* provides a conceptual plan view of the proposed development. Project site information is summarized in Table 3-1. Phase 1 construction is scheduled for 2024 and Phase 2 in 2030.

3.5.1 Agricultural Land Mitigation

As discussed above, because the Project is consistent with the Public Services - Essential use type, it is a conditionally permitted use within the General Agricultural AG-40 zone and no Development Title Zone Reclassification or General Plan Land Use Map Amendment is necessary to implement the Project. Furthermore, because the Project doesn't require a zone change, it's not subject to the agricultural land mitigation requirements of the County's Agricultural Mitigation Ordinance as outlined in San Joaquin County Development Title Chapter 9-1080 Agricultural Mitigation (San Joaquin County. 2019.). Regardless, in recognition of the spirit of the Ordinance, the applicant has agreed to preserve agricultural land at a 1:1 ratio consistent with Ordinance mitigation requirements. According to analysis contained in Draft EIR Section 4.4 Agricultural and Forestry Resources, the Project would result in removal of approximately 33.11 acres of active agricultural land due to site development. Therefore, the Project includes the preservation of 33.11 acres of equal or better- quality agricultural land prior to the issuance of building permits consistent with the intent of Ordinance requirements. This mitigation may be phased consistent with site development and would include either the direct provision of agricultural mitigation land for preservation, or payment of in-lieu fees as allowed under the County's Agricultural Mitigation Ordinance.

3.5.2 Participation in the San Joaquin County Multi Species Conservation Plan

This Draft EIR includes recommended mitigation measures to ensure all identified potential biological resource impacts are reduced to less than significant under CEQA. As an alternative, the applicant has the option to seek coverage for certain species under the San Joaquin County Multi Species Conservation Plan (SJMSCP). Participation in the SJMSCP is voluntary. Should the Project participate, mitigation would be implemented for those species covered by the SJMSCP according to the SJMSCP. Under this approach, Draft EIR mitigation measures would only be implemented for the balance of species impacts identified in this Draft EIR but not covered by the SJMSCP. Should the Project not participate in the SJMSCP, all recommended Draft EIR mitigation measures would be implemented.

3.6 Project Components

Figure 3-5 identifies the major Project components and phasing areas and Table 3-2. Lists the Proposed Buildings and Structures. Each major component is described below.

Table 3-1. Project Parcels, Land Use and Zoning Statistics				
APNS	DEVELOPMENT PHASE	ACREAGE	GENERAL PLAN DESIGNATION	ZONING
059-08-029	1	12.5	AG (General Agriculture)	AG-40 (Agriculture 40-Acre Minimum)
059-08-007	2	29.9	AG (General Agriculture)	AG-40 (Agriculture 40-Acre Minimum)
059-08-030	(Lot Line Adjustment-N/A)	18.4	AG (General Agriculture)	AG-40 (Agriculture 40-Acre Minimum)

3.6.1 Buildings and Structures

Proposed buildings and structures are described below, are listed in Table 3-2, and shown on Figure 3-5. Buildings and structures associated with onsite utilities are described in Section 3.6.4 Utilities.

3.6.1.1 Phase 1 Hospital Building (Site Plan Building A)

The Phase 1 Hospital Building would be the focal point of Phase 1 development. The 36,000-SF, 25-foot-high, single-story center is proposed in the approximate center of the Phase 1 development area.

3.6.1.2 Phase 1 Water Treatment Facility (Site Plan Building B)

The Water Treatment facility building would be located near the site's northern midpoint boundary.

3.6.1.3 Phase 1 Wastewater Treatment Facility (Site Plan Building C)

An expandable wastewater treatment "package plant" would be constructed near the site's northern midpoint boundary. "Package plants" are pre-manufactured treatment facilities used to treat wastewater in small communities or on individual properties.

3.6.1.4 Phase 2 Medical Office Building (Site Plan Building D)

The related Phase 2 60,000 -SF, 45-foot-high, two-story Medical Office Building would support the hospitals and be located west of the Phase 2 Main Hospital building and north of the West Lane entrance road.

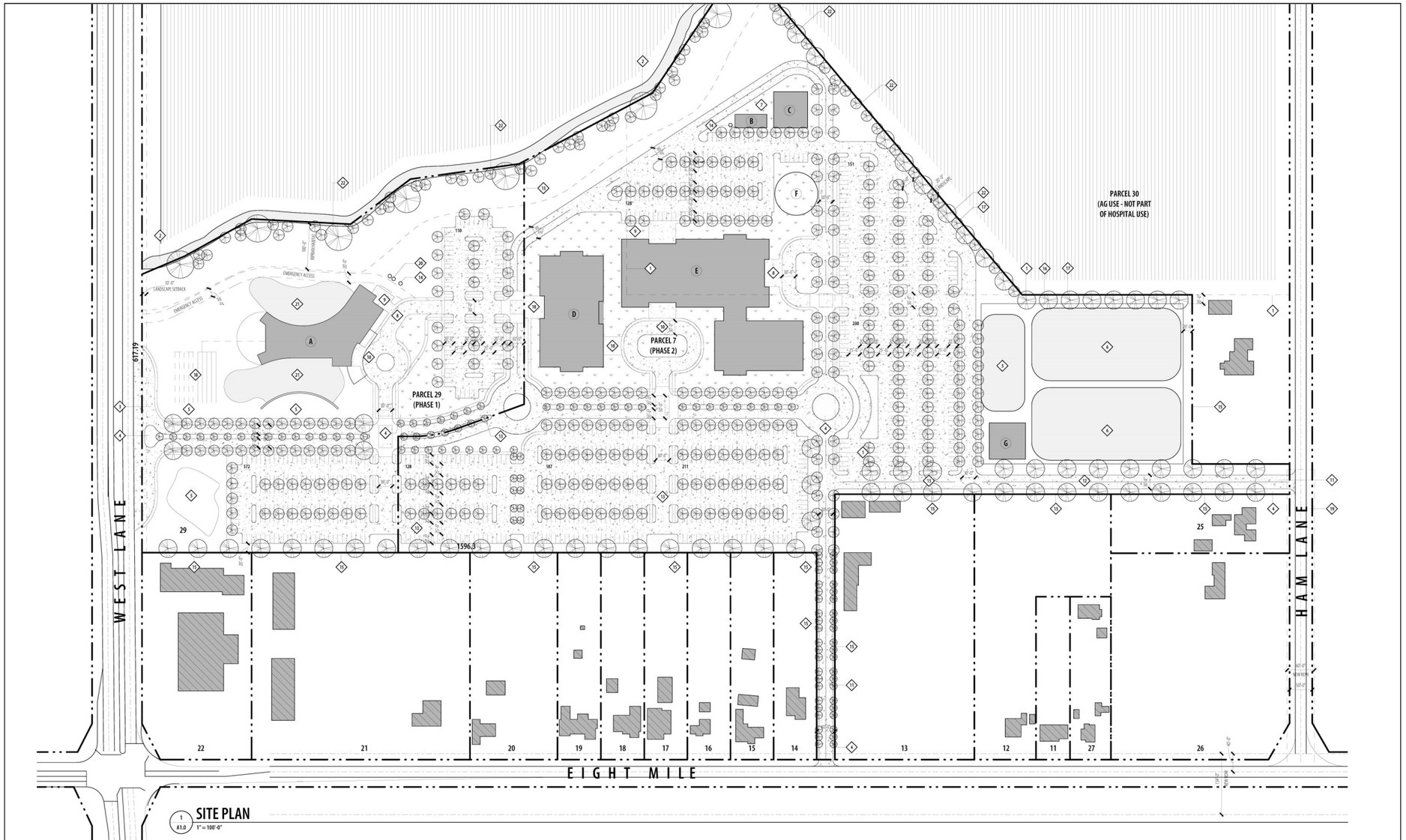
3.6.1.5 Phase 2 Hospital (Site Plan Building E)

The Phase 2 Main Hospital building would be the focal point of Project buildout and Phase 2 development. The 140,000-SF, 55-foot-high, three-story hospital is in the central portion of the Phase 2 development area.

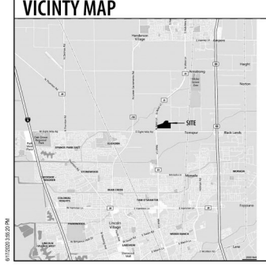
Rendering A: View of proposed Phase 1 Gill Medical Center building main entrance looking north.

Rendering B: Bird's eye view of Phase 1 Gill Medical Center building (foreground) and Phase 2 Hospital, Medical Office Building and support infrastructure looking east (background).

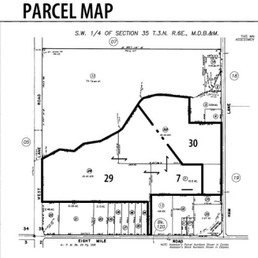
Figure 3-4. Project Renderings



VICINTY MAP



PARCEL MAP



SITE INFO

APN	059-08-029 PHASE 1		12.5 ACRES
	059-08-007 PHASE 2		29.9 ACRES
	059-08-030 (LOT LINE ADJ)		18.4 ACRES
ZONING:	AG-40		
GENERAL PLAN	A/G		
TOTAL BLDG SF			**PARKING REQ.**
PHASE 1:	36,000 SF	MEDICAL	180
PHASE 2:	174,000 SF	MEDICAL	870
	10,000 SF	UTL. SERVICE	6
TOTAL:	**222,000 SF**		**1,056**
PROPOSED PARKING			
PHASE 1:	282		
PHASE 2:	1,000		
TOTAL:	**1,282 SPACES**		
PAVED SURFACES:			
PHASE 1:	SEE CIVIL		
PHASE 2:	SEE CIVIL		

LEGEND

- PROPERTY LINE
- ASSUMED ACCESSIBLE PATH OF TRAVEL. FOR ADDITIONAL INFO. REFER TO SHEET G4.0 ACCESSIBILITY STANDARDS.
- PROPOSED STRUCTURES
- EXISTING BUILDING
- IMPERVIOUS SURFACE CONCRETE OR ASPHALT
- NEW LANDSCAPE AREA

GENERAL NOTES

1. **PHASE 1 PROPOSED IN ADJUSTED PARCEL 29**
2. PARALLEL TO ANY NATURAL BANK OF A WATERWAY, A NATURAL OPEN SPACE FOR RIPARIAN HABITAT AND WATERWAY PROTECTION SHALL BE MAINTAINED TO PROVIDE NESTING AND FORAGING HABITAT AND THE PROTECTION OF WATERWAY QUALITY. THE MINIMUM WIDTH OF SAID OPEN SPACE SHALL BE ONE HUNDRED (100) FEET, MEASURED FROM THE MEAN HIGH WATER LEVEL OF THE NATURAL BANK OR FIFTY (50) FEET BACK FROM THE EXISTING RIPARIAN HABITAT, WHICHEVER IS GREATER. WATER-DEPENDENT USES MAY BE PERMITTED IN THIS BUFFER.
3. DRIVEWAYS, PARKING, AND MANEUVERING AREAS PROPOSED TO BE CONCRETE OR ASPHALT.
4. PHASE 1: 12 MONTHS, PHASE 2: 120 MONTHS.
5. TWO WAY DRIVEWAYS TO BE MIN. 20'-0" WIDE (TYP.)
6. PARKING SPACES TO BE MIN. 10'-0" WIDE BY 20'-0" DEEP (TYP.)
7. EACH PARKING FACILITY WHERE PARKING IS PROVIDED FOR THE PUBLIC, GUESTS OR EMPLOYEES SHALL PROVIDE ACCESSIBLE PARKING
8. CFC SECTION 503.2.7 FIRE APPARATUS ACCESS ROAD SHALL NOT ALLOW THE PONDING OF WATER. FIRE APPARATUS APPROACH AND DEPARTURE ANGLES SHALL BE WITHIN LIMIT BY THE FIRE CODE OFFICIAL BASED ON THE FIRE DEPARTMENT'S APPARATUS. CFC SECTION 503.2.8.
9. TRAFFIC CALM DEVICES SHALL BE PROHIBITED UNLESS APPROVED BY THE FIRE CODE OFF.
10. TYP. PARKING, LOT LIGHING TO PROVIDE THE FOLLOWING:
   - 1 FOOT CANDLE THROUGHOUT THE PARKING AREA
   - LIGHTING ON TIME CLOCK SYSTEM
   - LED W/ 90 DEGREE CUT OFF AND FLAT LENSES
   - DESIGNED TO DIRECT RAYS ONLY ON THE PARKING LOT PREMS.

KEY NOTES

1. (E) BOUNDARY PROPERTY LINE (59-08-029, (59-08-006), (59-08-007
2. EXISTING WATER CANAL
3. MAIN ENTRANCE
4. ENTRANCE SIGNAGE
5. STORM RETENTION POND
6. WASTE DISPOSAL AREA
7. FIRE SUPPRESSION TANKS
8. EMERGENCY DROP OFF
9. DELIVERY/TRASH
10. DROP OFF & ENTRY
11. PRIMARY ENTRANCE/EXIT, PHASE 2
12. ACCESS TO HAM LANE
13. PHASE 1 BOUNDARY
14. (N) PRIVATE WELL, ON PUBLIC WATER SYSTEM
   - 5' from structures
   - 100' from septic tanks
   - 150' from leach lines
   - 200' from sumps or seepage pits
   - 25' from property lines.
15. SOLID CMU PRIVACY FENCE 7'-0" HIGH @ PROPERTY BOUNDARY
16. 8'-0" FENCE AROUND WATER TREATMENT
17. PROPOSED LOT LINE ADJUSTMENT FOR PARCELS #29, #30, & 7, SEE PARCEL MAP
18. LEACH FIELD (PHASE 1) W/ 100% REPLACEMENT
19. HAM LANE 66'-0" RIGHT OF WAY TO BE EXTENDED TO ENTRY, PHASE 2
20. WASTE WATER TANKS, PHASE 1
21. WATER FEATURE
22. LANDSCAPE FREE BUFFER ALONG AG

STRUCTURE LEGEND

KEYNOTE	USE	SF	PHASE	HT/STORIES
A	**WOMENS MEDICAL CENTER**	**36,000**	**PHASE 1**	**25FT, 1 STY**
B	**WATER TREATMENT FACILITY**	**2,000 SF**	**PHASE 2**	**25 FT, 1 STY**
C	**WASTE TREATMENT FACILITY**	**6,000 SF**	**PHASE 2**	**25 FT, 1 STY**
D	**MEDICAL OFFICE BUILDING**	**60,000 SF**	**PHASE 2**	**45 FT, 2 STY**
E	**HOSPITAL**	**140,000 SF**	**PHASE 2**	**55 FT, 3 STY**
F	**HELICOPTER PAD**	**20,000 SF**	**PHASE 2**	
G	**PHYSICAL PLANT**	**4,000 SF**	**PHASE 2**	**35 FT, 1 STY**

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Figure 3-5. Site Plan

2020-053 Gill Medical Center

3.6.1.6 Phase 2 Helicopter Pad Helistop (Site Plan Facility F)

The design and analysis of helistop operations is based on the Gill Medical Center Heliport Design and Operations memorandum prepared by Heliplanners (Heliplanners. 15 September 2021.) (Draft EIR Appendix B).

Should the Phase 2 Project include a Trauma designation, Phase 2 improvements would include a helicopter pad "helistop" located northeast of the Main Hospital building. As a "helistop," no fueling or maintenance facilities would be provided as the pad would only be used by helicopters for patient drop off or pick up.

The helistop has not been fully designed at this early stage. It is expected to be ground-based, although not at grade due to proposed nearby driveways and parking areas. Vehicle (cars, ambulances, etc.) must be considered when applying the Federal Aviation Regulations (FAR) Part 77 airspace obstruction-clearance criteria. A helistop at the proposed location will likely need to be elevated on a berm or on a free-standing structure sufficient to provide specified clearance above grade for vehicles. The maximum elevation would likely be ten feet and may be less, especially if the currently proposed automobile circulation could be adjusted. A berm helistop is considered ground-based and the dimensions to accommodate the design helicopter size would be 40 feet by 40 feet (or 40 feet in diameter). This represents FAA's minimum design size for a hospital helistop touchdown lift off area and is sufficient to accommodate the design helicopter size. The helistop pad would be illuminated for nighttime use consistent with applicable standards. This would include eight to 16 green light-emitting diode (LED) lights embedded in the concrete pad perimeter. These lights would be turned on only during nighttime operations. Because of their orientation, these lights would be easily seen by pilots from above (but not from ground level offsite locations) and would be omnidirectional so they can be seen from any approaching direction. In addition, standard lighting (described further in Section 3.6.2 below) would be provided between the landing pad and hospital to light the connecting surface pathway for moving gurneys at night. For additional details of expected helicopter operations, refer to Section 3.7.2 Helicopter Operations, below, and Appendix B.

3.6.1.7 Physical Plant (Site Plan Facility G)

A 4,000-square-foot Physical Plant building would be located east of the Phase 2 eastern parking lot.

Table 3-2. Proposed Buildings, Structures and Parking

Site Plan Keynote	Use	Proposed Parking (spaces)	Square Feet/Beds	Phase	Height/Story
A	Phase 1 Hospital Building	282	36,000/12	PHASE 1	25FT/1 Story
B	Water Treatment Facility		2,000	PHASE 2	25 FT/1 Story

Table 3-2. Proposed Buildings, Structures and Parking

Site Plan Keynote	Use	Proposed Parking (spaces)	Square Feet/Beds	Phase	Height/Story
C	Wastewater Treatment Facility		6,000	PHASE 2	25 FT/1 Story
D	Medical Office Building		60,000	PHASE 2	45 FT/2 Story
E	Phase 2 Hospital Building	1,035	140,000/100	PHASE 2	55 FT/3 Story
F	Helistop Pad		20,000	PHASE 2	N/A
G	Physical Plant		4,000	PHASE 2	35 FT/1 Story
Totals	N/A	1,317	268,000/112	N/A	N/A

3.6.2 Access, Circulation and Parking

Proposed site access points, onsite circulation and parking areas are shown in Figure 3-5. As shown, site access would be provided from West Lane, Ham Lane and Eight Mile Road. The West Lane and Ham Lane access points would allow for full turning movements while the West Lane and Eight Mile Road access points would be right in and right out only.

Driveways and sidewalks would provide onsite circulation and connection between all buildings and parking areas, including patient drop off and pick up areas at the Hospital buildings and Medical Office Building main entrances. All onsite driveways would have minimum 20-foot wide paved sections and all driveways, parking and vehicle maneuvering areas would be constructed of concrete or asphalt. All pedestrian sidewalks and pathways would meet Americans with Disabilities Act of 1990 (ADA) standards.

Construction of access, circulation and parking improvements would proceed consistent with Project phasing as identified on Figure 3-5. Phase 1 improvements at the West Lane entrance would accommodate right-in and right-out turning movements and include a driveway with 50-foot road section inclusive of curb, gutter, sidewalk, and two 20-foot travel lanes separated by a center median. West Lane access improvements include dedication of right-of-way to accommodate West Lane acceleration and deceleration lanes and full curb, gutter and sidewalk at the driveway entrance and along the West Lane Project frontage. The Ham Lane and Eight Mile Road Phase 2 access driveways would include a 30-foot road section inclusive of curb, gutter and two travel lanes. Additionally, a 20-foot wide emergency access road from West Lane would be located south of the WID agricultural canal setback buffer and north of the Phase 1 Hospital building and constructed as part of Phase 1 improvements.

A total of 1,317 parking spaces would be provided onsite within the parking lots surrounding the main buildings as shown on Figure 3-5. This includes 282 parking spaces for Phase 1 and 1,035 parking spaces

for Phase 2 (10 feet wide by 20 feet deep) (1,317 total), including accessible parking near all building main entrances. All onsite parking areas and pedestrian pathways would be lighted to a minimum one foot-candle. Light fixtures would use light-emitting diode (LED) technology with 90° cut off and flat lenses to reduce light spill and all outdoor lighting would be connected to a timed clock control system.

3.6.3 Landscaping, Walls and Signage

The proposed landscape plan is shown in *Figure 3-6. Landscape Plan*. All onsite landscaping and irrigation would be drought tolerant, water conserving, and would follow sustainable practices as outlined in Model Water Efficiency Landscape Ordinance. The landscape plan is designed to be low maintenance, provide perimeter screening and enhance habitat along the existing WID agricultural canal.

As shown on the Landscape Plan, all onsite roads, parking lots and buildings would include adjacent landscaping installed consistent with development phasing.

The Phase 1 West Lane site frontage would include a 10-foot setback for landscape planting and the entrance driveway would receive enhanced landscaping including trees and shrubs in the center median and between the back of curb and sidewalk. The Phase 2 Ham Lane and Eight Mile Road entrance driveways would be landscaped with trees and shrubs at the back of curb. All parking lots would be planted with shade trees consistent with County parking lot shade requirements.

In addition to vegetated landscape, water features are proposed on the north and south sides of the Phase 1 Hospital. Fountains or other amenities may be included within the water feature and perimeter pedestrian pathways and seating may be installed in the surrounding areas.

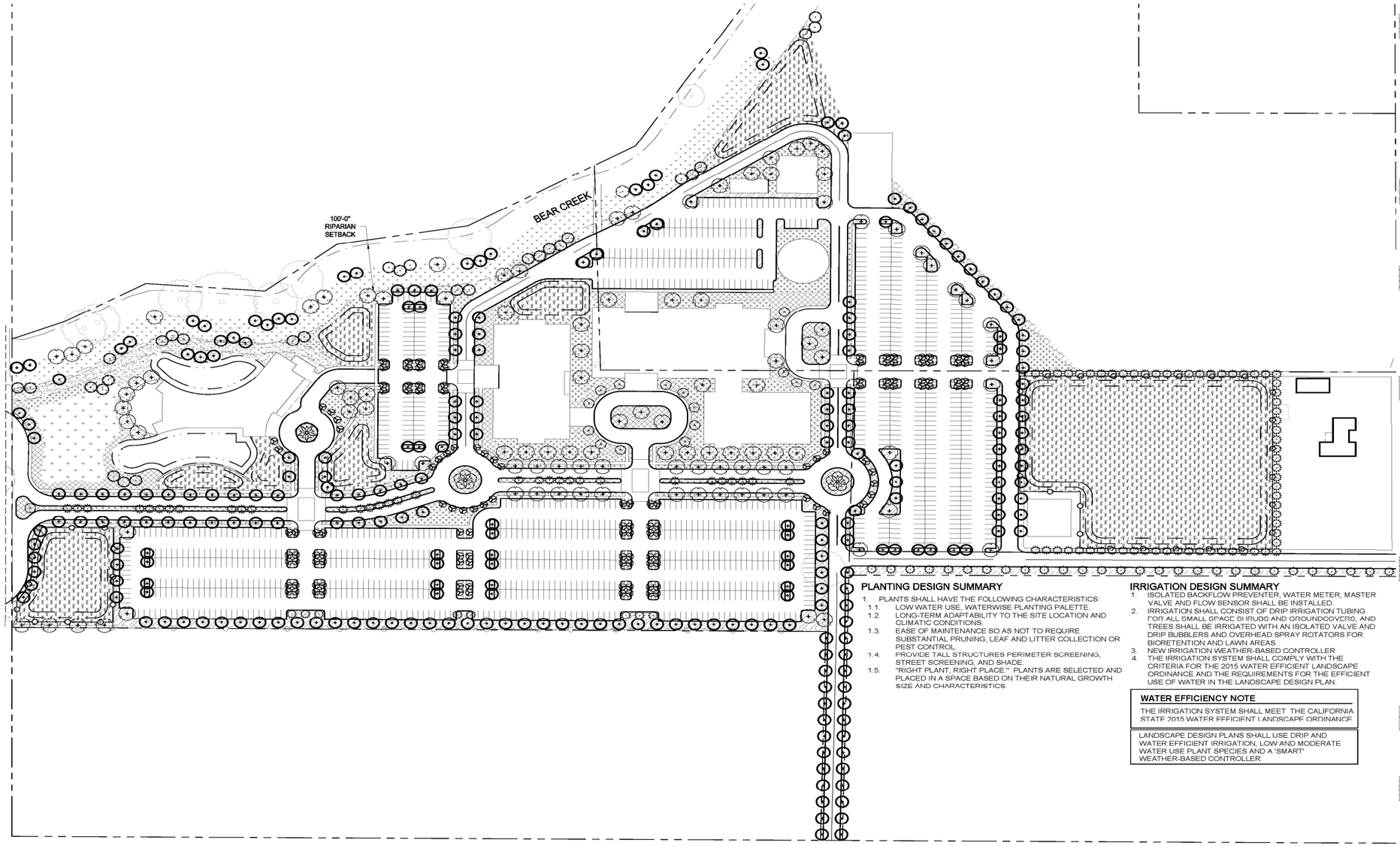
Consistent with San Joaquin County Development Title Section 9-1022.4 (d) (1), a seven-foot-tall solid Concrete Masonry Unit (CMU) wall would be constructed along the southern site boundary and along both sides of the Ham Lane and Eight Mile Road entrance drive. In addition, an eight-foot-tall security fence would be located around the storm water retention pond to prevent unauthorized access.

Signage identifying the Project would be installed at all driveway entrances and wayfinding signage would be located as appropriate throughout the site.

3.6.4 Woodbridge Irrigation District (WID) Agricultural Canal Buffer

The WID agricultural canal exists along the northwest site boundary. Consistent with San Joaquin County Development Title Section 9-1510.5, a 100-foot wide buffer is proposed along the canal. This buffer would provide natural open space habitat for nesting and foraging and for the protection of surface water quality.

According to County Development Title requirements, the minimum buffer width shall be 100 feet, measured from the mean high-water level of the natural bank or fifty (50) feet back from the existing habitat, whichever is greater. Although not currently planned, water-dependent uses, such as stormwater retention basins, may be permitted within this buffer.



PARKING LOT
5 gallon and 1 gallon shrubs.
Parking lot planter areas.
Medium and small sized shrubs, groundcovers and grasses
Dripline Irrigation.
Coleonema pulchrum 'Sunset Gold' / Golden Breath Of Heaven
Dietes vegeta / African Iris
Escallonia rubra / Red Escallonia
Gazania rigens / Gazania
Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily
Hesperaloe parviflora 'Perpa' TM / Brakelights Red Yucca
Limonium perezii / Statice
Lomandra longifolia 'Platinum Beauty' / Platinum Beauty Dwarf Mat Rush
Osteospermum fruticosum 'African Queen' / Trailing African Daisy
Pennisetum setaceum / Fountain Grass
Phormium tenax / New Zealand Flax
Rhaphiolepis indica / Indian Hawthorn
Verbena Tapien hybrids 'Blue-Violet' TM / Tapien Blue-Violet Verbena
Westringia fruticosa / Coast Rosemary

BIORETENTION
Native seed turfgrass mix to be installed in storm water basin and retention basin areas.
Seasonal mowing only to prevent fire hazard.
Overhead spray irrigation.
Carex testacea 'Prairie Fire' / Prairie Fire Orange Sedge
Chondropetalum tectorum / Small Cape Rush
Festuca x 'Native Mow Free' / 1/3 Molate rubra, 1/3 Idaho, 1/3 Western Mow
Juncus effusus / Soft Rush

SCREENING
5 and 15 gallon shrubs. Drought tolerant, low water-use plants.
Install foundation shrubs (4'-8' high) at building and fenceline for screening.
Drip bubbler irrigation.
Cistus x purpureus / Orchid Rockrose
Dodonaea viscosa purpurea / Hopseed Bush
Heteromeles arbutifolia / Toyon
Nerium oleander / Oleander
Pittosporum tenuifolium 'Golf Ball' / Golf Ball Tawhiwhi
Rhamnus californica / California Coffeeberry
Westringia fruticosa / Coast Rosemary
Xylosma congestum

SITE PLANTING
5 gallon and 1 gallon shrubs.
Interior planter areas.
Medium and small sized shrubs, groundcovers and grasses.
Drip Irrigation.
Arctostaphylos x 'Emerald Carpet' / Emerald Carpet Manzanita
Baccharis pilularis 'Pigeon Point' / Pigeon Point Coyote Brush
Ceanothus gloriosus 'Anchor Bay' / Anchor Bay Point Reyes Ceanothus
Cistus x purpureus / Orchid Rockrose
Coprosma kirkii / Creeping Mirror Plant
Gazania x 'Burgundy' / Gazania
Lavandula angustifolia 'Hidcote' / Hidcote English Lavender
Myoporum parvifolium 'Pink' / Trailing Myoporum
Nandina domestica / Heavenly Bamboo
Phormium tenax 'Maori Queen' / New Zealand Flax
Phormium tenax 'Variegatum' / Variegated New Zealand Flax
Phormium x 'Yellow Wave' / Yellow Wave New Zealand Flax
Rhaphiolepis indica 'Ballerina' / Ballerina Indian Hawthorn
Salvia greggii / Autumn Sage
Salvia leucantha 'Santa Barbara' / Mexican Bush Sage
Salvia spathacea / Hummingbird Sage

ENTRY ACCENT
5 gallon and 1 gallon shrubs.
Entry and building perimeter planter areas
Medium and small sized shrubs, groundcovers and grasses
Drip Irrigation.
Erigeron karvinskianus 'Profusion' / Profusion Santa Barbara Daisy
Festuca californica / California Fescue
Festuca glauca 'Elijah Blue' / Elijah Blue Fescue
Lantana x 'New Gold' / New Gold Lantana
Lomandra longifolia 'Platinum Beauty' / Platinum Beauty Dwarf Mat Rush
Loropetalum chinense rubrum 'Purple Prince' / Purple Prince Fringe Flower
Muhlenbergia capilaris 'Regal Mist' / Pink Muhly
Penstemon heterophyllus 'Margarita BOP' / Margarita BOP Penstemon
Phormium tenax 'Amazing Red' / Dwarf Red Flax
Phormium tenax 'Cream Delight' / Cream Delight New Zealand Flax
Vinca minor / Common Periwinkle
Zauschneria californica / California Fuchsia

CREEK/LEACH FIELD
Hydroseeded
Non-irrigated
Seasonal mowing
Pacific Coast Seed
"Green to Gold Blend"
-

BARK MULCH
Recycled bark mulch.
Provided to retain soil moisture, mitigate soil erosion and minimize weed control.
3" thick layer minimum. Installed in landscape street frontage planted areas as well as perimeter screen tree areas within the project site.
-

PLANTING DESIGN SUMMARY

1. PLANTS SHALL HAVE THE FOLLOWING CHARACTERISTICS:
   - 1.1. LOW WATER USE, WATERWISE PLANTING PALETTE.
   - 1.2. LONG-TERM ADAPTABILITY TO THE SITE LOCATION AND CLIMATIC CONDITIONS.
   - 1.3. EASE OF MAINTENANCE SO AS NOT TO REQUIRE SUBSTANTIAL PRUNING, LEAF AND LITTER COLLECTION OR PEST CONTROL.
   - 1.4. PROVIDE TALL STRUCTURES PERIMETER SCREENING, STREET SCREENING, AND SHADE.
   - 1.5. "RIGHT PLANT, RIGHT PLACE." PLANTS ARE SELECTED AND PLACED IN A SPACE BASED ON THEIR NATURAL GROWTH SIZE AND CHARACTERISTICS.

IRRIGATION DESIGN SUMMARY

1. ISOLATED BACKFLOW PREVENTER, WATER METER, MASTER VALVE AND FLOW SENSOR SHALL BE INSTALLED.
2. IRRIGATION SHALL CONSIST OF DRIP IRRIGATION TUBING FOR ALL SMALL SPACE SHRUBS AND GROUNDCOVERS, AND TREES SHALL BE IRRIGATED WITH AN ISOLATED VALVE AND DRIP BUBBLERS AND OVERHEAD SPRAY ROTATORS FOR BIORETENTION AND LAWN AREAS.
3. NEW IRRIGATION WEATHER-BASED CONTROLLER
4. THE IRRIGATION SYSTEM SHALL COMPLY WITH THE CRITERIA FOR THE 2015 WATER EFFICIENT LANDSCAPE ORDINANCE AND THE REQUIREMENTS FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.

WATER EFFICIENCY NOTE

THE IRRIGATION SYSTEM SHALL MEET THE CALIFORNIA STATE 2015 WATER EFFICIENT LANDSCAPE ORDINANCE.

LANDSCAPE DESIGN PLANS SHALL USE DRIP AND WATER EFFICIENT IRRIGATION, LOW AND MODERATE WATER USE PLANT SPECIES AND A "SMART" WEATHER-BASED CONTROLLER.

LEGEND

LARGE SHADE TREES
15 gallon trees.
Located within the site and parking lot. Spacing per plan.
Drip bubbler irrigation.
-
Aesculus californica / California Buckeye
Cinnamomum camphora / Camphor Tree
Fraxinus latifolia / Oregon Ash
Gleditsia triacanthos / Honey Locust
Platanus racemosa / California Sycamore
Quercus agrifolia / Coast Live Oak
Quercus douglasii / Blue Oak
Quercus ilex / Holly Oak
Quercus lobata / Valley Oak
Quercus wislizenii / Interior Live Oak
Schinus molle / California Pepper
Zelkova serrata 'Village Green' / Village Green Sawleaf Zelkova

MEDIUM SHADE TREES
15 gallon trees.
Located within the site and parking lot. Spacing per plan.
Drip bubbler irrigation.
-
Acer negundo / Box Elder
Acer rubrum 'October Glory' / October Glory Red Maple
Agonis flexuosa / Peppermint Tree
Celtis sinensis / Chinese Hackberry
Juglans californica / Southern California Black Walnut
Pistacia chinensis 'Keith Davey' / Keith Davey Chinese Pistache
Populus fremontii / Fremont Cottonwood
Pyrus calleryana 'Aristocrat' TM / Aristocrat Callery Pear
Quercus frainetto 'Schmidt' / Forest Green Oak
Ulmus parvifolia / Lacebark Elm
x Chitalpa tashkentensis / Chitalpa

SMALL ACCENT TREES
15 gallon trees.
Located in small space planting areas as accent. Spacing per plan.
Drip bubbler irrigation.
-
Arbutus x 'Marina' / Marina Strawberry Tree Standard
Cercis canadensis / Eastern Redbud
Chilopsis linearis 'Warren Jones' TM / Warren Jones Desert Willow
Lagerstroemia indica / Crape Myrtle

MULTI-TRUNK ACCENT TREES
15 gallon trees.
Located as impact and accent areas of site. Spacing per plan.
Drip bubbler irrigation.
-
Arbutus x 'Marina' / Marina Strawberry Tree Multi-Trunk
Cercis canadensis / Eastern Redbud Multi-trunk
Chilopsis linearis 'Warren Jones' TM / Warren Jones Desert Willow
Lagerstroemia indica 'Pink' / Crape Myrtle Multi-Trunk
Olea europaea / Olive Multi-Trunk

CONIFER TREES
15 gallon trees.
Located within the site and riparian edge. Spacing per plan.
Drip bubbler irrigation.
-
Calocedrus decurrens / Incense Cedar
Cedrus atlantica 'Glauca' / Blue Atlas Cedar
Cedrus deodara / Deodar Cedar
Pinus attenuata / Knobcone Pine
Pinus canariensis / Canary Island Pine
Pinus nigra nigra / Austrian Black Pine

NARROW TREES
15 gallon, Low/medium water use trees. Perimeter areas requiring narrow, upright growth along building and fenceline screening. Drip bubbler irrigation.
-
Acer platanoides 'Columnare' / Columnar Norway Maple
Ginkgo biloba 'Autumn Gold' TM / Autumn Gold Maidenhair Tree
Podocarpus gracilior / Fern Pine

0' 50' 100' 200'
SCALE: 1"=100'

KEY NOTES

	RETENTION BASIN			
	WASTE DISPOSAL AREA			

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- PLANNING
- SURVEYING

REGISTERED LANDSCAPE ARCHITECT
NORMAN J. NORWICH
No.5595
No.: 62498
Exp.: 09/30/21
CA
STATE OF CALIFORNIA

REVISIONS
No. Description Date By

Project No.:19161
Drawn By:LMS
Checked By:PJS

SITE APPROVAL
07.09.21

LANDSCAPE PLAN

L1.0

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ENVIRONMENTAL CONSULTANTS

Figure 3-6. Landscape Plan
2020-053 Gill Medical Center

3.6.5 Utilities

The Proposed Project is not currently served by public water, sewer, or storm drain Utilities. The Project requested public utilities (sanitary sewer, storm sewer and water service) from the City of Stockton, however on August 24, 2020 the requested services were denied based on a General Plan conformity review conducted by City staff (See Appendix K for service request and response letters). Therefore, the Project includes construction and phased expansion of onsite Utilities to serve the Project. The ultimate Utility improvements are shown on *Figure 3-7. Grading and Utility Plan* and are sized to serve full project buildout. Phase 1 Utility improvements would be sized to accommodate Phase 1 demands and would be designed for efficient expansion commensurate with development phasing. The individual utilities are further described below.

3.6.5.1 Water

According to a technical memorandum prepared by Siegfried Engineering, Inc. (2020), the Project's potable water demand is approximately 37,300 gpd, or 41.8 acre-feet per year (Phase 1 demands of approximately 4,800 gpd, or 5.4 acre-feet per year; and Phase 2 demands of approximately 32,500 gpd, or 36.4 acre-feet per year).

Potable water would be provided via an onsite Small Public Water System (SPWS) with groundwater serving as the source supply. Permitting of SPWS is through the State Division of Drinking Water (DDW), and San Joaquin County Environmental Health Department (EHD) Small Public Water Systems Program. The purpose of the County program is to protect public health and prevent disease by assuring that small public water supplies are at all times safe, potable and available in adequate quantity. The County EHD has been delegated authority as a Local Primacy Agency by the State Department of Health Services for the inspection and surveillance/regulation of small public water systems in San Joaquin County as required by State law.

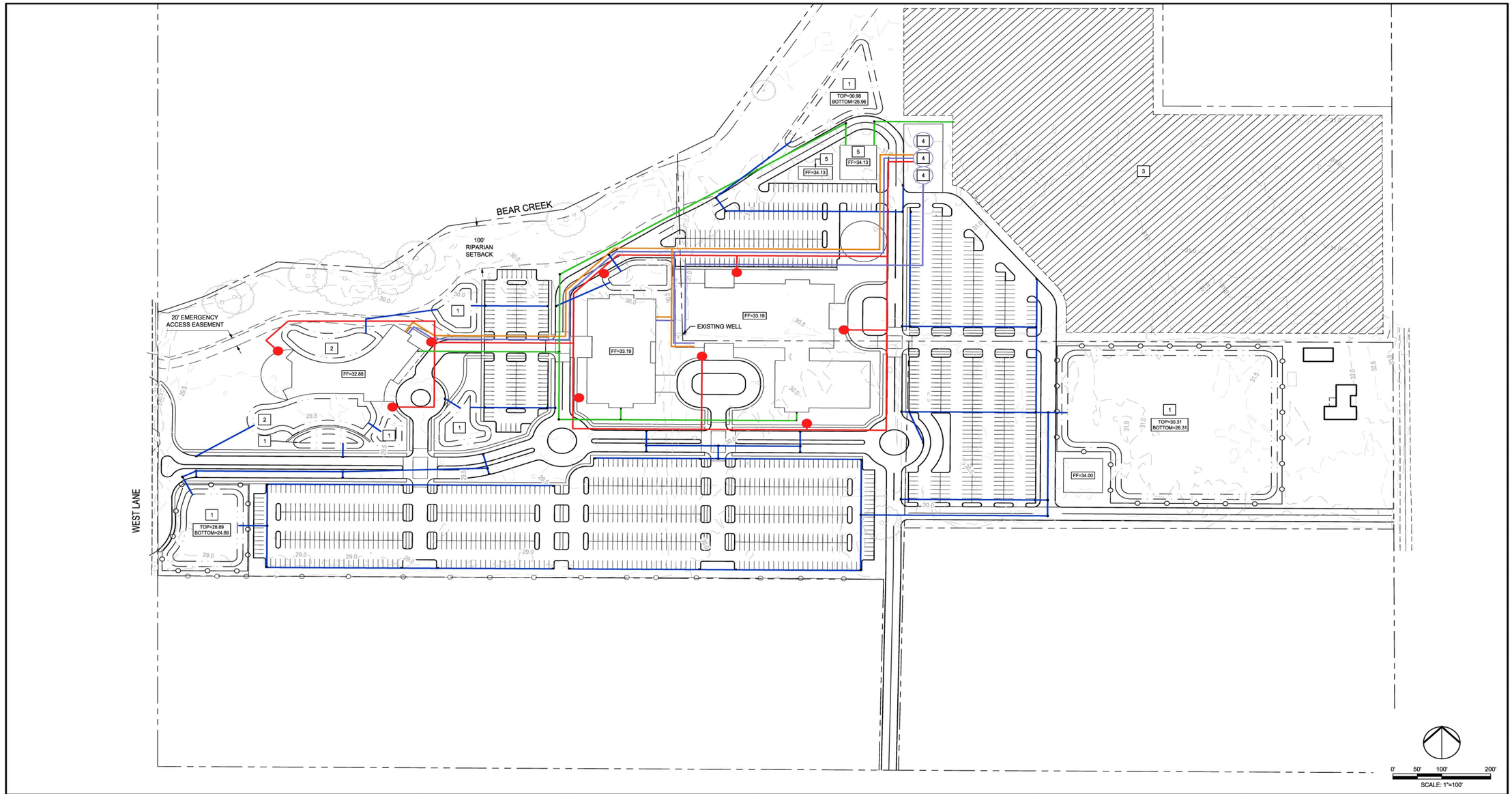
As shown on Figure 3-7, groundwater would be pumped from an onsite well or wells and transmitted via underground pipeline to potable water storage tanks located on the northern point of the Project site.

From there smaller pipelines would distribute water to indoor potable use areas, fire hydrants and building sprinkler systems as shown in Figure 3-7. If required by the DDW as part of the SPWS permit, treatment of the water prior to distribution may be required.

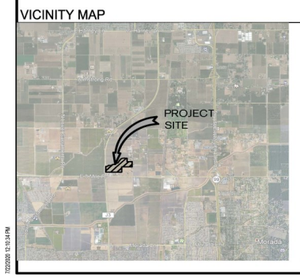
3.6.5.2 Wastewater

Wastewater

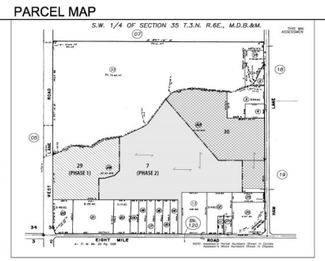
The Project is outside of the area served by a municipal sanitary sewer system. Therefore, the Project includes its own onsite sanitary sewer and wastewater treatment system. Wastewater generated by the Project would be conveyed by underground piping to an advanced "package plant" wastewater treatment system constructed near the northern site boundary, west of the water storage tanks (Figure 3-7). The treatment process would be specially designed to treat/remove hospital generated liquid medical waste.



VICINITY MAP



PARCEL MAP



LEGEND

- STORM
- SANITARY
- WATER
- FIRE HYDRANT
- FIRE SPRINKLER
- FIRE HYDRANT
- LAND APPLICATION AREA

KEY NOTES

1	STORM RETENTION BASIN (3.48 AC TOTAL)
2	STORM DETENTION BASIN (0.43 AC TOTAL)
3	12.15 AC LAND APPLICATION AREA
4	PROPOSED TANK
5	WASTE WATER TREATMENT PLANT

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- PLANNING
- SURVEYING

REGISTERED PROFESSIONAL ENGINEER
PAUL J. SCHNEIDER
No. 62498
Exp. 09/30/23
CIVIL
STATE OF CALIFORNIA

REVISIONS

No.	Description	Date	By

Project No.: 19161
Drawn By: LMS
Checked By: PJS

SITE APPROVAL
07.09.21

GRADING AND UTILITY PLAN

C1.0

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Figure 3-7. Grading and Utility Plan

2020-053 Gill Medical Center

The resultant water quality would be treated to a level suitable for National Pollutant Discharge Elimination System (NPDES) permitting by the Regional Water Quality Control Board with Waste Discharge Requirements (WDR). Treatment to this level would produce "recycled water" suitable for use in outdoor reflecting ponds, as landscape irrigation, or for agricultural production.

Piping would also allow for directing treated wastewater (i.e., recycled water) to onsite landscape areas and reflecting ponds to reduce the Project's overall potable water demand. The wastewater treatment and recycled water irrigation system would be permitted and expanded by development phase as needed.

3.6.5.3 Storm Water

The closest existing stormwater mainline is a 12-inch line that runs in a north-south direction on West Lane approximately one-mile (approximately 5,500 feet) south of the Project site. Due to the distance from the site, and because the City of Stockton denied connection to City utilities based on a General Plan conformity review, connecting to this existing facility is not feasible. Therefore, onsite stormwater retention is proposed.

To determine the need for physical storm water improvements, expected storm water runoff was calculated based on state water quality requirements and related San Joaquin County improvement standards. According to Siegfried (2020), full project buildout (Phases 1 and 2) would generate the need for approximately 15-acre feet (AF) of onsite stormwater storage.

Storm water runoff from impervious surfaces would be collected via drop inlets and underground piping and conveyed to onsite retention basins where it would undergo pre-treatment and be allowed to infiltrate and evaporate. Figure 3-7 shows a full buildout conceptual retention basin plan that employs multiple sized basins with 3:1 side slopes (min) occupying approximately 9.5 acres of the Project site. All basins in the concept plan are located down gradient from development areas allowing for a gravity flow system. Like water and wastewater, stormwater improvements would be constructed and sized consistent with development phasing.

3.7 Project Operation

3.7.1 Employees, Customers and Deliveries

The anticipated staffing by building and shift is shown in Table 3-3. As shown, the Phase 1 and Phase 2 Hospitals would operate 24 hours per day, seven days per week with 10 defined employee "shifts" and slightly reduced staffing levels during the overnight hours. The average number of employees over a 24-hour period is expected to be 50 at the Phase 1 Hospital and 450 at the Phase 2 Main Hospital. The average number of patients over a 24-hour period is expected to be 72 at the Phase 1 Hospital and 400 at the Phase 2 Main Hospital. The Phase 2 Medical Office Building would operate on a more traditional 8:00 a.m. to 5:00 p.m. Monday through Friday schedule and is expected to accommodate 100 office workers and attract approximately 384 customers Monday through Friday. The following routine daily material/supply deliveries are also expected: two at the Phase 1 Hospital, 12 at the Phase 2 Main Hospital, and four at the Phase 2 Medical Office Building. The number of onsite staff, medical building occupants, customers, and deliveries are not expected to vary significantly throughout the year.

Table 3-3. Employees, Customers and Deliveries per Work Shift*

Building	Number of Shifts	Shift Length (Hours)	Shift Hours	# of Days of Operation	Average # Employees / Shift	Average # Customers per Shift	Average # Deliveries per Shift
Phase 1 Hospital (Option 1)	2	12	6 am-6 pm 6 pm-6 am	7 Days	10 10	36 36	2
Phase 1 Hospital (Option 2)	3	8	6 am-2 pm, 2 pm-10 pm, 10 pm-6 am	7 Days	10 10 10		
Phase 2 Main Hospital (Option 1)	2	12	6 am-6 pm, 6 pm-6 am	7 Days	100 75	300 100	10 2
Phase 2 Main Hospital (Option 2)	3	8	6 am-2 pm, 2 pm-10 pm, 10 pm-6 am	7 Days	100 100 75		
Medical Office Building	1	8	8 am-5 pm	M-F	100	384	4

*Year round

3.7.2 Helicopter Operations

According to the Heliplanners memo prepared for the Project (Heliplanners 2021, Appendix B), the anticipated number of daily flights would vary. Rescue events with multiple victims can result in multiple flights within relatively short periods. However, on average approximately one landing/take off event per week is expected.

Given the current site plan, prevailing winds and surrounding land uses, according to Heliplanners, the *preliminary* helicopter approach and departure flight path is expected to be a southeast/northwest alignment as shown on *Figure 3-8. Helicopter Preliminary Flight Path*. During emergency events, flight plans could deviate from the preliminary flightpath depending on the urgency of the situation. Further, other factors could affect flightpath layout at the actual time of helistop design which would occur during detailed Phase 2 site planning.

Helicopters would descend to and climb from the helistop on different vertical profiles that may vary according to the pilot, weather, helicopter loading characteristics, etc. In general, for noise analysis purposes, default vertical flight profiles are used in computer noise modeling conducted for the Project.

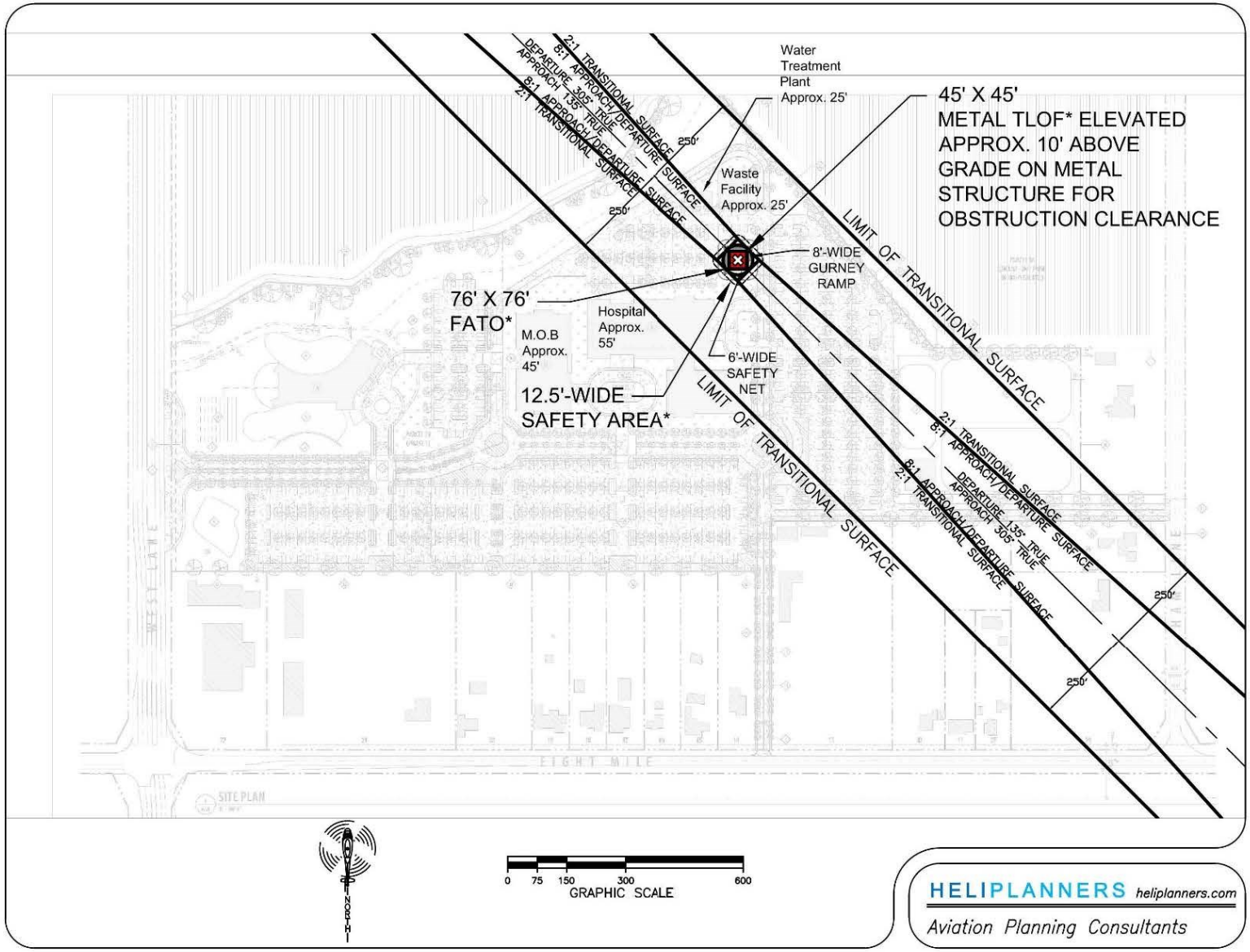

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Figure 3-8. Helicopter Preliminary Flight Path

2020-053 Gill Medical Center

3.7.3 Public Transportation

Public transit in the Project area includes San Joaquin Regional Transit District (SJRTD) Route 23, a city-to-city route that travels along West Lane between Stockton and Lodi. Use of this existing route to create a transit stop at the Project site main entrance was investigated. However, due to the Project site's distance from the existing signalized West Lane/Eight Mile Road intersection and because of private property constraints at the proposed main entrance on the west side of West Lane Drive, construction of a new transit stop at the West Lane Drive main entrance is infeasible. Accordingly, a private shuttle service is being investigated to serve the project.

3.8 Construction Schedule and Approach

Phase 1 construction is anticipated to begin in 2024 and take approximately 12 months to complete. The Phase 1 Hospital is expected to begin operations in 2025. Phase 2 construction is scheduled to begin in 2030 and take approximately 20 months to complete. The Phase 2 Main Hospital and other support uses are expected to begin operation in 2032.

Construction activities would take place between 7:00 a.m. and 7:00 p.m. Monday through Friday and, if necessary, between 8:00 a.m. and 8:00 p.m. Saturday and Sunday, consistent with the San Joaquin County Development Title. Phase 1 and 2 construction would generally progress as follows.

- *Mobilization and Site Layout*. The construction team would set up the construction site, including perimeter fencing, and implement initial construction best management practices (BMPs) (such as fencing environmentally sensitive areas).
- Civil Site Preparation, Road Installation, and Receipt of Construction Materials. The construction team would remove the existing vineyard and conduct minor grading to smooth and contour the site, construct access roads, install underground utilities, and prepare building sites. Materials needed for Project construction would be received and stored onsite within designated construction staging areas.
- *Building Construction*. Buildings and special use areas such as the helicopter landing pad and other utility and support infrastructure would be constructed.
- *Landscaping, Signage and Demobilization Activities*. Landscaping and finishing work such as signage and fences would be installed. The construction team would conduct post-construction site restoration, including site cleanup activities, removal of all temporary facilities and fences, and implementation of post-construction BMPs.

3.8.1 Grading

Grading would consist of cuts and fills to build up development areas and ensure positive drainage as shown on Figure 3-7. No import or export of soil is anticipated as Project grading is expected to be balanced onsite. It is expected that grading would be accomplished using conventional grading equipment listed in Table 3-4. Scrapers would cut and transport onsite soil within the Project site. Finish grading would be achieved by motor graders (blades) and skip loaders. Material excavation and

compaction activities would be required primarily to install roads to meet fire and safety requirements. Consistent with Best Management Practices (BMPs), throughout grading operations, water trucks would provide water to the site to achieve the proper moisture content for compaction and dust suppression. Grading would be stopped to control dust generation during times of excessive wind.

Underground utilities would be installed using standard underground utility trenching methods. Trenches would be excavated by hand or by a backhoe or similar excavation equipment. Underground utility placement would begin immediately following trench excavation, followed by back fill and compaction.

Table 3-4. Construction Equipment List

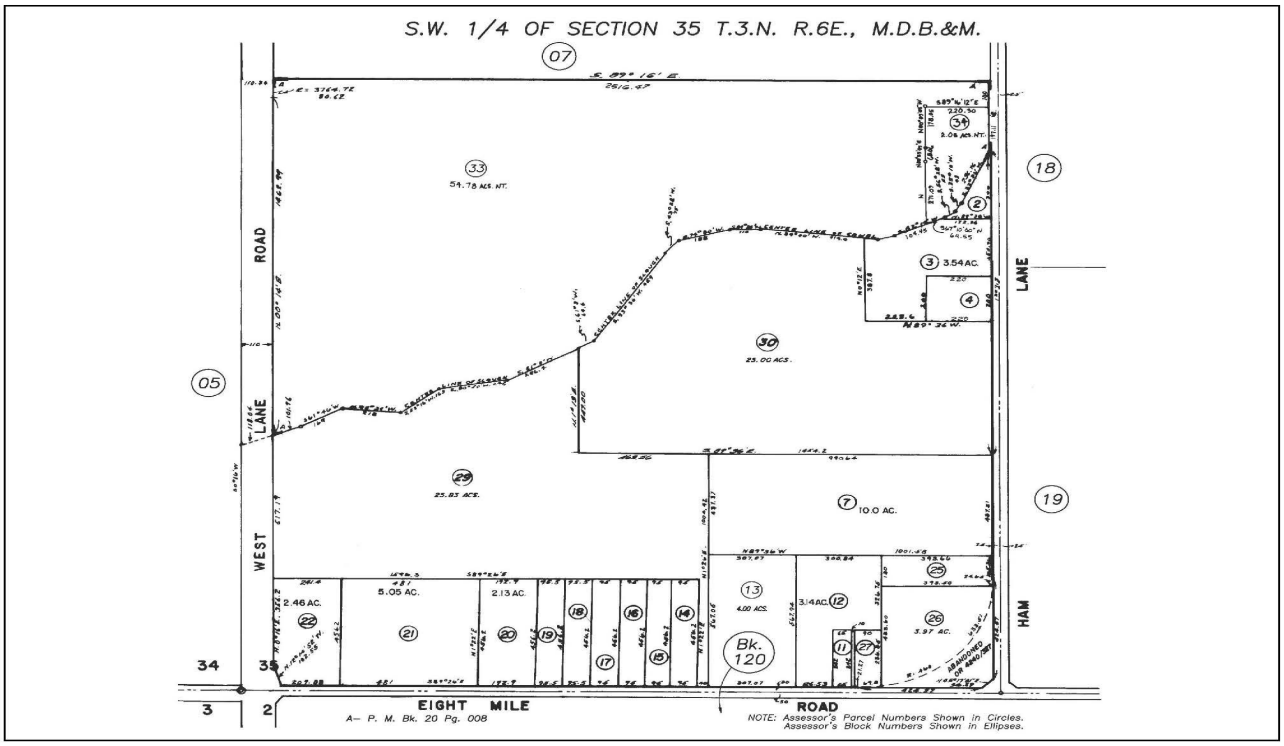
Grading, Underground and Road Construction Phase	Building Construction Phase
6 Rubber Tired Dozers	2 Cranes
8 Tractors/Loaders/Backhoes	6 Forklifts
2 Excavator	2 Generator Sets
2 Grader	6 Tractors/Loaders/Backhoes
4 Pavers	2 Welders
4 Paving Equipment	2 Air Compressors
4 Rollers	

3.9 Requested Entitlements and Approvals

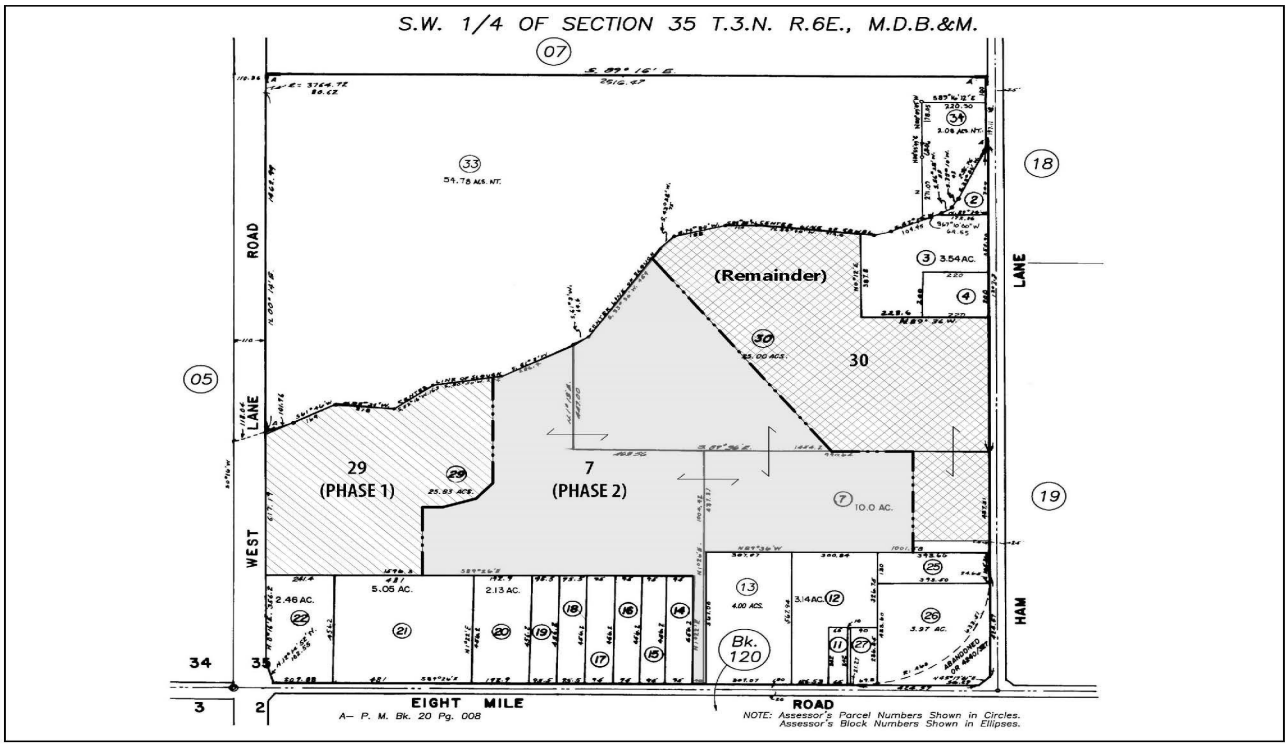
Prior to initiation of Phase 1 development, the following project entitlements and approvals are requested from San Joaquin County.

3.9.1 Lot Line Adjustment Application

As shown on *Figure 3-9. Existing Assessor Page and Proposed Lot Line Adjustment*, the Project site is comprised of three legal parcels totaling 60.8 acres. The Project proposes a lot line adjustment to parcels 30 and 7 to reconfigure the existing parcels and exclude 18.4 acres from the Project site to conform with Project phasing (*Figure 3-9.*). Following the lot line adjustment, portions of Parcels 7 and 30 would become part of the Phase 2 development area. The balance of Parcel 30 would remain in agriculture crop production and retain the existing residence. The existing and proposed acreages for each parcel following lot line adjustment are shown in Table 3-5. It is expected that should the Site Approval be granted; a Condition of Approval would require the lot line adjustment be processed under a separate application.



Existing Assessor's Page



Proposed Lot Line Merger

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Figure 3-9. Existing Assessor's Page and Proposed Lot Line Adjustment

2020-053 Gill Medical Center

Table 3-5. Existing and Proposed Parcel Acreages

Assessor's Parcel Number	Existing Acreage	Proposed Acreage	Phase
059-080-29	25.8	12.5	PHASE 1
059-080-07	10	29.9	PHASE 2
059-080-30	25	18.4	Remainder
Totals:	**60.8**	**60.8**	

3.9.2 Development Agreement Application

The Project would include execution of a Development Agreement between the landowner and the County. The Development Agreement would outline vested entitlements, Project phasing over ten years, landowner and County development responsibilities, and anticipated timelines and schedules.

3.9.3 Site Approval

As discussed above, County Development Title conditionally permits hospital campus and related medical service uses within the General Agriculture (AG) General Plan designation and General Agriculture, 40-acre minimum (AG-40) Zone. Consequently, a General Plan Map amendment, and/or zone reclassification, is not required for the Project. Rather, the Project requests approval of a Site Approval application along with the Development Agreement to allow both phases of project development to proceed over the next 10 years consistent with the Site Plan shown in Figure 3-5.

3.9.4 Eight Mile Road Precise Road Plan Amendment

The City of Stockton and County of San Joaquin in 1994 jointly developed and approved the Eight Mile Road Precise Road Plan. A goal of the plan is to regulate access to Eight Mile Road to ensure safe and efficient regional travel between I-5 and SR 99. According to the Plan, this goal is achieved by ensuring numerous points of access to Eight Mile Road, similar to existing conditions along March Lane and Hammer Lane, do not occur.

As discussed above, Project site access is proposed from West Lane, Ham Lane, and Eight Mile Road. The proposed Phase 1 and Phase 2 driveway access points served by West Lane and Ham Lane would allow for full turning movements at their intersection with Eight Mile Road consistent with the Eight Mile Road Precise Road Plan. However, the existing proposed Phase 2 driveway to Eight Mile Road is not currently identified as an approved future Eight Mile Road access point. This access point would facilitate Phase 2 development, would be limited to right-in and right-out turning movements only, and would serve to reduce turn movement Project generated traffic at the Eight Mile Road/West Lane and Eight Mile Road/Ham Lane intersections. Thus, the project includes amendment of the Eight Mile Road Precise Road Plan to allow Phase 2 right-in and right-out only driveway access to Eight Mile Road as show in Figure 3-5.

3.9.5 Water Supply Assessment Approval

As discussed above, to serve water demands the Project proposes an onsite SPWS with groundwater serving as the source supply. State Water Code Sections 10910 through 10915 were amended by Senate Bill (SB) 610 in 2002. SB 610 requires that, under specific circumstances, an assessment of available water supplies must be conducted. The purpose of the assessment is to determine if available water supplies are sufficient to serve the Project generated demand, as well as the reasonably foreseeable demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Water Code Section 10910 was further amended by SB 1262 on September 24, 2016 to require a Water Supply Assessment to include additional information regarding the groundwater basin designation and adjacent water systems.

To comply with the above regulatory requirements, a Water Supply Assessment for the Gill Medical Center Project (ECORP. September 9, 2021.) has been prepared (Appendix G) and the Project includes a request for Water Supply Assessment approval pursuant to Senate Bill 610 and California Water Code Section 10910.

3.10 Other Required Permits and Approvals

In addition to addressing required County entitlements and approvals, this Draft EIR also provides the CEQA documentation necessary for San Joaquin County to consider the construction and operational effects of the Project. San Joaquin County, as CEQA lead agency, has approval authority over the proposed Site Approval Application, Development Agreement, and Lot Line Adjustment, Eight Mile Road Precise Road Plan Amendment, and Water Supply Assessment Approval and has Lead Agency responsibility for CEQA compliance.

Table 3-6 lists additional State and local approvals and regulatory permits required for Project implementation. It is anticipated the Final EIR will be utilized by the Responsible Agencies identified below when making their discretionary approvals.

Table 3-6. Anticipated Responsible Agency Approvals

Organization or Issue	Approval or Permit
California Department of Transportation (Caltrans)	Encroachment permits for placement of encroachments within, under, or over the state highway rights of way if improvements are required at freeway interchanges
California Department of Transportation (Caltrans) Division of Aeronautics	Approval of Helistop-related permits Prior to use of the helistop pad, a State Helistop Permit issued by Caltrans, Division of Aeronautics MS-40, is required. The permit process includes review of the proposed helicopter pad by a Caltrans Aviation Safety Officer. The Safety Officer is responsible for certification of the proposed helicopter pad location and associated takeoff and landing flight paths.

Table 3-6. Anticipated Responsible Agency Approvals

Organization or Issue	Approval or Permit
California Department of Health Care Access and Information (HCAI)	HCAI 1 certification and construction inspection for the Phase 1 and Main Hospital Buildings.
California Department of Public Health, Licensing, and Certification	Licensing and certification of hospital and healthcare facilities
Central Valley Regional Water Quality Control Board (CVRWQCB)	National Pollutant Discharge Elimination System (NPDES) permitting with Waste Discharge Requirements (WDR).
San Joaquin Valley Air Pollution Control District (SJVAPCD)	Authority to construct and permit to operate
State Division of Drinking Water (DDW)	Small Public Water System Approval/Concurrence for County EHD permitting
San Joaquin County EHD	Small Public Water System Permitting, Inspection and Enforcement
San Joaquin Council of Governments	Approval of participation and certificate of payment confirming participation in the San Joaquin Multi-Species and Habitat Conservation Plan

References

Heliplanners. 2021. *Gill Medical Center Heliport Design and Operations Assumptions*. September 15.

Siegfried Engineering Inc. 2020. Memo: North Stockton Hospital. June 23.

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_____. 2016. *2035 San Joaquin County General Plan*. December.

King, Philip G., Ph.D., Sharmila G. King, Ph.D., and Sarah Jenkins. 2021. *Economic Impact and Urban Decay Analysis. Prepared for Gill Medical Center Project, San Joaquin County CA*. September 30.

4.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION

4.1 INTRODUCTION TO IMPACT ANALYSIS

Chapter 4 of this Draft EIR describes the environmental resources directly and indirectly affected by the Gill Woman's Medical Center Project and the extent and significance of those effects. This Chapter also considers the Project's contribution to the cumulative impact on affected resources due to past, ongoing and foreseeable future projects.

Within each issue area in this section, the discussion of project impacts is provided in the following format:

- Environmental Setting;
- Regulatory Setting;
- Thresholds of Significance;
- Project Impacts and Mitigation Measures; and,
- Cumulative Impacts.

4.2 METHODS OF ENVIRONMENTAL ANALYSIS

The CEQA analysis methodology employed in this Draft EIR is described below.

4.2.1 Environmental Baseline

Pursuant to the State CEQA Guidelines (Section 15125(a)), the environmental setting used to determine the impacts associated with the Project normally is based on the environmental conditions that existed in the project area at the time the Notice of Preparation was published. However, the state CEQA Guidelines (Section 15125(a)) also says that where existing conditions change or fluctuate over time, a lead agency may define existing conditions by referencing historic conditions, conditions expected when a project becomes operational, or projected future conditions beyond the date of initial project operations, if doing so would meet CEQA's objective of giving the public and decisionmakers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts.

For purposes of this EIR, environmental baseline is generally defined as conditions that existed within the Project Study Area at the time of NOP circulation, or January 13, 2020. This provides the basis for the determination of the majority of Project impacts, i.e., the changes to those conditions brought about by Project construction and operation either directly or indirectly. When environmental baseline is substantially different than described above, the specific conditions and assumptions relied on for the issue area are described, such as in Section 4.17 Transportation.

4.2.2 Impact and Mitigation Measure Terminology

This Draft EIR analyzes the potential direct, indirect, and cumulative environmental impacts of the proposed Project. The determination of whether an impact is considered significant is based on specific

significance criteria. Under CEQA, these criteria (sometimes called thresholds of significance) are used to make a determination of significance for each environmental impact evaluated. An adverse impact that exceeds or crosses the significance criteria is considered significant, and an impact that does not exceed or cross the criteria is considered less than significant. The CEQA significance criteria used in this Draft EIR are based on CEQA's mandatory findings of significance (as summarized in State CEQA Guidelines Section 15065); the checklist presented in Appendix G of the State CEQA Guidelines in effect when the Draft EIR was prepared; and where appropriate, factual or scientific data and regulatory standards of federal, state, and local agencies. For CEQA purposes, impacts in this Draft EIR are classified as:

- **Less than significant** - A project impact is considered less than significant if it would not exceed the threshold of significance and therefore would not cause a substantial adverse change in the environment. No mitigation is required for a less than significant impact.
- **Potentially Significant Impact** - A potentially significant impact is an environmental effect that may cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.
- **Significant Impact** - A project impact is considered significant if it results in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects in the context of specified thresholds of significance. Mitigation measures and/or project alternatives are identified to reduce these effects to the environment, where feasible.
- **Significant and unavoidable Impact** - A project impact is considered significant and unavoidable if it would result in a substantial adverse change in the environment that cannot be feasibly avoided or mitigated to a less than significant level if the project is implemented. If a lead agency proposes to approve a project with significant unavoidable impacts, it must adopt a statement of overriding considerations to explain its actions (State CEQA Guidelines Section 15093(b)).
- **Cumulative Impacts** - According to CEQA, "cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines Section 15355). CEQA requires that cumulative impacts be discussed when the "project's incremental effect is cumulatively considerable… [or] … provide a basis for concluding that the incremental effect is not cumulatively considerable (State CEQA Guidelines Section 15130 (a))."
- **Mitigation Measures** - Mitigation measures are identified, where feasible, to avoid, minimize, rectify, reduce, or compensate for significant or potentially significant impacts of the project, in accordance with the State CEQA Guidelines (Section 15126.4).

CEQA requires that a diligent effort be taken to identify mitigation measures that would reduce identified significant impacts to less than significant. Where feasible, such measures are presented for all potential impacts identified herein that are found to be potentially significant.

4.2.3 Cumulative Impact Analysis

The State CEQA Guidelines (Section 15130) requires that an EIR discuss cumulative impacts of a project and determine whether the project's incremental effect is "cumulatively considerable." The definition of cumulatively considerable is provided in CEQA Guidelines Section 15065(a)(3):

> "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

According to the State CEQA Guidelines (Section 15130(b))

> The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

For purposes of this EIR, the project would have a significant cumulative effect if it meets either one of the following criteria:

- The cumulative effects of related projects (past, current, and probable future projects) without the project are not significant but the project's incremental impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- The cumulative effects of related projects (past, current, and probable future projects) without the project are already significant and the project represents a considerable contribution to the already significant effect. The standards used herein to determine "considerable contribution" are that the impact either must be substantial or must exceed an established threshold of significance.

Mitigation measures are to be developed, where feasible, that reduce a project's contribution to cumulative effects to less than considerable.

4.2.3.1 Geographic Scope

The analysis of cumulative environmental impacts addresses the potential incremental impacts of the project in combination with those of other past, present, and probable future projects and land use changes. The geographic area that could be affected by development of the proposed project varies depending on the type of environmental resource being considered. The general geographic area associated with various environmental effects of construction and operation of the Proposed Project defines the boundaries of the area used for the cumulative impact analysis. Table 4.1-1 presents the general geographic areas associated with the different resources addressed in this EIR's cumulative analysis. As shown, unless otherwise noted, the cumulative impacts analysis area is primarily regionally inclusive of San Joaquin County, however for some issues, a more local geographic area is defined (i.e., the more immediate project vicinity).

Table 4.1-1. Geographic Scope of Cumulative Impacts

Resource Issue	Geographic Area
Aesthetics	Local (immediate project vicinity)
Agriculture and Forestry	Regional (San Joaquin Valley)
Air Quality	Regional (San Joaquin Valley Air Basin —pollutant emissions that have regional effects) Local (immediate project vicinity—pollutant emissions that are highly localized)
Biological Resources	Regional (San Joaquin County)
Cultural Resources	Regional (San Joaquin County)
Energy	Regional (San Joaquin County)
Geology and Soils	Local (immediate project vicinity)
Greenhouse Gas Emissions and Climate Change	Global
Hazards and Hazardous Materials	Local (immediate project vicinity)
Hydrology and Water Quality	Local (immediate project vicinity—local watershed/groundwater aquifer)
Land Use and Planning	Regional (San Joaquin County)
Mineral Resources	Regional (San Joaquin County)
Noise	Local (immediate project vicinity)
Population and Housing	Regional (San Joaquin County/City of Stockton)
Public Services	Local (San Joaquin County)
Recreation	Regional (San Joaquin County)
Transportation	Regional (San Joaquin County)
Tribal Cultural Resources	Regional (San Joaquin County)
Utilities/Service Systems	Regional (regional utility area)
Wildfire	Local (immediate project vicinity)

Source: Data compiled by ECORP Consulting, 2020

4.2.3.2 Cumulative Condition

To analyze cumulative impacts of the project in combination with other expected future growth, the amount and location of growth expected to occur must be predicted. Section 15130(b) of the CEQA Guidelines allows two methods of prediction:

Either:

a. *A list of relevant past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or*
b. *A summary of projections contained in adopted general plan or related planning document or in a prior adopted or certified environmental document that described or evaluated regional or area-wide conditions contributing to the cumulative impact.*

For the purpose of this EIR, a cumulative analysis projections approach is used based on buildout of the San Joaquin County 2035 General Plan as analyzed in the San Joaquin County 2035 General Plan EIR (San Joaquin County 2016). Given the historic county growth rate, development patterns established under the General Plan, and other constraints, it would be infeasible for every parcel in the county to develop to its maximum theoretical buildout potential within the 2035 planning horizon. Therefore, this EIR's cumulative analysis focuses on growth that is reasonably foreseeable to occur within the 2035 planning horizon consistent with historic growth trends and the assumptions and cumulative analysis methodology contained in the San Joaquin County 2035 General Plan EIR (San Joaquin County 2016). The only exception to this approach is the cumulative traffic analysis which is based on a future 2040 cumulative traffic scenario as further described in Section 4.17 Transportation.

4.2.3.3 San Joaquin County Growth Projections

The project site is located in San Joaquin County just north of the City of Stockton. The County encompasses over 900,000 acres (about 1,425 square miles) and is bordered by Sacramento County to the north, Stanislaus County to the south, Amador and Calaveras Counties to the east, and Contra Costa and Alameda Counties to the west.

Table 4.1-2 presents the distribution of 2010 San Joaquin County population between the cities and unincorporated county outside of city Spheres of Influence and summarizes the projected population growth from 2010 to 2035 (San Joaquin County 2016). As shown, a majority of new population growth would occur as part of city expansions (218,300 or 83.48 percent) compared to growth resulting from unincorporated county development outside of city Spheres of Influence (43,200 or 16.52 percent). While the County 2035 General Plan allows for development in some areas within city Spheres of Influence, it is expected that most of the anticipated growth in Spheres of Influence would occur as a result of city annexations and expansions. According to the San Joaquin County 2035 General Plan, it can be expected that by 2035 much of the land currently within each city Sphere of Influence will be annexed into each respective city.

Table 4.1-2. Population and Housing Growth within San Joaquin County by City Spheres of Influence

City/County	2010 Population		Population Growth (2010-2035)		2035 Population		New Housing Units (2010 to 2035)
	Population	Distribution	Population	Distribution	Population	Distribution	
City SOIs							
Escalon	7,300	1.07%	2,400	0.92%	9,700	1.02%	900
Lathrop	18,100	2.64%	49,800	19.04%	67,900	7.17%	13,700
Lodi	65,700	9.59%	7,300	2.79%	73,000	7.71%	2,700
Manteca	69,100	10.08%	36,400	13.92%	105,500	11.14%	12,300
Ripon	14,700	2.15%	9,900	3.79%	24,600	2.60%	3,500
Stockton	344,300	50.24%	74,400	28.45%	418,700	44.22%	24,500
Tracy	87,500	12.77%	38,100	14.57%	125,600	13.27%	11,700
Subtotal	*606,700*	*88.53%*	*218,300*	*83.48%*	*825,000*	*87.14%*	*69,300*
Unincorporated County outside City Spheres of Influence	78,600	11.47%	43,200	16.52%	121,800	12.86%	14,700
Total	**685,300**	**100.00%**	**261,500**	**100.00%**	**946,800**	**100.00%**	*84,000*

NOTE: Addresses growth within Spheres of Influence of cities as annexations would occur with increased housing and employment growth.
SOURCE: San Joaquin County. 2016. *San Joaquin County 2035 General Plan EIR*

The projected growth pattern moving forward to 2035 is similar to what has happened in San Joaquin County since the 2010 General Plan was adopted in 1992. At the time of the 2010 General Plan adoption, it was predicted that about 37,400 acres of undeveloped land within the county would be developed with residential, commercial, or industrial uses (San Joaquin County 1992). Since 1992, about 27,800 acres of land have been annexed into incorporated cities within the county. In that same time period, the county has had development within unincorporated areas that totaled about 183.45 acres. Thus, it can be seen that the historical trend has been for new development to be focused within cities, either by annexations or by development within existing city boundaries. Therefore, it is reasonable for this EIR to assume that in the future, cities will continue to annex unincorporated land within Spheres of Influence through 2035.

As can be seen in Table 4.1-2, a majority of the county's existing population resides in the City of Stockton's Sphere of Influence (344,300 or 50.24 percent). The largest projected increases are expected to occur in the Stockton Sphere of Influence (74,400 persons), Lathrop Sphere of Influence (49,800 persons), and Tracy Sphere of Influence (38,100 persons). While about 50 percent of the county's population now resides in the Stockton Sphere of Influence, that percentage is projected to change to 44 percent by 2035. Only about 11 percent of the overall countywide population currently resides within unincorporated areas of San Joaquin County outside of city Spheres of Influence, and in 2035, this percentage is expected to increase to 13 percent. A large portion of the population growth would occur outside current city limits, but within city Spheres of Influence. Additionally, a significant amount of growth is projected to occur within the unincorporated community of Mountain House. Annexations of unincorporated land would occur as city boundaries expand outward and much of the new growth is served by existing services and utilities provided by the cities.

4.2.3.4 Significant Unavoidable Cumulative Impacts Identified in the San Joaquin County 2035 General Plan Update EIR

The following specific significant cumulative impacts were identified in the San Joaquin County 2035 General Plan EIR as cumulatively considerable, significant and unavoidable impacts:

Impact 4.B-6: Implementation of the proposed 2035 General Plan, combined with cumulative development in the Central Valley, including past, present, reasonably foreseeable probable future development, could contribute to significant adverse cumulative impacts on agricultural resources. (Significant and Unavoidable)

Impact 4.D-10: Implementation of proposed 2035 General Plan, combined with cumulative development in the defined geographic area, including past, present, and reasonably foreseeable probable future development, could contribute to significant cumulative transportation and circulation impacts. (Significant and Unavoidable)

Impact 4.E-6: Implementation of proposed 2035 General Plan, in conjunction with, past, present, and reasonably foreseeable probable future projects, could have significant cumulative impacts on historical resources in the County. (Significant and Unavoidable)

Impact 4.G-6: Development facilitated by implementation of the proposed 2035 General Plan, when combined with past, present and other reasonably foreseeable development in the vicinity, could result in cumulative criteria air pollutant air quality impacts. (Significant and Unavoidable)

Impact 4.N-7: Development facilitated by implementation of the proposed 2035 General Plan, in combination with other past, present, and reasonably foreseeable probable future projects, could result in cumulatively considerable impacts to potable water supply and treatment and delivery systems. (Significant and Unavoidable)

The Project's contribution to the above unavoidable impacts is analyzed in the cumulative impact analysis sections of this EIR.

4.2.4 Format of the Environmental Analysis

Each section in Chapter 4 begins with a description of the project environmental setting and regulatory setting as it pertains to the particular resource topic. The environmental setting serves as the baseline, which provides a point of reference for assessing the environmental impacts of the proposed project and alternatives and determining the significance of those impacts. The setting description in each section is followed by an environmental impacts and mitigation measures discussion. The impact and mitigation portion of each section includes impact statements, which are prefaced by an "Impact Number" in bold-faced type. The discussion that follows the impact statement includes the substantial evidence supporting the impact analysis and significance conclusion. If necessary, mitigation measures are then recommended to reduce potentially significant or significant impacts to less than significant levels, as feasible, and the significance of the impact after implementation of mitigation is described. Mitigation measures are organized numerically to correspond to the impact they address. For example, Impact 4.4-1 would be mitigated by Mitigation Measure 4.4-1a, and if more than one measure is required to ensure the impact is mitigated to less than significant, it would continue this sequencing as 4.4-1b and so on.

A cumulative impacts section follows the existing plus project analysis. The cumulative impact analysis focuses on determining if the proposed project would result in a cumulative impact or make a cumulatively considerable contribution to cumulative impacts identified in the San Joaquin County 2035 General Plan EIR.

References

San Joaquin County. 2016. *San Joaquin County 2035 General Plan EIR*. September

_____. 1992. *San Joaquin County General Plan 2010*. July 29

4.3 AESTHETICS

This section describes the aesthetic, or visual, setting of the project area and vicinity; identifies substantial changes to the visual setting directly or indirectly caused by the Project; and recommends mitigation measures to reduce or eliminate any impacts found to be significant. The discussion contained in this chapter is based on the proposed site plan and a qualitative description of the visual setting derived from site visits, photographs, photo simulations/renderings, satellite imagery, and the County 2035 General Plan.

4.3.1 Environmental Setting

San Joaquin County is set within the greater San Joaquin Valley, with the Delta and large expanses of level, agricultural lands and urban development framed by the foothills of the Diablo Range to the west and the foothills of the Sierra Nevada to the east. The foothills of the Diablo Range separate San Joaquin County from Alameda County and Contra Costa County to the west, with the main access between these counties being Interstate 205 (I-205), which cuts through the Altamont Pass. The eastern portion of San Joaquin County, and adjoining Amador County and Calaveras County to the east, share the rolling terrain of the Sierra Nevada foothills. To the south, the Stanislaus River separates San Joaquin County from Stanislaus County. Other major rivers passing through San Joaquin County include the San Joaquin River, the Calaveras River, the Mokelumne River, and Dry Creek. Agricultural uses make up about 83 percent of the unincorporated lands within the county, with urban development concentrated in the seven incorporated cities of the county.

The county also includes major transportation systems that pass through it. In the Project area this includes State Route (SR) 99 and Interstate 5 (I-5), two of the State's major north-south freeways.

Long distance and open sky views are possible from many locations within San Joaquin County due to the predominantly level terrain and low density of development. The most intense development occurs within the urban centers of Stockton and Tracy; otherwise, much of the county is developed at low densities with most buildings not exceeding two stories. Large expanses of agricultural land are often broken up by small areas of scattered development. The most intense corridors of development occur along I-205 in the southwestern portion of the county and along I-5 through the central portion of the county.

4.3.1.1 Project Area Setting

According to the San Joaquin County 2035 General Plan EIR (, areas of the county with important visual resources include the Delta, river corridors, agricultural lands and rangelands, significant oak groves, hillsides and ridges, and parklands. The Project site is in the north part of the county, north of the City of Stockton in an area characterized as agricultural lands and rangelands. The project area includes predominately level agricultural lands that are irrigated for row crops, vineyards, orchards, and field crops such as alfalfa. Depending on the time of year, these agricultural lands take on different visual characteristics ranging from fallow lands in mid-winter to vibrant fruit trees in bloom in early spring. Grazing occurs in many portions of the county, from the flat agricultural lands outside of the City of Tracy to the rolling hills in the northeastern portion of the county near Clements and Linden. During summer

and fall, the rolling hills in the eastern portion of the county are composed of dry grasses that transform to brilliant green after heavy winter and spring rains. Views of these rangelands can be found while driving on State Routes 12, 88, 4, and 26.

Visual Character of the Project Site and Surroundings

As described in the Project Description of this EIR, the project site is located north of the city of Stockton between West Lane and Ham Lane approximately 550 feet north of Eight Mile Road. The majority of the 42.4-acre Project site is in agricultural production and planted with vineyard. The only exception is a ±10-acre rectangular-shaped field on the east side of the site adjacent Ham Lane which is currently fallow. The northwestern site boundary is framed by the Woodbridge Irrigation District canal, the southern half of which is located onsite. This canal is approximately 10-feet wide with several large trees (including oaks and walnuts) ranging in size from approximately 8 to 32 inches DBH) dispersed along the banks which provide vertical visual relief to an otherwise mostly flat horizon landscape. The only other onsite trees are located along the West Lane project frontage south of the proposed main entrance (where a small stand of three trees exists) and near the mid-point of the southern site boundary (where three additional trees are located). An overhead electric line extends approximately 1,430 feet along the south side of an existing farm road from North Ham Lane to an existing well located in the approximate center of the site. A farm road also extends north from the well site to the northern property boundary, where it connects with a perimeter farm road that runs along the edge of existing vineyards around the northern and western site boundaries. Onsite structures are limited to a dilapidated corral and loading chute, both located near the mid-point of the southern property boundary; however, these are not visible from public viewing locations.

As shown in Figure 4.3-1 *Photo Location Map*, with the exception of properties bordering the southern site boundary, all surrounding properties are also in agricultural production. The properties bordering the Project site's southern boundary are developed with rural residential and light industrial uses that take access from and front Eight Mile Road.

Public Views of the Project Site

The project site is primarily visible from the immediately adjacent roads; West Lane on the west and Ham Lane on the east, with West Lane providing the most prominent views of the site. The Project site is not currently visible from immediately adjacent lands to the north or south as there are no public viewing locations with clear sightlines from these directions. Existing available public views of the site are described below. Refer to Figure 4.3-1 for the location and direction of representative photos.

West Lane

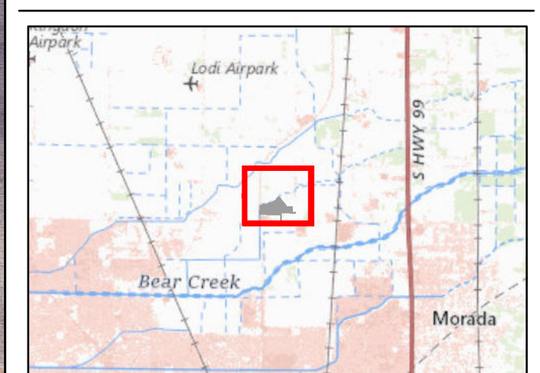
As shown in Figure 4.3-2 *Existing Views of the Project Site – West Lane*, Photos A and B, the most prominent existing views of the Project site are from West Lane drive which runs adjacent the site's western boundary. As shown in Photo A, Project site views from West Lane looking southeast primarily include existing vineyards in the foreground, with cypress, oak and other large trees visible in the

Map Features

- Project Boundary - +/-42 ac.
- Photo Points

Photo Source: Google Earth (08/03/2019)
Boundary Source: NJA Architecture (Boundary is Approximate)
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

[1] *Subject to U.S. Army Corps of Engineers verification. Feature boundaries have not been legally surveyed and may be subject to adjustments if more accurate locations are required.*



ECORP: N:\2020\2020-053 Gill Womens Medical Center\MAPS\CEQA\GWMC_Photos_20201007.mxd [CCH]-chinkelman 10/7/2020

Map Date: 10/7/2020

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Scale in Feet
0 400

Figure 4.3-1. Photo Location Map

2020-053 Gill Medical Center

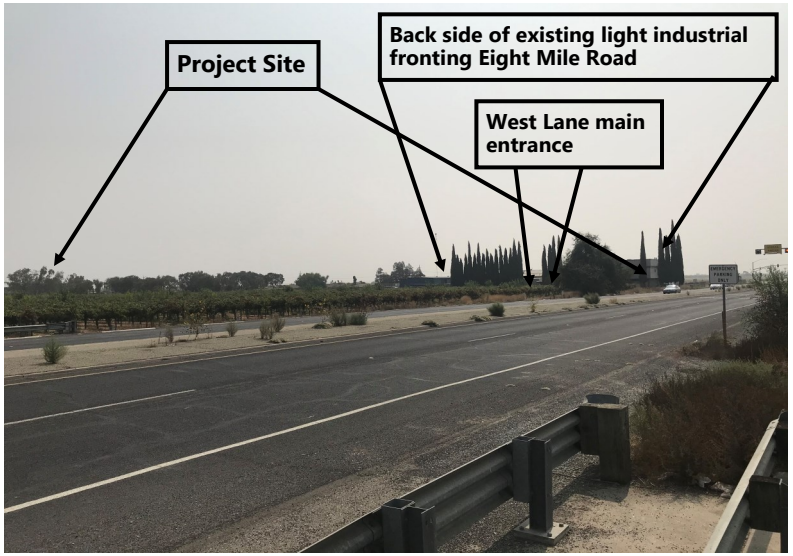

Photo A: View from West Lane Drive looking southeast at Project Site and Main entrance.

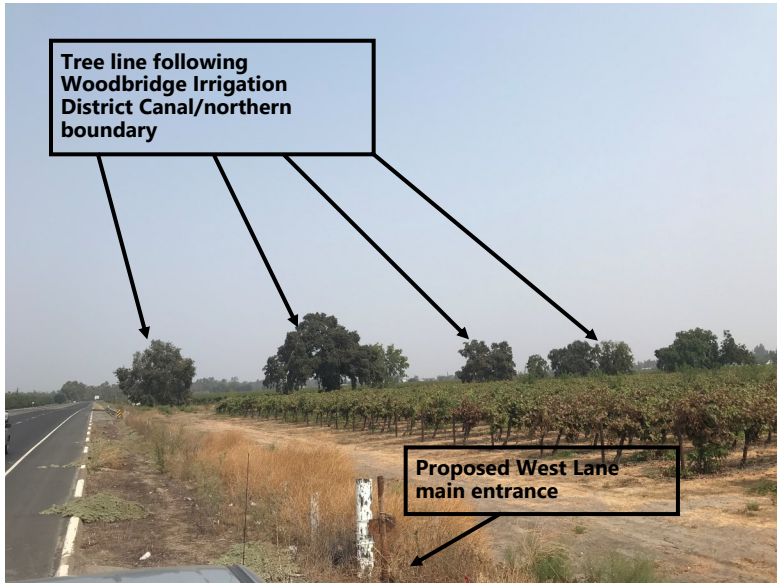

Photo B: View from West Lane looking northeast at proposed-West Lane main entrance..

Photo C: Distant view of Project site from West Lane looking southeast.

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Figure 4.3-2. Existing Views of the Project West Lane Drive

2020-053 Gill Medical Center

Background and primarily located offsite along and adjacent the southern property boundary. As shown in Photo B, views from West Lane looking northeast include vineyards in the foreground followed by a line of large oak and walnut trees located along the Woodbridge Irrigation Canal which follows the site's northwestern boundary. While no public viewing locations of the site are available from directly north, as shown on Figure 4.3-2, Photo C, distant background views of trees that border the site's northern and southern boundaries are possible from approximately ½ mile north of the site when traveling south on West Lane.

Ham Lane

Figure 4.3-3 *Existing Views of the Project Site – Ham Lane*, Photo D shows the proposed Ham Lane Phase 2 driveway access point and existing overhead electric line that extends onsite to serve the existing agricultural well. Figure 4.3-3, Photo E is representative of typical views of the site while traveling south on Ham Lane. In general, existing Ham lane views of the site are mostly screened by existing residences, outbuildings and vegetation. Other than the proposed entrance driveway, travelers on Ham Lane have very limited views of the project site.

Eight Mile Road

Figure 4.3-4 *Existing Views of the Project Site – Eight Mile Road*, Photo F provides a view of the proposed Eight Mile Road access drive location. As shown, the east (right) side of the access drive is tree lined between Eight Mile Road and the Project site; A residence is located on the west (left) side. Figure 4.3-4, Photos G and H provide views of existing residences and businesses located south of the project site and fronting Eight Mile Road. The existing development pattern of rural residential and light industrial along the north side of Eight Mile Road predominately block all views of the Project site from Eight Mile Road.

4.3.1.2 Regulatory Setting

Scenic Roadways

There are two State designated scenic highways in San Joaquin County: I-580, located approximately 27 miles southwest of the Project site, and I-5, located approximately 4 miles west of the Project site. The Project site is not visible from either of these designated scenic routes.

In addition to state designated scenic highways, several local "scenic routes" are designated by San Joaquin County. The nearest locally designated scenic route is a segment of Eight Mile Road between Empire Track and Thornton Road, located approximately 3 miles west of the project site. No existing views of the Project site area available from this segment of Eight Mile Road.

Photo D. View of Ham Lane entrance driveway looking west.

Photo E. View from Ham Lane near entrance driveway looking southwest.

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Figure 4.3-3. Existing Views of Project Site

Ham Lane

2020-053 Gill Medical Center

Photo F. View of Eight Mile Road proposed southern access entrance looking north.

Photo G. View from Eight Mile Road just west of southern access entrance looking northwest.

Photo H. View from Eight Mile Road looking northeast.

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Figure 4.3-4. Existing Views of Project Site

Eight Mile Road

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General Plan Policy

The following general plan policy is applicable to the Proposed Project.

NCF-7.7: *Reducing Glare and Light Pollution. The County shall encourage project designs, lighting configurations, complementary land uses and operational practices that reduce the potential for glare during daytime hours and reduce nighttime light pollution to protect adjacent uses from light and glare and preserve views of the night sky.*

4.3.2 Environmental Impacts and Mitigation Measures

As discussed above, the visual setting of the Project site and immediately surrounding lands to the north, east and west is predominately agricultural with scattered rural residential. The visual setting to the south includes a mix of light industrial and residential along the north side of Eight Mile Road. Visual changes would occur commensurate with site development which would occur in phases over 10 years. Phase 1 would occur within 5 years of Project approval and would involve the west side of the project site.

4.3.2.1 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this EIR, implementation of the proposed project could have a significant adverse impact on visual quality if it would result in any of the following:

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.3.2.2 Methods of Analysis

To assess aesthetic impacts, the site plan and available satellite imagery were reviewed, a site visit was conducted on September 12, 2020, and photos were taken to document existing conditions. Artist's renderings of proposed development were used to depict the Project's post construction appearance, and a photo simulation was created using geographic information system software to characterize expected distant views of site development. Finally, applicable sections of the San Joaquin County 2035 General Plan were considered.

Project Impacts and Mitigation Measures

Impact 4.3-1 Implementation of the proposed project would have a substantial adverse effect on scenic vista.
Impact Determination: *No Impact*

Threshold:	*Substantial degradation of an existing scenic vista.*

The Project Site is generally level with limited public views, primarily from West Lane Drive and to a lesser extent from Ham Lane. While Project development would change the visual character of the Project site from agriculture and open space to developed, the Project site does not contain, and Project development would not effect, any existing scenic vista per the San Joaquin County 2035 General Plan. Therefore, site development would not have a substantial adverse effect on a scenic vista and **no impact** would occur.

Mitigation Measures

No mitigation measures required.

Impact 4.3-2 **Project implementation would substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.**
Impact Determination: *No Impact*

Threshold:	*Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway.*

The Project site is currently in agricultural production and is mostly level. There are no onsite rock outcroppings or historic buildings and the Project site is not located along a state scenic highway. However, the site does support four relatively large native oaks and several walnut trees. As shown in Figure 4.3-1, these trees are primarily located along the northwest site boundary adjacent the Woodbridge Irrigation District canal, and along the western boundary adjacent West Lane. In addition, three trees are located adjacent the corral near the midpoint of the southern boundary.

According to the site plan, proposed development would avoid impacts to existing trees. Trees along the irrigation canal would be protected within a proposed 100-foot buffer and trees along West Lane and near the midpoint of the southern boundary would be incorporated within proposed landscape areas. There would be **no impacts** to scenic resources.

Mitigation Measures

No mitigation measures are required.

Impact 4.3-3 **In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point.). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.**
Impact Determination: *less than significant*

Threshold:	*Substantially degrade the existing visual character or quality of public views of the site and its surroundings.*

The Project site is in the north part of the county, north of the City of Stockton in a non-urbanized area characterized as agricultural and rangelands. The project site and surrounding areas are predominately level and improved for agricultural production including irrigated row crops, vineyards, orchards, and field crops such as alfalfa.

Following project implementation, when traveling south on West Lane the proposed Phase 2 three-story hospital and two-story medical office building would start becoming visible in the background at a point approximately ½ mile north of the Project site. As shown in Figure 4.3-5 *Simulated Views of Project Development from West Lane*, the upper floors of the taller onsite buildings would be visible from the location of Photo Point "C" (as shown in Figure 4.3-1). It should be noted that this future view would include partial screening from tree planting proposed along the site's northwestern boundary (not shown in Figure 4.3-5). Onsite buildings as viewed from West Lane traveling south would become more prominent the closer viewers travel to the Project site. Comparatively, due to intervening road-side structures and vegetation when traveling on Ham Lane, primarily only intermittent views of the proposed 3-story hospital and 2 story medical office building would be available. Views of Project development looking north from Eight Mile Road are expected to be similar to, but lessor than, those from Ham Lane. Depending on the viewer's location, the extent of existing building setbacks and the height of existing trees and vegetation, the traveling public is expected to only experience short, intermittent views of the upper floors of the Phase 2 buildings when traveling along Eight Mile Road.

As discussed above and in the setting section, public views of the Project site are not currently available from immediately adjacent lands to the north or south as there are no public viewing locations with clear sightlines from these locations. Due to a number of residences, barns, trees and vegetation existing along the west side of Ham Lane, only intermittent public views of the elevated portions of the proposed 3-story hospital and 2 story medical office building would be available to the traveling public from Ham Lane, and primarily when traveling south. Depending on distance from the site, these views of proposed buildings would be similar to views shown in Figure 4.3-5.

The most prominent public views of site development would be from West Lane looking southeast and east when approaching the site from the north. Figure 4.3-6 *Artist's Rendering of Site Development*, Simulations A and B, provide an artist's rendering "bird's eye" view of the overall development looking southeast and east from above West Lane Drive. As shown, proposed development would transform the site from vineyard to a "campus like" setting with three primary buildings including a single-story Phase 1 hospital/Alternative Birthing Center (ABC), Phase 2 three-story hospital and two-story medical office building. The two tallest onsite structures would be located near the center of the site and set back from the adjacent roadways by a minimum distance of 900 feet, significantly reducing their appearance from available public viewing locations. Reflecting pools would be located north and south of the ABC and a 100-foot wide densely planted landscape screening buffer is proposed along the northern site boundary adjacent the existing irrigation canal. The reflecting pools and buffer area would provide a park like setting linked by pedestrian trails and seating areas for use by patients, guests and employees. Site development would also include roads, curbs and gutters, parking lots, pedestrian pathways, wayfinding signage, night lighting and landscaping, all tied together under a cohesive design theme. Landscaping treatments would include a tree lined entrance drive with signage

Distant view of simulated medical office and hospital buildings as viewed from West Lane approximately ½ mile north of the site looking south (from Photo point C as shown on Figure 4.3-1).

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Figure 4.3-5. Simulated View of Project Development from West Lane

Gill Medical Center

Simulation A. "Bird's eye" view from West Lane looking southeast.

Simulation B. "Bird's eye" view from West Lane looking east.

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Figure 4.3-6. Artist's Rendering of Site Development

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and planted median, parking lot shade trees and larger landscape screening trees along the site's southern boundary where adjacent to existing development.

While the Proposed Project would introduce public views of site development from West Lane and views of the upper floors of proposed buildings from more distant locations, due to building setbacks from available public viewing locations and the quality of proposed development, project implementation would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Related impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.3-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area.
Impact Determination: *less than significant*

Threshold:	*Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area.*

The site plan places the largest and tallest buildings near the center of the site maximizing distance from adjacent uses that may be sensitive to glare. For example, the two-story medical office building would be set back approximately 900 feet West Lane and the tree-story hospital would be set back approximately 1,100 feet from West Lane, and 990 feet from Ham Lane. The Proposed Project would include building, parking lot, and landscape lighting typical of similar developments. Exterior lighting would be designed to achieve a minimum exterior illumination level of one foot-candle at grade level. The only exception is the helistop pad which would also include helicopter aviation lighting consistent with applicable standards. This would include eight to 16 green light-emitting diode (LED) lights embedded in the concrete landing pad perimeter. These lights would be turned on only during nighttime operations and because of their orientation would be easily seen by pilots from above, but not from ground level offsite locations. Building perimeters would be highlighted by wall mounted light fixtures and downlights and would provide coverage for pedestrians in proximity of buildings. All corridors, exit pathways, and other areas required by code would be illuminated to current California Building Code minimum standards and all exterior fixtures would be dark-sky compliant. Onsite parking areas and pedestrian pathways light fixtures would use light-emitting diode (LED) technology with 90° cut off and flat lenses to reduce light spill; all outdoor lighting would be connected to a timed clock control system. Finally, a minimum 7-foot tall masonry block wall would be constructed along the site's southern boundary which would aid in containing and minimizing parking lot light "spill" onto existing development to the south.

The above noted design features, combined with County Policy NCF-7.7: Reducing Glare and Light Pollution, would ensure the project would not create a new source of substantial light or glare that could adversely affect day or nighttime views in the area. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

4.3.3 Cumulative Impacts

The geographic area evaluated for cumulative visual quality analysis is the local project vicinity. Past, present, and reasonably foreseeable future projects include those proposed near the Project site within the unincorporated county. As discussed in the San Joaquin County 2035 General Plan EIR (San Joaquin County. 2016), cumulative project development would be subject to county general plan policies and implementation programs that address visual quality and mitigate potential cumulative visual quality impacts. As discussed in the setting section above, this would include Policy NCF-7.7: Reducing Glare and Light Pollution. Therefore, consistent with the San Joaquin County 2035 General Plan EIR, the Proposed Project would result in **a less than cumulatively considerable contribution** to aesthetic resource impacts.

Mitigation Measures

None required.

References

San Joaquin County. 2016. *San Joaquin County 2035 General Plan Final EIR*. September.

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4.4 AGRICULTURAL AND FORESTRY RESOURCES

This section describes the environmental setting for agricultural and forestry resources, including the existing site conditions, regulatory setting, and potential impacts that would result from the proposed Project, and, if significant impacts are identified, the mitigation measures that would reduce these impacts.

4.4.1 Environmental Setting

San Joaquin County occupies a central location in California's agricultural heartland, the San Joaquin Valley. The gross value for agricultural production in 2019 was $2,617,815,000, a 0.91% increase compared to 2018 (San Joaquin County 2020). Table 4.4-1, below, provides gross values for agriculture types in San Joaquin County in 2019.

Table 4.4-1. Summary of Agriculture Values

Product	Value
Fruit and Nut Crops	$1,354,789,000
Livestock and Poultry Products	$540,204,000
Vegetable Crops	$228,893,000
Field Crops	$204,057,000
Livestock and Poultry	$133,196,000
Nursery	$115,542,000
Apiary	$37,853,000
Firewood	$15,279,000
Seed	$3,281,000

4.4.1.1 Project Site

Approximately 33.11 acres of the Project site are currently in agricultural production in the form of a vineyard. Other site improvements include a dilapidated corral and cattle chute located near the mid-point of the southern site boundary and a former gas well converted to a water well in the approximate center of the property. An overhead electric line extends approximately 1,430 feet along the south side of an existing farm road from North Ham Lane to the well site. A farm road also extends north from the well

site to the northern property boundary, where it connects with a perimeter farm road that runs along the northern, eastern, and western site boundaries. Finally, the southern half of the existing Woodbridge Irrigation District canal is located onsite along the northern site boundary, between West Lane and the northern most point of the Phase 2 development area. The Project sit has historically been used for agriculture and grazing.

4.4.2 Regulatory Setting

4.4.2.1 Federal

Agricultural Conservation Easement Program (ACEP)

The Agricultural Act of 2014 established the ACEP, which consolidated previously separate federal farmland conservation programs. Under the ACEP, U,S. Department of Agriculture's National Resource Conservation Service (NRCS) provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. Under the Agricultural Land Easements component, NRCS helps Indian tribes, state and local governments, and non-governmental organizations protect working agricultural lands and limit non-agricultural uses of the land.

4.4.2.2 State

Department of Conservation

The California Department of Conservation, Division of Land Resource Protection (DOC) manages the Farmland Mapping and Monitoring Program (FMMP), which identifies and maps significant farmland and monitors the conversion of the state's farmland to and from agricultural use. The map series identifies seven land classifications (discussed below) and uses a minimum mapping unit size of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every two years. The FMMP designates Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance as "Important Farmland." The classifications of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance are based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The DOC also manages the California Important Farmland Finder, an interactive website, which can be used to identify the farmland classification of a specific area (DOC 2021).

Prime Farmland

Prime Farmland is farmland with the best combination of physical and chemical features 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 of Statewide Importance is similar to Prime Farmland but has minor shortcomings, such as greater slopes or a lesser 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

Unique Farmland has lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated 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

Farmland of Local Importance is land important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land

Grazing Land is land on which the vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, the 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

Urban and Built-Up Land is land occupied by structures with a building density of at least 1 unit per 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land

Other Land is 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 Agricultural Land Evaluation and Site Assessment (LESA) Model

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the LESA Model prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 established procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. This act requires that development or use of land for other than open-space shall be guided away from existing prime agricultural lands in open-space use toward areas containing nonprime agricultural lands, unless that action would promote the planned, orderly, efficient development of an area.

Williamson Act

The California Land Conservation Act of 1965, commonly known as the Williamson Act, was established based on numerous State legislative findings regarding the importance of agricultural lands in an urbanizing society. Policies emanating from those findings discourage premature and unnecessary conversion of agricultural land to urban uses and discourage discontinuous urban development patterns, which unnecessarily increase the cost of community services to community residents. The Williamson Act authorizes each County to establish an agricultural preserve. Land within the agricultural preserve is eligible to be placed under a contract between the property owner and County that would restrict the use of the land to agriculture in exchange for a tax assessment that is based on the yearly production yield. The contracts have a 10-year term that is automatically renewed each year, unless the property owner requests a non-renewal or the contract is cancelled. If the contract is cancelled the property owner is assessed a fee of up to 12.5 percent of the property value.

In 1972, the County and a prior owner of the Project site entered a Williamson Act Contract, as authorized by Cal. Gov't. Code § 51200, *et seq*. The Project Site was subsequently acquired by the City of Colfax in 1993. At that time, the County Assessor, in consultation with representatives of the State of California Board of Equalization, determined that the Contract was nullified by Colfax's acquisition of the property pursuant to Article XIII, Section 3 of the California Constitution. The Gill Family purchased the Project site from the City of Colfax in 1994, at which point the Gill Family did not elect to enroll the Project site into a new Williamson Act contract. The County has applied, and the owners have paid a 100% tax rate on the property since acquiring the property in 1994. Accordingly, the Project site is no longer subject to any restrictions under the Williamson Act. A few scattered parcels north and east of the Project site are under Williamson Act Contracts.

4.4.2.3 Local

Agricultural Mitigation Ordinance

In 2006, the San Joaquin County Board of Supervisors enacted the Agriculture Mitigation Ordinance (Mintier Harnish 2009). Finding that the "loss of farmland to development is irreparable" and that zoning and other regulatory measures are an "inadequate" approach to preservation, the ordinance calls for:

- At least a 1:1 ratio between the acres of farmland lost and preserved;
- Preservation through the acquisition of easements either (1) directly by the developer or (2) through payment of in-lieu fees;

- Mitigation of either a General Plan amendment or rezoning that changes land from an agricultural to non-agricultural designation, regardless of the non-agricultural designation;
- Having a "qualified entity" hold the easements and administer the fees—generally assumed to be the Central Valley Farmland Trust;
- Coordination with similar mitigation efforts of the cities, the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), and the Delta Protection Commission; and
- Organization of a nine-member Agricultural Technical Advisory Committee (with three members each appointed by the San Joaquin Farm Bureau Federation, the Building Industry Association, and the Board of Supervisors) to develop a Mitigation Strategy, report annually on the effectiveness of the program, and advise the county.

Right to Farm Ordinance

San Joaquin County's Real Estate Transfer Disclosure Statement (Right to Farm Ordinance) addresses the problem of urban growth encroaching on agricultural land by seeking to reduce nuisance complaints about farm operations from residential neighbors (Mintier Harnish 2009). Using disclosure methods, purchasers and existing owners of residential property are informed about the local importance of agriculture and the possible negative impacts of residing near normal farm operations, such as noise, odors, insects, dust, fumes, operation of machinery, application of pesticides and fertilizers, storage and disposal of manure, and other operational requirements. The ordinance is intended to protect existing farming operations from pressure to cease operations when residential development occurs nearby. The county established an Agricultural Grievance Committee to assist in resolution of disputes that arise regarding such operations or activities (Mintier Harnish 2009).

San Joaquin County 2035 General Plan

The following goals and policies are relevant to agriculture in San Joaquin County.

Goal LU-1: *Direct most urban development towards cities and urban and rural communities within the unincorporated county to promote economic development, while preserving agricultural lands and protecting open space resources.*

LU-1.1: Compact Growth and Development: The County shall discourage urban sprawl and promote compact development patterns, mixed-use development, and higher development intensities that conserve agricultural land resources, protect habitat, support transit, reduce vehicle trips, improve air quality, make efficient use of existing infrastructure, encourage healthful, active living, conserve energy and water, and diversify San Joaquin County's housing stock.

LU-1.5: Clear Boundaries: The County shall strive to preserve agricultural and open space areas that contribute to maintaining clear boundaries among cities and unincorporated communities.

LU-2.1: Compatible and Complimentary Development: The County shall ensure that new development is compatible with adjacent uses and complements the surrounding natural or agricultural setting.

It should be noted that analysis of project consistency with the above Land Use Element policies is provided in Draft EIR Section 4.3 Land Use and Planning (see discussion under Impact 4.13-2).

4.4.3 Environmental Impacts and Mitigation Measures

4.4.3.1 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2020 CEQA Guidelines. For the purposes of this EIR, implementation of the proposed Project may result in a potentially significant impact on agricultural resources if it would do any of the following:

- 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.
- Conflict with existing zoning for agricultural use or a Williamson Act contract.
- 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)).
- 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.

4.4.3.2 Methods of Analysis

This impact analysis considers Project consistency with applicable laws, regulations, ordinances, permits, and other legal requirements pertaining to agriculture and forest resources, as discussed above.

The LESA Model is used in determining whether impacts to agricultural resources are significant environmental effects under CEQA (Impact 4.4-1).

4.4.3.3 Project Impacts and Mitigation Measures

Impact 4.4-1: The proposed project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use and preserve an equal amount of Farmland by Conservation Easement.
Impact Determination: *less than significant.*

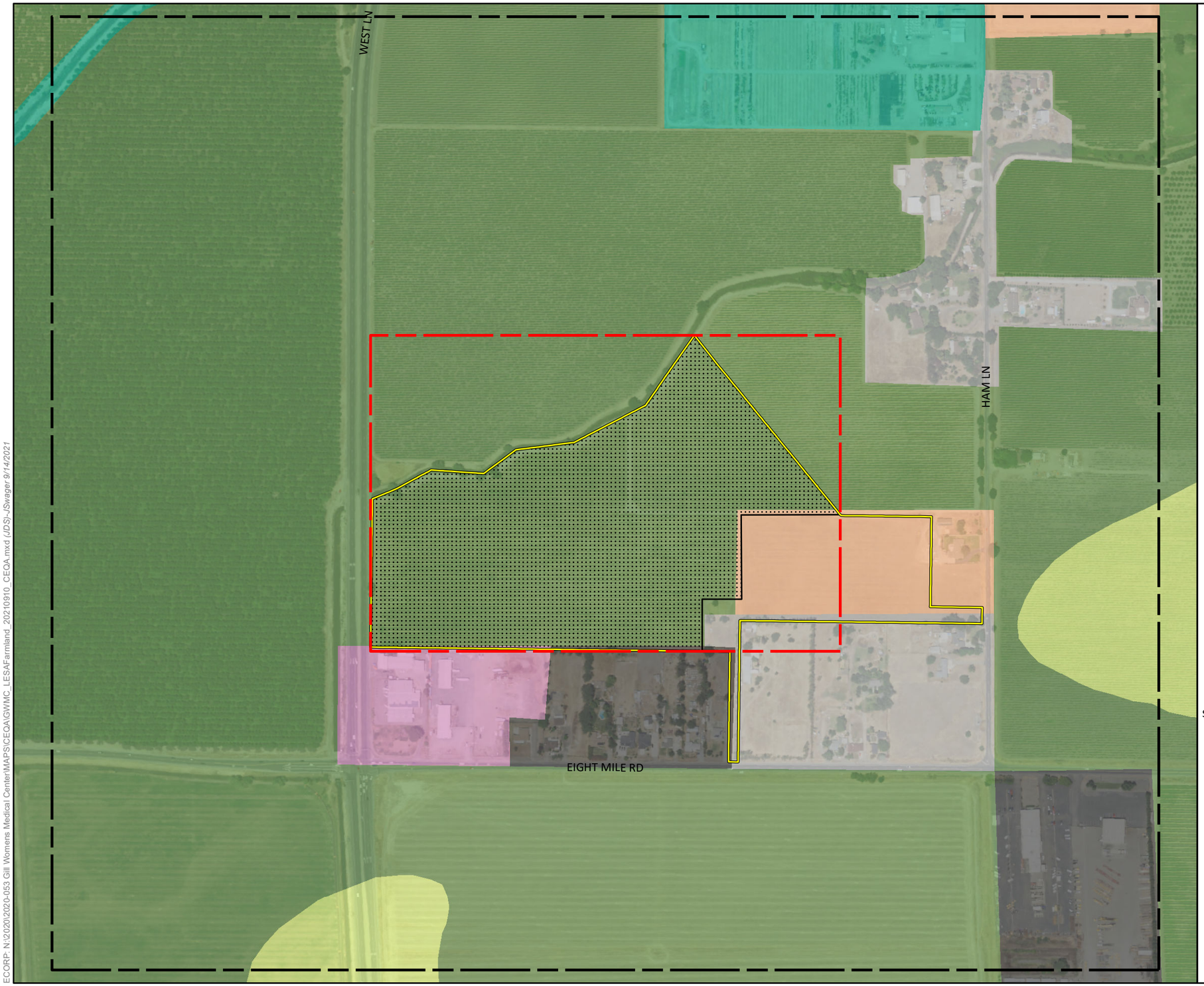
Threshold:	*Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.*

LESA Model

33.11 acres of the Project site is listed as Farmland of Statewide Importance (Farmland) and is currently a vineyard (see Figure 4.4-1. *LESA Surrounding Agricultural Lands*). The fallow field area in the eastern corner of the Project site (see Figure 3-3) is approximately 8.28 acres and is described as Farmland of Local Importance. The corral & cattle chute area is approximately .57 acres. The access road that connects to Eight Mile Road is approximately .62 acres. Both the corral & cattle chute area and access road are designated as Urban and Built-Up land. While Farmland of Local Importance is considered "Important Farmland" under the FMMP, it is not required for Farmland analysis under this CEQA threshold. Therefore, Farmland of Local Importance to be converted to non-agricultural uses is not considered under the LESA model presented herein.

Figure 4.4-1 shows producing agricultural lands that surround the Project site, the LESA Envelope, and the LESA Zone of Influence. The LESA Envelope is the smallest rectangle on the Project site that can completely contain Farmland as defined under Impact 4.4-1 (see Attachment A of Appendix C for additional information). The LESA Zone of Influence is a .25-mile buffer around the LESA Envelope that helps determine the Surrounding Agricultural Lands Score and Protected Lands Resource Score. Figure 4.4-2. *LESA Surrounding Protected Resource Lands* shows Williamson Act contracted lands within the LESA Zone of Influence. Appendix C contains the full LESA Model Calculation Table, LESA Instructions (Attachment A), and Soil Report (Attachment B). A summary is given below and the Final LESA Scoresheet is shown in Table 4.4-3:

- The entire 33.11 acres of Farmland, as described in Impact 4.4-1, contains soils characterized as Jacktone clay soil, 0 to 2 percent slopes. This soil type contains a 3s Land Capability Classification (LCC) Rating when irrigated, which it is, and has a corresponding LCC Score of 60 (see Appendices C, Attachment B – Soil Report).
- The Storie Index was determined to be 11, given the Grade 5 – Very Poor Rating of the soil type (see Appendices C, Attachment B – Soil Report).
- A 3s LCC Rating for a 33.11-acre plot corresponds to a Project Size Score of 30 (see Table 3 in Attachment A of Appendices C).
- The Project site sole water source is groundwater. A Water Availability Score of 100 was determined, given irrigated production for the site is feasible and there are no physical or economic restrictions in non-drought or drought years (see Table 5 of Attachment A).



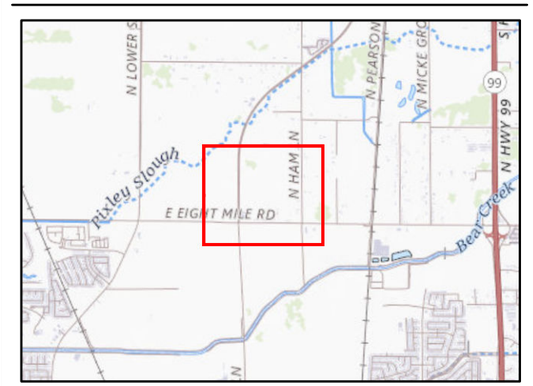
Map Features

- Project Boundary - +/-42 ac.
- Farmland as Defined Under Impact 4.4-1
- LESA Envelope
- LESA Zone of Influence

FMMP Farmland Type

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance
- Rural Residential
- Semi-Agricultural and Rural Commercial Land
- Urban and Built-up Land

Sources: ESRI, NJA, California Department of Conservation (FMMP), NAIP (2020)



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Map Date: 9/14/2021

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Scale in Feet
0 400

Figure 4.4-1. LESA Surrounding Agricultural Lands

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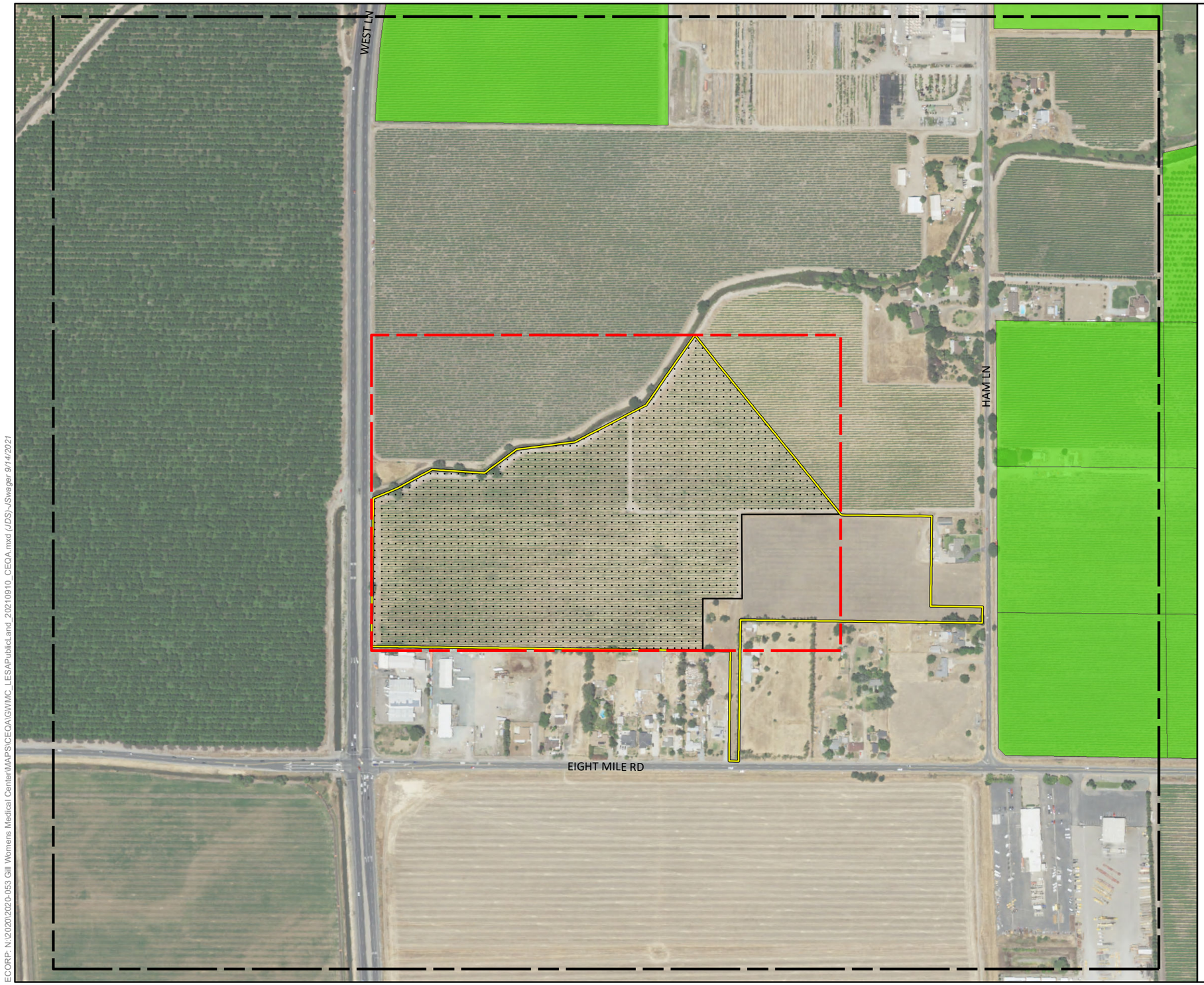


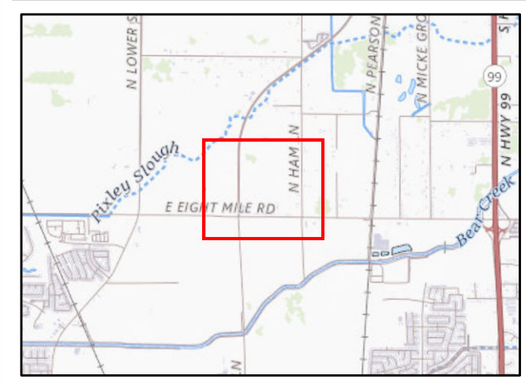
Map Features

- Project Boundary - +/-42 ac.
- Farmland as Defined Under Impact 4.4-1
- LESA Envelope
- LESA Zone of Influence

Williamson Act Parcels

- Mixed Enrolled Agricultural Land

Sources: ESRI, NJA, California Department of Conservation (FMMP), California Department of Conservation, San Joaquin County, CCED, NAIP (2020)



ECORP: N:\2020\2020-053 Gill Womens Medical Center\MAPS\CEQA\GWMC_LESAPublicLand_20210910_CEQA.mxd (JDS)-JSwager 9/14/2021

Map Date: 9/14/2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 400

Figure 4.4-2. LESA Surrounding Protected Resource Lands

2020-053 Gill Medical Center

- The Surrounding Agricultural Lands Score was determined to be 90 given that 296.37 acres of the 357.20 acers (82.97 percent) within in the LESA Zone of Influence were determined to be currently producing agricultural crops (DOC 2018) (see Table 4.4-2. LESA Zone of Influence, below, and Table 6 in Attachment A in Appendices C).
- The Protected Lands Resource Score is computed similarly to the Surrounding Agricultural lands Score. The Protected Lands Resource Score accounts for Williamson Act contracted lands, publicly owned lands maintained as park, forest, or watershed resources, and lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses. The Protected Lands Resource Score was determined to be 0 given that 40.81 acres of the 357.20 acres (11.42%) within the LESA Zone of Influence were found to be under Williamson Act Contracts (San Joaquin County 2015) (see Table 7 of Attachment A in Appendices C). ECORP also searched the California Conservation Easement Database and California Protected Lands Database and found no protected natural or biological resources lands or easements within the LESA Zone of Influence.

Table 4.4-2. LESA Zone of Influence

Land Type	LESA Envelope (acres)[1]	LESA Zone of Influence (acres)[2]
Prime Farmland	0.00	13.29
Farmland of Statewide Importance	51.36	260.57
Unique Farmland	0.00	15.04
Farmland of Local Importance	4.28	7.47
Active Farmland Subtotal	*55.64*	*296.37*
Rural Residential	1.93	30.37
Semi-Agricultural and Rural Commercial Land	0.42	8.77
Urban and Built-up Land	0.43	21.69
Grand Total:	**58.42**	**357.20**

[1] The LESA Envelope is the smallest rectangle on the Project site that can completely contain Farmland as defined under Impact 4.4-1.

[2] The LESA Zone of Influence is a .25-mile buffer around the LESA Envelope that helps determine the Surrounding Agricultural Lands Score and Protected Lands Resource Score.

Table 4.4-3. Final LESA Scoresheet

A	B	C	D	E	F
Factor Name	**Factor Rating (0-100 point)**	**X**	**Factor Weighting (Total = 1.00)**	**=**	**Weighted Factor Rating**
Land Evaluation (LE)					
1. Land Capability Classification	60	X	0.25	=	15.0
2. Storie Index Rating	11	X	0.25	=	2.75
				LE Subscore:	17.75
Site Assessment (SA)					
1. Project Size	30	X	0.15	=	4.5
2. Water Resource Availability	100	X	0.15	=	15.0
3. Surrounding Agricultural Lands	90	X	0.15	=	13.5
4. Protected Resource Lands	0	X	0.05	=	0
				SA Subscore	33
				Final LESA Score:	50.75 Not Significant

Table 4.4-4 shows the scoring thresholds and decisions for the LESA Model. The impact is considered **less than significant** because the Final LESA Score is 50.75 points and the LE subscore (17.75) is below 20 points.

Table 4.4-4. LESA Model Scoring Thresholds

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

Agricultural Mitigation Ordinance

Finding that the "loss of farmland to development is irreparable" and that zoning and other regulatory measures are an "inadequate" approach to agricultural land preservation, as discussed above the San Joaquin County Agriculture Mitigation Ordinance requires farmland preservation when farmland is lost due to development. The ordinance stipulates that should a project that requires a zone change or General Plan Land Use Map amendment result in conversion of agricultural land, reciprocal perseveration of agricultural land shall occur at 1:1 ratio and may be accomplished through the acquisition of easements either: 1) directly by the developer; or, 2) through payment of in-lieu fees.

The proposed Project would result in the conversion of approximately 33.11 acres of active agricultural land due to site development. However as discussed in Project Description Section 3.5.1 Agricultural Mitigation, the proposed Project use is consistent with the exiting AG zoning and General Plan land use designations. Thus, because the Project doesn't require a zone change or General Plan Land Use Map amendment, site development is not subject to the San Joaquin County Agriculture Mitigation Ordinance. While not subject to the Ordinance, the Project would still displace active agricultural land. To address this, as discussed in Project Description Section 3.5.1 Agricultural Mitigation, because the project results in the loss of 33.11 acres of active agricultural land, consistent with the intent of the Ordinance the Project applicant has agreed to preserve an equal amount of agricultural land as part of the Project. Doing so ensures adequate agricultural land mitigation consistent with the intent of the County's Agricultural Mitigation Ordinance. Therefore, with implementation of the Project as proposed, impacts to conversion of agricultural land would be **less than significant**. No mitigation is required.

Right to Farm Ordinance

Because the proposed Project does not include residential development, the San Joaquin County Right to Farm Ordinance does not apply. There would be **no impact**.

Mitigation Measures

None required.

Impact 4.4-2: The proposed project would conflict with current zoning for agricultural use or a Williamson Act contract.
Impact Determination: *less than significant*

Threshold:	*Conflict with existing zoning for agricultural use, or a Williamson Act contract.*

The Project site is designated General Agricultural (AG) by the San Joaquin County 2035 General Plan (San Joaquin County 2016), and AG-40 by Title 9 of County Development Title (San Joaquin County 2019). According to the San Joaquin County Development Title, the AG Zone is established to preserve agricultural lands for the continuation of commercial agriculture enterprises. Minimum parcel sizes within the AG Zone are 20, 40, 80 or 160 acres, as specified by the precise zoning. The precise Development Title zone for the Project site parcels is AG-40. The Project applicant submitted Site Approval Application No. PA-1900240 to the County to construct the Project in two (2) phases over ten (10) years. After review of the Site Approval Application, County staff determined the principal proposed use of the property is for a

hospital and medical center campus and is properly classified under the Use Type Public Services-Essential. Because the Project is consistent with the Public Services-Essential use type it is a conditionally permitted use within the General Agricultural AG-40 zone and a Site Approval application is the appropriate requested entitlement for the Project (no Development Title zone reclassification is required).

As described in Section 4.4.2.2 (*Williamson Act* subsection), the Project site was under a Williamson Act Contract from 1972-1994. However, the Project has not been under a Contract since 1994 and is not currently under one. The DOC also maintains mapping for Williamson Act contracts by county. As shown on the map for San Joaquin County, the site is not currently subject to a Williamson Act contract (San Joaquin County 2015). Therefore, the Project would result in a **less than significant impact** to Williamson Act contract lands or land zoned for agricultural use.

Mitigation Measures

None required.

Impact 4.4-3: The proposed project would conflict with current zoning for forest use.
Impact Determination: *no impact*

Threshold:	*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)).*

The Project site is zone AG-40 and does not contain any forest land. There would be **no impact**.

Mitigation Measures

None required.

Impact 4.4-4: The proposed project would not convert land designated as forest to non-forest use.
Impact Determination: *no impact*

Threshold:	*Result in the loss of forest land or conversion of forest land to non-forest use.*

The Project site does not contain any forest land and is not designated as forest. There would be **no impact**.

Mitigation Measures

None required.

Impact 4.4-5: The proposed project would directly or indirectly convert any other farmland to non-agricultural use or forestland to non-forest-use.
Impact Determination: *no impact*

Threshold:	*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.*

The Project would not cause change to any other lands. Other Farmland adjacent to and in the vicinity of the Project site would be unaffected. There would be **no impact**.

Mitigation Measures

None required.

4.4.4 Cumulative Impacts

The geographic context considered for the cumulative agricultural resources impacts analysis includes plans for the surrounding incorporated areas and other San Joaquin Valley counties that, when combined with the proposed project, could result in cumulative agricultural resources impacts as discussed in the San Joaquin County 2035 General Plan EIR (San Joaquin County. September 2016.). This includes past projects listed in the General Plan EIR, present projects such as the proposed Project, plus any projects recently approved or currently under construction. Recently approved projects include the Tra Vigne project located just south of the proposed Project, an approximately 200-acre mixed use planned community approved by City of Stockton and currently proposed for annexation. Reasonably foreseeable future probable projects are those that could be developed within the County or neighboring jurisdictions by 2035 as discussed in the General Plan EIR.

As discussed in the General Plan EIR, cumulative agricultural land impacts could occur in conjunction with development allowed by incorporated cities and other counties. San Joaquin County also abuts Calaveras, Amador, Alameda, Contra Costa, and Sacramento Counties where cumulative agricultural resource impacts could occur. Although farmland conversion in the Central Valley declined following the 2007 economic downturn, American Farmland Trust (AFT) still projects that up to 300,000 acres of San Joaquin Valley farmland will be lost between 2010 and 2050 if current development patterns continue (AFT 2013).

According to the San Joaquin County 2035 General Plan Update EIR, cumulative agricultural impacts are partially mitigated by the multiple policies identified in the San Joaquin County 2035 General Plan, as well as by other plans and policies within other jurisdictions of the Central Valley. However, even with implementation of applicable plans and General Plan policy, the San Joaquin County 2035 General Plan EIR finds the following cumulative impacts to agriculture to be significant and unavoidable: conversion of almost 6,000 acres of important farmland, termination of Williamson Act contracts, development in areas currently zoned for agricultural use, and land use conflicts with existing agricultural uses.

Based on the LESA model results presented above, the proposed Project results in a less than significant impact to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Further, as discussed in Section 4.13 Land Use and Planning, because the Project is consistent with the Public Services -

Essential use type, it is a conditionally permitted use within the General Agricultural AG-40 zone. The Project also includes an onsite 100-foot agricultural buffer that incorporates the existing Woodbridge Irrigation District (WID) canal along the Project site's northwestern boundary. The Project is not expected to directly or indirectly convert any other farmland to non-agricultural use.

Irrespective of the above findings, the Project would still convert 33.11 acres of active agriculture on Farmland of Statewide Importance to medical use. As discussed in Draft EIR Section 4.13 Land Use and Planning, to mitigate for this conversion, consistent with the San Joaquin County Agricultural Mitigation Ordinance, Mitigation Measure 4.4-1 requires active agricultural use preservation at a 1:1 ratio through either the acquisition of easements or payment of in-lieu fees.

As discussed above, the Project's cumulative agricultural impacts are partially mitigated by site design and implementation of Mitigation Measure 4.4-1. However, even with implementation of these measures, consistent with findings contained in the San Joaquin County 2035 General Plan EIR, the Project would still result in a cumulatively considerable contribution to loss of lands zoned for agricultural use. New farmland cannot feasibly be made available as mitigation because it would require either conversion from an existing, developed use, or conversion from forest land, park land, or open space. Such uses are typically either occupied by existing businesses or residents or are also protected from conversion under state and local policies and regulations. Therefore, no additional feasible mitigation is available to further reduce the Project's contribution to this cumulative impact. The Project would result in a **cumulatively considerable contribution** to a significant and unavoidable loss of agricultural resources in the San Joaquin Valley area.

Mitigation Measures

None available.

4.4.5 References

American Farmland Trust (AFT). 2013. Saving Farmland, Growing Cities, available online: https://farmland.org/project/saving-farmland-growing-cities/.

Department of Conservation (DOC). 2021. *Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/dlrp/ciff/. Division of Land Resource Protection.

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4.5 AIR QUALITY

This section evaluates the Project-related effects to air quality. This section is based on the Air Quality and Greenhouse Gas Emissions Assessment prepared by ECORP Consulting, Inc. (2021) (see Draft EIR Appendix D). The information provided below is an abridged version of this report. This analysis was prepared using methodologies and assumptions recommended by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and California Air Resources Board (CARB). Regional and local existing conditions are presented, along with pertinent standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutant emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

4.5.1 Environmental Setting

4.5.1.1 San Joaquin Valley Air Basin

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The San Joaquin Valley Air Basin (SJVAB) occupies the southern two-thirds of the Central Valley and includes the Project site. The SJVAB is mostly flat, less than 1,000 feet in elevation, and is surrounded on three sides by the Sierra Nevada, Tehachapi, and Coast Range mountains. This bowl-shaped feature forms a natural barrier to the dispersion (spreading over an area) of air pollutants. As a result, the SJVAB is highly susceptible to pollutant accumulation over time.

Climate and Meteorology

The climate in the SJVAB is strongly influenced by the presence of mountain ranges. The mountains create a partial rain shadow over the valley and block the free circulation of air, trapping stable air in the valley for extended periods. The climate is semi-arid and is characterized by long, hot, dry summers and cool, wet, and foggy winters. Based on historical data obtained from the meteorological station located in Bakersfield, ambient temperatures range from an average minimum of 39˚F in January to an average maximum of 98˚F in July. The average monthly precipitation is approximately 6.24 inches per year, with January and February averaging 1.35 inches. The average daily wind speed is 5.9 miles per hour (mph). The air flow patterns are characterized by one of four directions depending on the season. For example, during the summer, winds are predominantly northwestern (up valley), while winters typically feature a prevailing stagnant condition that leads to high incidence of valley fog.

Atmospheric Stability and Inversions

Stability describes the relative resistance of the atmosphere to vertical motion, which in turn mixes the air. The stability of the atmosphere is dependent on the vertical distribution of temperature with height. Unstable conditions often occur during daytime hours when solar heating warms the lower atmospheric layers while the upper layers remain cold. In contrast, an inversion is a layer of warmer air over a layer of cooler air. Inversions influence the mixing depth of the atmosphere, which is the vertical depth available for diluting air pollution near the ground. The SJVAB experiences both surface-based and elevated inversions. The shallow surface-based inversions can be present in the morning but are often broken by daytime heating of the air layers near the ground. The deep, elevated inversions occur less frequently than

the surface-based inversions but generally result in more severe air stagnation. The surface-based inversions occur more frequently in the fall, and the stronger elevated inversions usually occur during December and January. These naturally occurring conditions can make local air quality significantly worse than they would be without the inversions and the stagnation created by regional weather and topography.

4.5.1.2 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 4.5-1.

Table 4.5-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manmade Sources	Human Health & Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROG) and nitrous oxides (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: California Air Pollution Control Officers Association (CAPCOA 2013)

Carbon Monoxide

CO in the urban environment is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and NO_2, attribute to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROG and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. NO_x forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

Particulate Matter

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

4.5.1.3 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's $PM_{2.5}$ air quality problems. Public exposure to TACs can result from emissions from normal

operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Diesel Exhaust

Most recently, CARB identified DPM as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

4.5.1.4 Ambient Air Quality

Ambient air quality at the Project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region. As described in detail below, the region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$, and PM_{10} (CARB 2018a). The Stockton-Hazelton monitoring station, located at 1593 E. Hazelton Street, Stockton, CA 95205, located approximately 7.6 miles south of the Project site monitors ambient concentrations of O_3, $PM_{2.5}$, and PM_{10}. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the Project area.

Table 4.5-2 summarizes the published data concerning O_3, $PM_{2.5}$ and PM_{10} since 2016 for each year that the monitoring data is provided.

Table 4.5-2. Summary of Ambient Air Quality Data

Pollutant Standards	2016	2017	2018
O_3			
Max 1-hour concentration (ppm)	0.102	0.085	0.088
Max 8-hour concentration (ppm) (state/federal)	0.079 / 0.078	0.080 / 0.079	0.078 / 0.077
Number of days above 1-hour standard (state/federal)	2 / 0	0 / 0	0 / 0
Number of days above 8-hour standard (state/federal)	2 / 2	2 / 2	2 / 1

Table 4.5-2. Summary of Ambient Air Quality Data

Pollutant Standards	2016	2017	2018
PM_{10}			
Max 24-hour concentration (µg/m3) (state/federal)	66.5 / 65.9	92.6 / 89.9	198.6 / 187.0
Number of days above 24-hour standard (state/federal)	30.6 / 0	42.9 / 0	31.7 / 13.1
$PM_{2.5}$			
Max 24-hour concentration (µg/m3) (state/federal)	43.7 / 43.7	53.7 / 53.7	188.0 / 188.0
Number of days above federal 24-hour standard	4.0	16.9	25.0

Source: CARB 2019a
µg/m^3 = micrograms per cubic meter; ppm = parts per million
* = Insufficient data available

The USEPA and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10} and $PM_{2.5}$ and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the San Joaquin County portion of the SJVAB, which encompasses the Project site, is included in Table 4.5-3.

Table 4.5-3. Attainment Status for the San Joaquin Valley Air Basin

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: CARB 2018a

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment.

Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$ standards (CARB 2018a).

4.5.1.5 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive receptors to the Project site are existing rural residential properties directly adjacent to the site's southern boundary. These residences front Eight Mile Road between West Lane and North Ham Lane.

4.5.2 Regulatory Setting

4.5.2.1 Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide (CO_2) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO_2.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 4.5-3 lists the federal attainment status of the SJVAB for the criteria pollutants.

4.5.2.2 State

California Clean Air Act

The California Clean Air Act (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register.

The SJVAPCD is the agency primarily responsible for ensuring that national and state ambient air quality standards are not exceeded and that air quality conditions are maintained in the SJVAB. In an attempt to achieve NAAQS and CAAQS and maintain air quality, the air district has completed the following air quality attainment plans and reports, which together constitute the SIP for the portion of the SJVAB encompassing the Project:

- **2007 Ozone Plan**. The Ozone Plan, approved in 2007, contains a comprehensive list of regulatory and incentive-based measures to reduce emissions and particulate matter with the goal of addressing the USEPA's standards. The 2007 Ozone Plan calls for a 75 percent reduction of ozone-forming NOx emissions (SJVAPCD 2007a). These NO_x reductions are preferred and essential to meeting the new 8-hour ozone and $PM_{2.5}$ standards. The plan calls for new and more stringent rules and regulations for stationary sources, new and more stringent tail-pipe emission standards for mobile sources, emission standards for locomotives, local regulations and voluntary measures to reduce and/or mitigate mobile source emissions, incentive-based measures, and alternative compliance programs.

- **2013 Plan for the Revoked 1-Hour Ozone Standard.** The SJVAPCD initially adopted this plan in 2004 to address USEPA's 1-hour ozone standard. Although the USEPA approved the SJVAPCD's 2004 plan in 2010, the USEPA withdrew this approval as a result of a court ruling in November 2012. The SJVAPCD adopted a new plan for the USEPA's revoked 1-hour ozone standard in September 2013 (SJVAPCD 2013).
- **2014 Reasonably Available Control Technology (RACT) Demonstration for the 8-Hour Ozone State Implementation Plan (SIP).** The SJVAPCD adopted the Reasonably Available Control Technology (RACT) Demonstration for the 8-Hour Ozone Standard in 2014. The Clean Air Act requires RACT for certain sources in all nonattainment areas (SJVAPCD 2014).
- **2016 Plan for the 2008 8-Hour Ozone Standard.** The Ozone Plan, approved in 2016, contains a comprehensive list of regulatory and incentive-based measures to reduce emissions and particulate matter with the goal of addressing the USEPA's standards. The plan calls for new and more stringent rules and regulations for stationary sources, new and more stringent tail-pipe emission standards for mobile sources, emission standards for locomotives, local regulations and voluntary measures to reduce and/or mitigate mobile source emissions, incentive-based measures, and alternative compliance programs (SJVAPCD 2016).
- **2020 Reasonably Available Control Technology Demonstration for the 2015 8-Hour Ozone Standard**. The SJVAPCD adopted the RACT Demonstration for the 2015 8-Hour Ozone Standard on June 18, 2020. The Clean Air Act requires RACT for certain sources in all nonattainment areas. The SJVAPCD is required to ensure the USEPA's Control Techniques Guidance (CTG) is being implemented through SJVAPCD regulations. The 43 CTGs were developed to control major sources of emissions (SJVAPCD 2020).
- **2007 PM_{10} Maintenance Plan and Request for Redesignation.** In 2007, the SJVAPCD adopted the 2007 PM_{10} Attainment Plan to ensure the continued attainment of the USEPA's PM_{10} standard. Since the EPA determined that the air basin had attained the federal PM_{10} standards on October 30, 2006, the valley is designated as an attainment area (SJVAPCD 2007b).
- **2018 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard**. In 2018, the SJVAPCD adopted the 2018 $PM_{2.5}$ Plan to address the USEPA's annual and 24-hour standards. The plan utilizes the best available information to develop a strategy to demonstrate attainment of the federal standard for $PM_{2.5}$. A number of local strategies are included in the plan, including regulations to address stationary sources, use of a risk-based approach to prioritize measures to expedite attainment standards, incentive measures, technology advances, policy efforts to shape new legislation, and public outreach (SJVAPCD 2018).

Tanner Air Toxics Act & Air Toxics "Hot Spots" Information and Assessment Act

CARB's Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure

for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by SB 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

4.5.2.3 Local

San Joaquin Valley Air Pollution Control District

The local air quality agency affecting the SJVAB is the SJVAPCD, which is charged with the responsibility of implementing air quality programs and ensuring that national and state ambient air quality standards are not exceeded and that air quality conditions are maintained in the SJVAB. In an attempt to achieve national and state ambient air quality standards and maintain air quality, the air district has completed several air quality attainment plans and reports, which together constitute the SIP for the portion of the SJVAB encompassing the Project.

The SJVAPCD has also adopted various rules and regulations for the control of stationary and area sources of emissions. Provisions applicable to the Proposed Project are summarized as follows:

- **Regulation IV (Visible Emissions), Rule 4101, Nuisance.** The purpose of this rule is to protect the health and safety of the public from source operations that emit or may emit air contaminants or other materials. It prohibits emissions of air contaminants or other materials "which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public."
- **Regulation IV (Visible Emissions), Rule 4601, Architectural Coatings.** The rule limits volatile organic compound (VOC) emissions from architectural coatings and specifies practices for proper storage, cleanup, and labeling requirements. Rule 4601 applies to "any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the District." Materials covered by the rule include adhesives, architectural coatings, paints, varnishes, sealers, stains, concrete curing compounds, concrete/masonry sealers, and waterproofing sealers.
- **Regulation IV (Visible Emissions), Rule 4641, Cutback, Slow Curve and Emulsified Asphalt, Paving and Maintenance Operations.** The purpose of this rule is to limit VOC emissions by restricting the application and manufacturing of certain types of asphalt and maintenance operations and applies to the use of these materials. Specifically, certain types of asphalt cannot

be used for penetrating prime coat, dust palliative, or other paving: rapid cure and medium cure cutback asphalt, slow cure asphalt that contains more than 0.5 percent of organic compound which evaporates at 500˚F or lower, and emulsified asphalt containing VOC in excess of 3 percent which evaporates at 500˚F or lower.

- **Regulation VIII (Fugitive PM_{10} Prohibitions), Rules 8021–8071, Fugitive PM_{10} Prohibitions.** The purpose of these rules is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources.
- **Regulation IX (Mobile and Indirect Sources), Rule 9510, Indirect Source Review.** This rule is the result of state requirements outlined in California Health and Safety Code Section 40604 and the SIP. The air district's SIP commitments were originally contained in the SJVAPCD's 2003 PM_{10} Plan and Extreme Ozone Attainment Demonstration Plans, which presented the SJVAPCD's strategy to reduce PM_{10} and NO_x in order to reach the ambient air pollution standards on schedule, which had been 2010. The plans quantify the reduction from current SJVAPCD rules and proposed rules, as well as state and federal regulations, and then model future emissions to determine whether the SJVAPCD may reach attainment for applicable pollutants. This rule will reduce emissions of NO_x and PM_{10} from new development projects that attract or generate motor vehicle trips. In general, new development contributes to the air pollution problem in the SJVAB by increasing the number of vehicles and vehicle miles traveled. Although newer, cleaner technology is reducing per-vehicle pollution, the emissions increase from new development partially offsets emission reductions gained from technology advances.

Indirect Source Review applies to larger development projects that have not yet gained discretionary approval. A discretionary permit is a permit from a public agency, which requires some amount of deliberation by that agency, including the potential to require modifications or conditions on the project. In accordance with this rule, developers of larger residential, commercial, and industrial projects are required to reduce smog-forming NO_x and PM_{10} emissions from their projects' baselines as follows (SJVAPCD 2017):

- 20 percent of construction NO_x exhaust
- 45 percent of construction PM_{10} exhaust
- 33 percent of operational NO_x over 10 years
- 50 percent of operational PM_{10} over 10 years

These reductions are intended to be achieved through incorporation of on-site reduction measures. If, after implementation of on-site emissions reduction measures project emissions still exceed the minimum baseline reduction, the Indirect Source Review requires a project applicant to pay an off-site fee to the SJVAPCD, which is then used to fund clean-air projects within the air basin.

4.5.3 Environmental Impacts and Mitigation Measures

4.5.3.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, air quality impacts are considered significant if implementation of the Proposed Project would:

- Conflict with or obstruct implementation of an applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

4.5.3.2 Methods of Analysis

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the SJVAPCD. Onsite construction (including worker commutes and vendors), operational area source, and energy source emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Operational mobile source emissions are calculated with the 2017 version of the EMission FACtor model (EMFAC) developed by CARB. EMFAC 2017 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to estimate changes in future emissions from on-road mobile sources. The most recent version of this model, EMFAC 2017, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled by speed, and number of starts per day. The most important improvement in EMFAC 2017 is the integration of the new data and methods to estimate emissions from diesel trucks and buses. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment.

As previously described, Phase 1 construction is anticipated to begin in late 2021 and take approximately 12 months to complete. The Phase 1 Medical Center Building is expected to begin operations in 2023. Phase 2 construction is scheduled to begin in 2029 and take approximately 20 months to complete. The Phase 2 Hospital and other support uses are expected to begin operation in 2031. Project construction-generated air pollutant emissions were calculated based on this timeline and the expected construction equipment provided by the Project applicant and identified in Section 3.0, Project Description.

Operational air pollutant emissions are based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from KD Anderson and Associates (2020). Helicopter emissions are calculated based on the emission factors identified for a UH-1N with two T400-CP-400 engines contained in the Air Force 2020 Mobile Emissions Calculations Guide (Air Force Civil Engineer Center 2020). The UH-

1N was chosen to represent a "worst-case" scenario per it's similarity to the Airbus H145 which is the largest aircraft anticipated for transport to the Project site. In order to estimate the highest daily emission rate of helicopter pollutants, three flights daily are assumed. Emissions are calculated using standardized landing and take-off cycle factors generated by the USEPA as presented in the Air Force Mobile Emissions Guidance Documents (Air Force Civil Engineer Center 2020). Emissions are calculated that occur in the "mixing zone" which is from 0 – 3,000 feet above ground level. This approach is consistent with CEQA guidance found in the Aviation Environment Design Tool referenced in CEQA guidance.

See Appendix D for emissions modeling details.

4.5.3.3 Project Impacts and Mitigation Measures

Impact 4.5-1 Air pollutant emissions associated with the proposed project could conflict with applicable air quality plans.
Impact Determination: *less than significant*

Threshold:	*Conflict with or obstruct implementation of the applicable air quality plan.*

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The SJVAPCD prepared the 2007 Ozone Plan, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2016 Plan for the 2008 8-Hour Ozone Standard, 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard, 2020 RACT Demonstration for the 2015 8-Hour Ozone Standard, 2007 PM_{10} Maintenance Plan and Request for Re-designation, and 2018 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard. These plans collectively address the air basin's nonattainment status with the national and state O_3 standards as well as particulate matter by establishing a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. Pollutant control strategies are based on the latest scientific and technical information and planning assumptions. According to the SJVAPCD (2015), the established thresholds of significance for criteria pollutant emissions are based on SJVAPCD New Source Review offset requirements for stationary sources. Stationary sources in the SJVAB are subject to some of the most stringent regulatory requirements in the nation. Emission reductions achieved through implementation of SJVAPCD offset requirements are a major component of the District's air quality planning efforts. Thus, projects with emissions below the thresholds of significance for criteria pollutants are determined to "Not conflict or obstruct implementation of the District's air quality plan" (SJVAPCD 2015).

As shown in Table 4.5-4 and Table 4.5-6 below, both Project construction and Project operations would not generate emissions that would exceed SJVAPCD significance thresholds. Furthermore, the Project

would reduce construction-generated emissions below what is required in Rule 9510 and would similarly reduce operational-generated emissions or offset the emissions with payment of a fee, which is then used to fund clean-air projects within the air basin. Therefore, the Project would be consistent with the emission-reduction goals of the SJVAPCD Attainment Plans. This impact is **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.5-2 Construction and operation of the proposed project would result in the emission of criteria pollutants.
Impact Determination: *less than significant with mitigation incorporated*

Threshold:	*Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).*

Construction Air Pollutant Emissions

Construction associated with the Proposed Project would generate short-term emissions of criteria air pollutants, including ROG, CO, NO_X, PM_{10}, and $PM_{2.5}$. The largest amount of ROG, CO, and NO_X emissions would occur during grading activity. PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to and from the site. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

During construction activities, the Project would be required to comply with SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions). The purpose of this rule is to limit airborne particulate emissions associated with construction, demolition, excavation, extraction, and other earthmoving activities, as well as with open disturbed land and emissions associated with paved and unpaved roads. Accordingly, these rules include specific measures to be employed to prevent and reduce fugitive dust emissions from anthropogenic sources. For instance, the Project applicant would be required to prepare a dust control plan. Construction activities anywhere within the regulatory jurisdiction of the SJVAPCD, including the Proposed Project site, may not commence until the SJVAPCD has approved or conditionally approved the dust control plan, which must describe all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity. Regulation VIII specifies the following measures to control fugitive dust:

- Apply water to unpaved surfaces and areas.
- Use nontoxic chemical or organic dust suppressants on unpaved roads and traffic areas.

- Limit or reduce vehicle speed on unpaved roads and traffic areas to a maximum 15 miles per hour.
- Maintain areas in a stabilized condition by restricting vehicle access.
- Install wind barriers.
- During high winds, cease outdoor activities that disturb the soil.
- Keep bulk materials sufficiently wet when handling.
- Store and handle materials in a three-sided structure.
- When storing bulk materials, apply water to the surface or cover the storage pile with a tarp.
- Don't overload haul trucks. Overloaded trucks are likely to spill bulk materials.
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions.
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site.
- Prevent trackout by installing a trackout control device.
- Clean up trackout at least once a day. If along a busy road or highway, clean up trackout immediately.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.

The SJVAPCD's (2015) Guidance for Assessing and Mitigation of Air Quality Impacts identifies significance thresholds for ROG, CO, and NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Construction-generated ozone precursor emissions associated with the Proposed Project were calculated using CalEEMod. Predicted maximum annual construction-generated emissions of criteria air pollutants for the Proposed Project are summarized in Table 4.5-4.

Table 4.5-4. Construction-Related Emissions

Construction Year	Maximum Pollutants (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Annual (Maximum Tons per Year)						
Phase 1 Construction (2023)	1.1	6.3	6.8	0.0	1.3	0.7
Phase 2 Construction (2029)	1.4	5.8	5.8	0.0	2.0	1.o
Phase 2 Construction (2030)	1.3	2.9	4.0	0.0	0.6	0.2
SJVAPCD Potentially Significant Impact Threshold	10	10	100	27	15	15
Exceed SJVAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Appendix D for Model Data Outputs.

As shown in Table 4.5-4, construction-generated emissions would not exceed SJVAPCD significance thresholds.

In addition to the SJVAPCD criteria air pollutant thresholds, SJVAPCD Rule 9510, Indirect Source Review, aims to fulfill the District's emission reduction commitments in the PM_{10} and Ozone Attainment Plans. This rule applies to construction projects within the jurisdiction of the SJVAPCD which upon full build-out will include any one of the following:

- 50 residential units
- 2,000 square feet of commercial space
- 25,000 square feet of light industrial space
- 100,000 square feet of heavy industrial space
- 20,000 square feet of medical office space
- 39,000 square feet of general office space
- 9,000 square feet of educational space
- 10,000 square feet of government space
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above.

This rule also applies to any transportation or transit project where construction exhaust emissions equal or exceed two tons of NO_x or two tons of PM_{10}. The project developers are required to reduce concentrations of NO_x by 20 percent and PM_{10} by 45 percent during construction activities. Development projects that have a mitigated baseline below two tons per year of NOx and two tons per year of PM_{10} shall be exempt from the requirements per Rule 9510 (SJVAPCD 2017).

The Project is proposing the construction of more than 20,000 square feet of medical office space. Thus, adherence to Rule 9510 is required of the Proposed Project. In accordance with Rule 9510, the Project applicant is required to prepare a detailed air impact assessment (AIA) for submittal to the SJVAPCD, which demonstrates reduction of NO_x emissions from the Project's baseline by 20 percent and a reduction of PM_{10} by 45 percent. Therefore, Mitigation Measure **4.5-2a** is required (see below).

As demonstrated in Table 4.5-5, implementation of Mitigation Measure **4.5-2a** would reduce annual NO_x emissions by as much as 72 percent during Phase 1 of construction and nearly 53 percent during Phase 2 of construction. Further, Mitigation Measure **4.5-2a** would reduce annual PM_{10} emissions by more than 60 percent during Phase 1 of construction and 50 percent during Phase 2 of construction. These reduction values are beyond the reduction needed to achieve the SJVAPCD Rule 9510 target.

Table 4.5-5. Construction Related NOx and PM10 Emissions- Baseline and Mitigated (tons per Phase)			
Construction Year	**NOx Baseline**	**NOx Mitigated**	**Percent Reduction**
Phase 1 Construction (2023)	6.3	0.7	72.69%
Phase 2 Construction (2029-2030)	8.7	4.1	52.87%
		SJVAPCD Potentially Significant Impact Threshold	**20%**
Construction Year	**PM10 Baseline**	**PM10 Mitigated**	**Percent Reduction**
Phase 1 Construction (2023)	1.3	0.5	61.53%
Phase 2 Construction (2029-2030)	2.6	1.3	50.00%
		SJVAPCD Potentially Significant Impact Threshold	**45%**

Source: CalEEMod version 2013.2.2. See Appendix D for emission outputs.
Notes: Mitigated emissions account for the use of equipment with CARB Tier 4 Certified engines. Emission reduction/credits for construction emissions are also applied based on the required implementation of SJVAPCD Regulation VIII. The specific regulation applied in CalEEMod are watering unpaved surfaces and areas, use of nontoxic chemical or organic dust suppressants on unpaved roads and traffic areas, limiting vehicle speed on unpaved roads and traffic areas to a maximum 15 miles per hour, and the prevention of trackout through installation of a trackout control device.
Percent reduction calculated using ((baseline-mitigated) / baseline) = percent reduction

As previously stated, construction-generated emissions would not exceed SJVAPCD significance thresholds. However, the Project proposes the construction of a medical center over 20,000 square feet, instigating the implementation of Rule 9510. Rule 9510 requires a project to reduce NO_x emissions from the Project's baseline emissions by 20 percent and reduce annual PM_{10} emissions by 45 percent. Mitigation Measure **4.5-2a** would result in a greater than required reduction in NO_x and PM_{10} emissions from baseline for all construction activities. Therefore, with implementation of Mitigation Measure **4.5-2a**, the Proposed Project would not exceed SJVAPCD thresholds for NO_x and PM_{10} , and construction generated emissions would be **less than significant with mitigation incorporated**.

Operational Air Pollutant Emissions

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROG and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Table 4.5-6 summarizes operational emissions from the Proposed Project.

The SJVAPCD's (2015) Guidance for Assessing and Mitigation of Air Quality Impacts identifies significance thresholds for ROG, CO, and NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Operational-generated area source and energy

source emissions associated with the Proposed Project were calculated using CalEEMod. Operational mobile source emissions are calculated with EMFAC2017. Helicopter emissions are calculated based on the emission factors identified for a UH-1N with two T400-CP-400 engines contained in the Air Force 2020 Mobile Emissions Calculations Guide (Air Force Civil Engineer Center 2020). The UH-1N was chosen to represent a "worst-case" scenario per its similarity to the Airbus H145 which is the largest aircraft anticipated for transport to the Project site. Predicted maximum annual operational-generated emissions of criteria air pollutants for the Proposed Projects are summarized in Table 4.5-6.

Table 4.5-6. Operational Emissions

Emission Source	Maximum Pollutants (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Proposed Project Annual Emissions						
Area	1.32	0.00	0.01	0.00	0.00	0.00
Energy	0.08	0.78	0.65	0.00	0.00	0.00
Mobile (automotive)	2.25	6.97	24.74	0.07	1.11	0.49
Mobile (helicopter operation)	0.02	0.05	0.05	0.01	0.002	0.002
Total	**3.67**	**7.80**	**25.45**	**0.08**	**1.11**	**0.49**
SJVAPCD Significance Threshold	10	10	100	27	15	15
Exceed SJVAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2; EMFAC2017. Refer to Attachment A for Model Data Outputs.
Notes: Automobile emissions projections account for an automotive trip generation rate identified in the Traffic Impact Study prepared by KD Anderson and Associates (2020).

As indicated in Table 4.5-6, operational-generated emissions would not exceed SJVAPCD significance thresholds.

As previously mentioned, SJVAPCD Rule 9510 is intended to fulfill the region's emission reduction commitments in the SJVAPCD PM_{10} and Ozone Attainment Plans. The Proposed Project is subject to Rule 9510 and would be required to consult with the SJVAPCD regarding the specific applicability of Rule 9510 in relation to Project operations. In accordance with Rule 9510, the Project applicant would be required to prepare a detailed air impact assessment for submittal to the SJVAPCD demonstrating the reduction from the Project's baseline of NO_x and PM_{10} emissions. The inability to meet or exceed Rule 9510 required emission reductions would be considered a significant impact. Implementation of Mitigation Measure **4.5-2b** would reduce this impact to less than significant as discussed below.

Since the Project's emissions do not exceed SJVAPCD thresholds, no exceedance of the ambient air quality standards would occur, and no health effects from Project criteria pollutants would occur. As identified in Table 4.5-3, the SJVAB is listed as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a

nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$. O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. Particulate matter can adversely affect the human respiratory system.

As shown in Table 4.5-6, the Proposed Project would result in increased emissions of the O_3 precursor pollutants ROG and NO_x, PM_{10}, and $PM_{2.5}$, however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in the SJVAB is contained in the SJVAPCD's various air quality management plans previously described. These air quality management plans provide control measures that reduce emissions to attain federal ambient air quality standards by their applicable deadlines such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods. The CEQA thresholds of significance established by the SJVAPCD are designed to meet the objectives of regional air quality planning efforts and in doing so achieve attainment status with state and federal standards. As noted above, the Project would increase the emission of these pollutants, but with implementation of Mitigation Measure **4.5-2b** would more than exceed the emission reduction thresholds of significance established by the SJVAPCD for purposes of reducing air pollution and its deleterious health effects. Therefore, with implementation of Mitigation Measure 4.5-2b, this potential impact would be **less than significant with mitigation incorporated**.

Mitigation Measures

4.5-2a: Prepare Air Impact Assessment to Reduce Construction NO_x Emissions

In accordance with SJVAPCD Rule 9510, a detailed air impact assessment (AIA) shall be prepared detailing the specific construction requirement (i.e., equipment required, hours of use). In accordance with this rule, emissions of NO_x from construction equipment greater than 50 horsepower used or associated with the development Project shall be reduced by 20 percent from baseline (unmitigated) emissions and PM10 shall be reduced by 45 percent. The Project shall demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit.

While the specific emission reduction measures will be developed to the satisfaction of the SJVAPCD, the following measures would reduce short-term air quality impacts attributable to the Proposed Project consistent with Rule 9510:

- During all construction activities, all diesel-fueled construction equipment including, but not limited to, rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors shall be California Air Resources Board (CARB) Tier 4 Certified as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. Equipment maintenance records shall be kept on-site and made available upon request by the SJVAPCD or the County.
- The Project applicant shall comply with all applicable SJVAPCD rules and regulations. Copies of any applicable air quality permits and/or monitoring plans shall be provided to the County.

Timing/Implementation: *Prior to the issuance of grading permits*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.5-2b: Prepare Air Impact Assessment to Reduce Operational NOx Emissions

In accordance with SJVAPCD Rule 9510, a detailed air impact assessment shall be prepared detailing the operational characteristics associated with the Proposed Project. In accordance with this rule, operational emissions of NO_x shall be reduced by a minimum of 33.3 percent and operational emissions of PM_{10} must be reduced by a minimum of 50 percent over a period of ten years. (Emissions reductions are in comparison to the Project's operational baseline emissions presented in Table 4.5-6.) The Project would demonstrate compliance with Rule 9510, including payment of all applicable fees, before issuance of the first building permit.

Based on the findings of the air impact assessment, the applicant shall pay the SJVAPCD a monetary sum necessary to offset the required operational emissions that are not reduced by the emission reduction measures contained in the air impact assessment. The quantity of operational emissions that need to be offset will be calculated in accordance with the methodologies identified in Rule 9510, Indirect Source Review, and approved by the SJVAPCD. Operational emissions reduction methods will be selected under the direction of the SJVAPCD according to the air impact assessment process detailed in, and required by Rule 9510, Indirect Source Review (see Rule 9510, subsection 5).

Timing/Implementation: *Prior to the issuance of building permits*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

Impact 4.5-3: Construction and operation of the proposed project could result in exposure of sensitive receptors to project emissions.
Impact Determination: *less than significant*

Threshold:	*Exposure of sensitive receptors to substantial pollutant concentrations.*

As previously described, sensitive receptors are defined as 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 these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected

by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project site are the existing rural residential properties directly adjacent to the site's southern boundary. These residences front Eight Mile Road between West Lane and North Ham Lane.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading, underground work); soil hauling truck traffic; paving; and other miscellaneous activities. The portion of the SJVAB which encompasses the Project is classified as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$, and PM_{10} (CARB 2018a). Thus, existing O_3, PM_{10}, and $PM_{2.5}$ levels in the SJVAB are at unhealthy levels during certain periods. However, as shown in Table 4.5-4, the Project would not exceed the SJVAPCD construction emission thresholds.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the SJVAPCD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SJVAPCD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (TAC) of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions (mitigated) of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 0.36 pounds per day during Phase 1 and 0.25 pounds per day during Phase 2 ($PM_{2.5}$ exhaust is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., $PM_{2.5}$). Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.). As with O_3 and NO_x, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SJVAPCD's thresholds. Additionally, the Project would be required to comply with Regulation VIII, Rules

8021–8071- Fugitive PM_{10} Prohibitions and Rule 9510- Indirect Source Review, as described above, which limit the amount of fugitive dust generated during construction. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, the Project would not result in a potentially significant contribution to regional or localized concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Related impacts are **less than significant**.

Valley Fever

Coccidioidomycosis, often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley fever (Coccidioidomycosis) is found in California, including San Joaquin County. In about 50 to 75 percent of people, valley fever causes either no symptoms or mild symptoms and those infected never seek medical care; when symptoms are more pronounced, they usually present as lung problems (cough, shortness of breath, sputum production, fever, and chest pains). The disease can progress to chronic or progressive lung disease and may even become disseminated to the skin, lining tissue of the brain (meninges), skeleton, and other body areas.

San Joaquin County is considered a highly endemic area for valley fever. When soil containing this fungus is disturbed by ground-disturbing activities such as digging or grading, by vehicles raising dust, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get valley fever. Fungal spores are small particles that can grow and reproduce in the body. The highest infection period for valley fever occurs during the driest months in California, between June and November. Infection from valley fever during ground-disturbing activities can be partially mitigated through the control of Project-generated dust. As noted, Project-generated dust would be controlled by adhering to SJVAPCD dust-reducing measures (Regulation VIII), which includes the preparation of a SJVAPCD-approved dust control plan describing all fugitive dust control measures that are to be implemented before, during, and after any dust-generating activity.

With minimal site grading and conformance with SJVAPCD Regulation VIII, dust from the construction of the Project would not add significantly to the existing exposure level of people to this fungus, including construction workers. Related impacts are **less than significant**.

Operational Air Contaminants

Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract large numbers of heavy-duty trucks that spend long periods queuing and idling at the site. Onsite Project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, the Project would not be a source of TACs and there would be no impact as a result of the Project during operations. The Project would not have a high carcinogenic or non-carcinogenic risk during operation. Related impacts are **less than significant**.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. In 1993, much of the state was designated nonattainment under the CAAQS and NAAQS for CO. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration across the entire state is now designated as attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. A study conducted in Los Angeles County by the South Coast Air Quality Management District (SCAQMD) is helpful in showing the amount of traffic necessary to result in a CO Hotspot. The SCAQMD analysis prepared for CO attainment in the SCAQMD's *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 Air Quality Management Plan can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood),

Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). To establish a more accurate record of baseline CO concentrations, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

According to the Traffic Impact Study prepared for the Project (KD Anderson and Associates 2020), the Project is expected to generate an average of 3,975 trips daily. Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day, or even 44,000 vehicles per day. There is no likelihood of Project traffic exceeding CO values and related impacts are considered less than significant.

The Project would result in **less than significant** impacts concerning the exposure of sensitive receptors to substantial amounts of air toxics.

Mitigation Measures

None required.

Impact 4.5-4 The proposed project could create odor emissions affecting a substantial number of people.
Impact Determination: *less than significant*

Threshold:	*Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).*

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, 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.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. Of these, the Project would include an onsite wastewater treatment "package plant." The package plant would have fully enclosed systems capable of odor control. Therefore, odor impacts are **less than significant**.

Mitigation Measures

None required.

4.5.4 Cumulative Impacts

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable. As identified in the analysis above, the Project would not exceed significance thresholds or otherwise result in any significant project-level impact. Thus, the Project is considered **less than cumulatively considerable** in terms of air quality-related impacts.

Mitigation Measures

None required.

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4.6 BIOLOGICAL RESOURCES

This section of the EIR describes existing biological resources located on the Project site and evaluates the potential impacts on these resources in accordance with impact significance criteria provided in Appendix G of the CEQA Guidelines. Information presented in this section is based on the technical study *Biological Resources Assessment Gill Medical Center* (BRA, ECORP 2020), which is included as Appendix E to this Draft EIR. The purpose of the BRA was to assess the potential for occurrence of special-status plant and animal species and their habitats, and sensitive habitats such as wetlands and riparian communities within the Project Study Area. The Study Area consists of the Project grading limits which is assumed to include the majority of the entire 42.4-acre project site. This section includes information generated from the reconnaissance-level site assessment and does not include a wetland delineation performed according to U.S. Army Corps of Engineers (USACE) standards, nor does it include determinate field surveys for special-status plant and animal species.

This assessment includes a preliminary analysis of impacts on biological resources anticipated to result from the Project. The mitigation recommendations presented in this section are based on a review of existing literature, results of BRA field work and the presence or absence of sensitive species and habitats as defined below.

4.6.1 Environmental Setting

The Study Area is situated in an agricultural setting at an elevation of approximately 35 feet above mean sea level in the southern San Joaquin Valley subregion of the Great Central Valley region of the California floristic province (Baldwin et. al. 2012). The vast majority of the Study Area is currently a vineyard with a fallow field and ruderal areas. The vineyard is comprised of uniform rows of grapes growing on posts and cables. The south half of the Woodbridge Irrigation District canal is located onsite along the northern boundary of the Study Area (where it runs adjacent the site, the ditch center line defines the northern property boundary).

Representative photographs of the Study Area can be found in Appendix E of this Draft EIR.

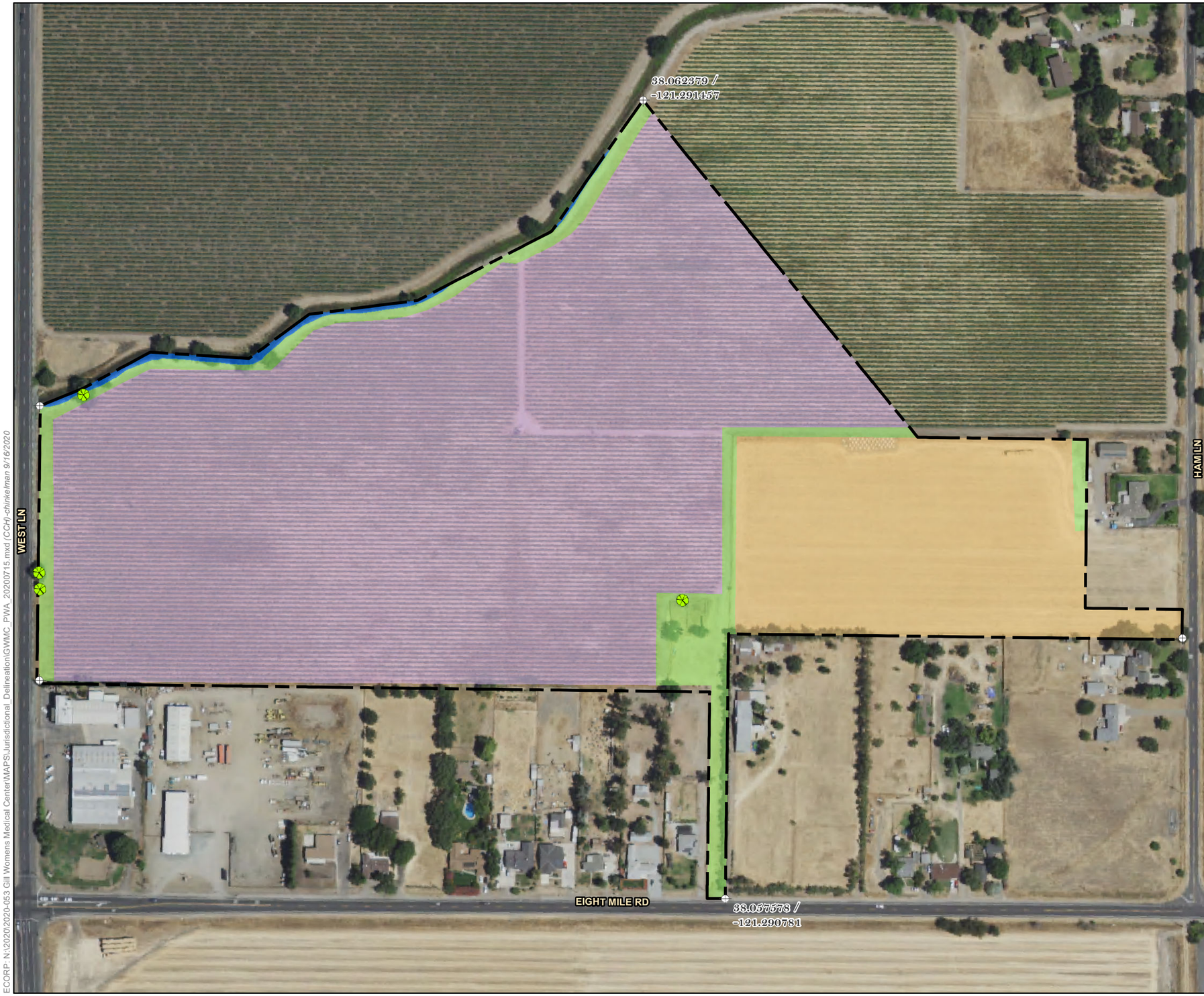
The surrounding lands include vineyards, orchards, undeveloped pastures, and light industrial and rural residential uses.

4.6.1.1 Vegetation Communities and Land Cover Types

The Project is currently comprised primarily of a vineyard with a small patch of fallow agricultural field and ruderal roadside areas along access roads and boundaries (Figure 4.6-1. *Vegetation Community and Land Cover Types/Preliminary Wetland Assessment*).

Vineyard

The vineyard is comprised of wine grapes (*Vitis* species) planted in uniform rows. The rows are approximately 10 feet apart and include a trellis of posts and wires. Grape plants can attain heights of six to eight feet of dense growth prior to pruning. Vines are pruned in the fall and winter. There is sparse



Map Features

- Project Boundary - +/-42 ac.
- Reference Coordinates
- Native Oak Trees

Preliminary Wetland Assessment[1]

Other Waters

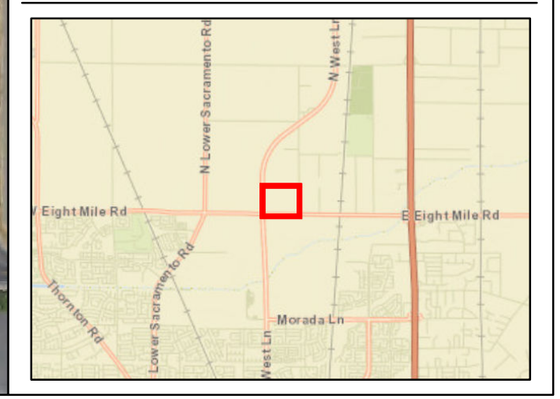
- Irrigation Ditch - 0.258 acres

Vegetation Commmunities and Land Cover Types

- Fallow Agricultural
- Vineyard
- Ruderal

Photo Source: NAIP (2018)
Boundary Source: NJA Architecture (Boundary is Approximate)
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

[1] *Subject to U.S. Army Corps of Engineers verification. Feature boundaries have not been legally surveyed and may be subject to adjustments if more accurate locations are required.*



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Map Date: 9/16/2020

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Scale in Feet
0 250

Figure 4.6-1. Vegetation Community and Land Cover Types/Preliminary Wetland Assessment

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ground cover of weedy plants such as turkey mullein (*Croton setigerus*), prickly lettuce (*Lactuca serriola*), English plantain (*Plantago lanceolata*), and Italian thistle (*Carduus pycnocephalus*).

Fallow Agricultural Field

A small area of fallow agricultural field is located in the southeastern corner of the Study Area. At the time of the site visit conducted in May 2020, the field was plowed and did not appear to have been planted with a crop the prior growing season. Plants identified in the fallow agricultural field included a variety of non-native weedy species such as wild oats (*Avena fatua*), Italian ryegrass (*Festuca perennis*), broad-leaf pepper grass (*Lepidium latifolium*), and English plantain.

Ruderal/Roadside

The ruderal areas found at the property boundaries include weedy annual grassland species with scattered trees. The ruderal areas within the Study Area include dirt access roads and edges of fields that cannot be accessed by farm equipment and dominated by non-native weedy plants. Common herbaceous plants found in the ruderal areas onsite included wild oats, prickly lettuce, English plantain, chicory (*Cichorium intybus*), and curly dock (*Rumex crispus*). Scattered trees found adjacent to the irrigation ditch, fence lines, and ruderal areas include valley oak (*Quercus lobata*), eucalyptus (*Eucalyptus* species), and walnut (*Juglans* species). Small patches of Himalayan blackberry (*Rubus armeniacus*) are found along the southern fence line and the irrigation ditch.

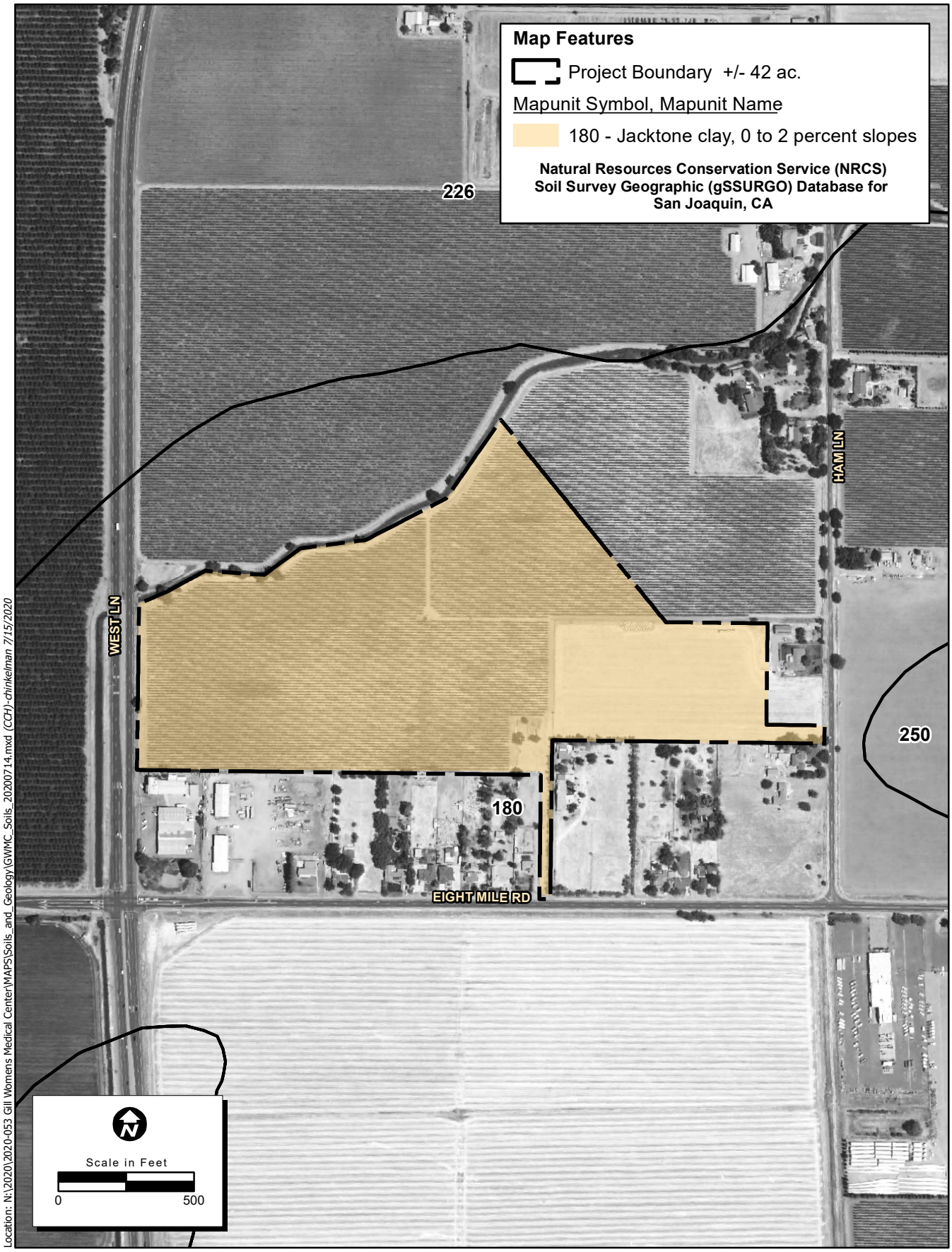
4.6.1.2 Soils

According to the *Web Soil Survey* (NRCS 2020a), there is one soil unit mapped within the Study Area: (180) Jacktone clay, 0 to 2 percent slopes (Figure 4.6-2. *Natural Resources Conservation Service Soil Types*). This soil unit contains hydric components (NRCS 2020b). If the unit is used for urban development, the main limitations are the high shrink-swell potential, the slow permeability, depth to the hardpan, and low strength. Properly designing foundations and footings and diverting runoff away from buildings help to prevent the structural damage caused by shrinking and swelling. Properly designing buildings can offset the limited ability of the soil to support a load. (Soil Conservation Service 1992).

4.6.1.3 Potential Aquatic Resources

A Woodbridge Irrigation District irrigation ditch is located along the northern boundary of the Study Area. The parcel boundary follows the centerline of the ditch. No other potential aquatic resources were identified on the Project Site. There is one California Aquatic Resources Inventory feature mapped, fluvial natural, along the northern boundary (Figure 4.6-3. *California Aquatic Resources Inventory*). This corresponds to the irrigation ditch.

The irrigation ditch supports intermittent flows based on irrigation needs. It is an excavated, unlined, and trapezoidal channel that is approximately 8 to 10 feet wide. Channel vegetation is limited to isolated patches of emergent plants, such as cattail (*Typha* species), hard-stem bulrush (*Schoenoplectus acutus*), and soft rush (*Juncus effusus*). A few scattered valley oak trees are found along the banks of the ditch.



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Map Date: 7/15/2020
Photo (or Base) Source: NAIP (2018)

Figure 4.6-2. Natural Resources Conservation Service Soil Types

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Figure 4.6-3. California Aquatic Resources Inventory

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4.6.1.4 Wildlife

Wildlife use onsite is expected to be minimal due to the agricultural practices and highly disturbed nature of the Study Area and surrounding lands. Common wildlife observed onsite during the field assessment included western fence lizard (*Sceloporus occidentalis*), Eurasian collared-dove (*Streptopelia decaocto*), western kingbird (*Tyrannus verticalis*), house sparrow (*Passer domesticus*), brown-headed cowbird (*Molothrus ater*), and Brewer's blackbird (*Euphagus cyanocephalus*). Several California ground squirrels (*Otospermophilus beecheyi*) and their burrows were found in scattered locations along the irrigation ditch at the northern boundary and within the vineyard.

4.6.1.5 Evaluation of Special-Status Species Identified in the Literature Search

A list of all of the special status plant and wildlife species identified in the literature search as potentially occurring within the Project site is provided in Table 4.6-1. This table includes the listing status for each species, a brief habitat description, and a determination on the potential to occur in the Project site. The potential to occur is based upon species' known distribution, the vegetation communities and habitats present onsite, and the site elevation. Following the table is a brief description of each species with potential to occur.

Species that were considered "Absent" included those not known to occur in the region and/or elevation of the Study Area or an absence of suitable habitat. These species are not discussed further in this EIR. The species identified through the database queries that are only tracked by the CNDDB and possess no special-status are not included in this EIR. Sensitive habitats that were identified through the database queries that are not located within the Study Area are also not discussed in this EIR.

There are no special-status species previously documented within the Study Area, but several special-status species are known to occur within an approximate five-mile radius of the Project (see Appendix E, Attachment A).

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Plants						
Alkali milk-vetch *(Astragalus tener* var. *tener)*	–	–	1B.2	Playas, mesic areas within valley and foothill grasslands, and alkaline vernal pools (3'–197').	March–June	Absent; there is no suitable habitat onsite.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Heartscale *(Atriplex cordulata* var. *cordulata)*	–	–	1B.2	Alkaline or saline valley and foothill grasslands, meadows and seeps, and chenopod scrub communities (0'–1,837').	April–October	Absent; there is no suitable habitat onsite.
Big tarplant *(Blepharizonia plumosa* ssp. *plumosa)*	–	–	1B.1	Valley and foothill grassland (98'–1,657').	July–October	Absent; there is no suitable habitat onsite.
Watershield *(Brasenia schreberi)*	–	–	2B.3	Freshwater marshes and swamps (98'–7,218').	June–September	Absent; there is no suitable habitat onsite.
Bristly sedge *(Carex comosa)*	–	–	2B.1	Coastal prairie, marshes and swamps including lake margins, and in valley and foothill grassland (0'–2,051').	May–September	Absent; there is no suitable habitat onsite.
Succulent owl's clover *(Castilleja campestris* ssp. *succulenta)*	FT	CE	1B.2; SJMSCP	Vernal pools, often in acidic environments (164'–2,461').	April–May	Absent; there is no suitable habitat onsite.
Parry's rough tarplant *(Centromadia parryi* ssp. *rudis)*	–	–	4.2	Alkaline, vernally mesic seeps in valley and foothill grassland and vernal pools, sometimes found on roadsides (0'–328').	May–October	Absent; there is no suitable habitat onsite.
Palmate-bracted bird's-beak *(Chloropyron palmatum)*	FE	CE	1B.1	Alkaline areas in chenopod scrub and valley and foothill grassland (16'–509').	May–October	Absent; there is no suitable habitat onsite.
Bolander's water-hemlock *(Cicuta maculata* var. *bolanderi)*	–	–	2B.1	Coastal, fresh, or brackish marshes and swamps (0'–656').	July–September	Absent; there is no suitable habitat onsite.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Recurved larkspur *(Delphinium recurvatum)*	–	–	1B.2	Chenopod scrub, cismontane woodland, and valley and foothill grasslands (10'–2,592').	March–June	Absent; there is no suitable habitat onsite.
San Joaquin spearscale (*Extriplex joaquinana*)	–	–	1B.2	Alkaline soils in chenopod scrub, meadows seeps, playas, and valley and foothill grassland (3'–2,740').	April–October	Absent; there is no suitable habitat onsite.
Boggs Lake hedge-hyssop *(Gratiola heterosepala)*	–	CE	1B.2; SJMSCP	Marshes, swamps, lake margins, and vernal pools (33'–7,792').	April–August	Absent; there is no suitable habitat onsite.
Woolly rose-mallow *(Hibiscus lasiocarpos* var. *occidentalis)*	–	–	1B.2	Marshes and freshwater swamps. Often in riprap on sides of levees (0'–394').	June–September	Absent; there is no suitable habitat onsite.
Delta tule pea (*Lathyrus jepsonii* var. *jepsonii)*	–	–	1B.2	Freshwater and brackish marshes and swamps (0'–16').	May–September	Absent; there is no suitable habitat onsite.
Legenere *(Legenere limosa)*	–	–	1B.1	Various seasonally inundated areas including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages (USFWS 2005) (3'–2,887').	April–June	Absent; there is no suitable habitat onsite.
Mason's lilaeopsis *(Lilaeopsis masonii)*	–	CR	1B.1; SJMSCP	Brackish or freshwater marshes or swamps and riparian scrub (0'–33').	April–November	Absent; there is no suitable habitat onsite.
Delta mudwort (*Limosella australis*)	–	–	2B.1	Usually mud banks in freshwater or brackish marshes and swamps and riparian scrub (0'–10').	May–August	Absent; there is no suitable habitat onsite.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Sanford's arrowhead *(Sagittaria sanfordii)*	–	–	1B.2	Shallow marshes and freshwater swamps (0'–2,133').	May–October	Low Potential; the irrigation ditch represents marginally suitable habitat for this species.
Side-flowering skullcap *(Scutellaria lateriflora)*	–	–	2B.2	Mesic areas in meadows and seeps and marshes and swamps (0'–1,640').	July–September	Absent; there is no suitable habitat onsite.
Suisun marsh aster (*Symphyotrichum lentum*)	–	–	1B.2	Brackish and freshwater marshes and swamps (0'–10').	May–November	Absent; there is no suitable habitat onsite.
Saline clover *(Trifolium hydrophilum)*	–	–	1B.2	Marshes and swamps, mesic and alkaline areas in valley and foothill grassland, and vernal pools (0'–984').	April–June	Absent; there is no suitable habitat onsite.
Invertebrates						
Conservancy fairy shrimp (*Branchinecta conservatio)*	FE	-	SJMSCP	Vernal pools/wetlands.	November-April	Absent; there is no suitable habitat onsite.
Longhorn fairy shrimp *(Branchinecta longiantenna)*	FE	-	SJMSCP	Vernal pools/wetlands.	November–April	Absent; there is no suitable habitat onsite.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	-	SJMSCP	Elderberry shrubs.	Any season	Absent; there is no suitable habitat onsite.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	-	SJMSCP	Vernal pools/wetlands.	November-April	Absent; there is no suitable habitat onsite.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Fish						
Delta smelt (*Hypomesus transpacificus*)	FT	CE	SJMSCP	Sacramento-San Joaquin delta.	N/A	Absent; there is no suitable habitat onsite.
Longfin smelt (*Spirinchus thaleichthys*)	FC	CT	SSC; SJMSCP	Freshwater and seawater estuaries.	N/A	Absent; there is no suitable habitat onsite.
Sacramento splittail *(Pogonichthys macrolepidotus)*	-	-	SSC; SJMSCP	San Francisco bay estuary. Spawns in upstream floodplains and backwater sloughs.	N/A	Absent; there is no suitable habitat onsite.
Steelhead (CA Central Valley DPS) (*Oncorhynchus mykiss*)	FT	-	-	Undammed rivers, streams, creeks.	N/A	Absent; there is no suitable habitat onsite.
Amphibians						
California red-legged frog (*Rana draytonii*)	FT	-	SSC; SJMSCP	Lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Adults must have aestivation habitat to endure summer dry down.	May 1-November 1	Absent; there is no suitable habitat onsite.
California tiger salamander (Central California DPS) (*Ambystoma californiense*)	FT	CT	SSC; SJMSCP	Vernal pools, wetlands (breeding) and adjacent grassland or oak woodland; needs underground refuge (e.g., ground squirrel and/or gopher burrows). Largely terrestrial as adults.	March-May	Absent; there is no suitable habitat onsite.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Foothill yellow-legged frog (*Rana boylii*)	-	CE	SSC; SJMSCP	Foothill yellow-legged frogs can be active all year in warmer locations, but may become inactive or hibernate in colder climates. At lower elevations, foothill yellow-legged frogs likely spend most of the year in or near streams. Adult frogs, primarily males, will gather along main-stem rivers during spring to breed.	May - October	Absent; there is no suitable habitat onsite.
Western spadefoot (*Spea hammondii*)	-	-	SSC; SJMSCP	California endemic species of vernal pools, swales, wetlands and adjacent grasslands throughout the Central Valley.	March-May	Absent; there is no suitable habitat onsite.
Reptiles						
Giant garter snake (*Thamnophis gigas*)	FT	CT	SJMSCP	Freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range.	April-October	Low Potential; the irrigation ditch and upland/vineyard near the irrigation ditch supports marginal habitat.
Northwestern pond turtle (*Actinemys marmorata*)	-	-	SSC; SJMSCP	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April-September	Low Potential; the irrigation ditch and upland/vineyard near the irrigation ditch supports marginal habitat.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Birds						
Rufous hummingbird *(Selasphorus rufus)*	-	-	BCC	Breeds in British Columbia and Alaska (does not breed in California). Winters in coastal Southern California south into Mexico. Common migrant during March-April in Sierra Nevada foothills and June-August in Lower Conifer to Alpine zone of Sierra Nevada. Nesting habitat includes secondary succession communities and openings, mature forests, parks and residential area.	April-July	Absent; this species does not nest in the region.
California black rail (*Laterallus jamaicensis coturniculus*)	-	CT	BCC, CFP, SJMSCP	Salt marsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation. In California, primarily found in coastal and Bay-Delta communities, but also in Sierran foothills (Butte, Yuba, Nevada, Placer, El Dorado counties)	March-September (breeding)	Absent; there is no suitable habitat onsite.
Greater sandhill crane *(Antigone canadensis tabida)*	-	CT	CFP; SJMSCP	Breeds in NE California, Nevada, Oregon, Washington, and BC, Canada; winters from CA to Florida. In winter, they forage in burned grasslands, pastures, and feed on waste grain in a variety of agricultural settings (corn, wheat, milo, rice, oats, and barley), tilled fields, recently planted fields, alfalfa fields, row crops and burned rice fields.	March-August (breeding); September-March (wintering)	Absent; there is no suitable wintering habitat onsite, and this species does not nest in the region.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Whimbrel *(Numenius phaeopus)*	-	-	BCC	Nesting occurs in Alaska and northern Canada; winters in coastal Oregon, California, south to Central America; wintering habitat includes tidal mudflats, coral reefs, lagoons, marshes, swamps, estuaries, sandy beaches, and rocky shores.	October-March	Absent; there is no suitable wintering habitat onsite, and this species does not nest in the region.
Long-billed curlew (*Numenius americanus*)	-	-	BCC	Breeds east of the Cascades in Washington, Oregon, northeastern California (Siskiyou, Modoc, Lassen counties), east-central California (Inyo County), through Great Basin region into Great Plains. Winters in California, Texas, and Louisiana. Wintering habitat includes tidal mudflats and estuaries, wet pastures, sandy beaches, salt marsh, managed wetlands, evaporation ponds, sewage ponds, and grasslands.	September-March (wintering)	Absent; there is no suitable wintering habitat onsite, and this species does not nest in the region.
Marbled godwit (*Limosa fedoa*)	-	-	BCC	Nests in Montana, North and South Dakota, Minnesota, into Canada. Winter range along Pacific Coast from British Columbia south to Central America, with small numbers wintering in interior California. Wintering habitat includes coastal mudflats, meadows, estuaries, sandy beaches, sandflats, and salt ponds.	August-April (Migrant/ Wintering in CA)	Absent; there is no suitable wintering habitat onsite, and this species does not nest in the region.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Short-billed Dowitcher (*Limnodromus griseus)*	-	-	BCC	Nests in Canada, southern Alaska; winters in coastal California south to South America; wintering habitat includes coastal mudflats and brackish lagoons	Wintering/ Migrant period: late-August-May	Absent; there is no suitable wintering habitat onsite, and this species does not nest in the region.
White-tailed kite (*Elanus leucurus*)	-	-	CFP, SJMSCP	Nesting occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats.	March-August	Potential; larger trees onsite represent potential nesting habitat.
Cooper's hawk (*Accipiter cooperii)*	-	-	CDFW WL; SJMSCP	Nests in trees in riparian woodlands in deciduous, mixed and evergreen forests, as well as urban landscapes	March-July	Potential; larger trees onsite represent potential nesting habitat.
Bald eagle (*Haliaeetus leucocephalus*)	Delisted	CE	CFP, BCC	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands	February – September (nesting); October-March (wintering)	Absent; there is no suitable habitat onsite.
Swainson's hawk (*Buteo swainsoni*)	-	CT	BCC, SJMSCP	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures	March-August	Potential; larger trees onsite represent potential nesting habitat.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Burrowing owl *(Athene cunicularia)*	-	-	BCC, SSC, SJMSCP	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g., prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.	February-August	Potential; California ground squirrel burrows throughout the site, especially near the irrigation ditch, represent potential habitat.
Lewis' woodpecker (*Melanerpes lewis*)	-	-	BCC	In California, breeds in Siskiyou and Modoc Counties, Warmer Mountains, inner coast ranges from Tehama to San Luis Obispo Counties, San Bernardino Mountains, and Big Pine Mountain (Inyo County); nesting habitat includes open ponderosa pine forest, open riparian woodland, logged/burned forest, and oak woodlands. Does not breed on the west side of Sierran crest (Beedy and Pandalfino 2013).	April-September (breeding); September-March (winter in Central Valley).	Absent; there is no suitable wintering habitat onsite, and this species does not nest in the region.
Nuttall's woodpecker *(Dryobates nuttallii)*	-	-	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	April-July	Absent; there is no suitable habitat onsite.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Loggerhead shrike (*Lanius ludovicianus*)	-	-	BCC, SSC; SJMSCP	Found throughout California in open country with short vegetation, pastures, old orchards, grasslands, agricultural areas, open woodlands. Not found in heavily forested habitats.	March-July	Potential; trees and shrubs onsite represent potential nesting habitat.
Least Bell's vireo (*Vireo bellii pusillus*)	FE	CE	BCC	In California, breeding range includes Ventura, Los Angeles, Riverside, Orange, San Diego, and San Bernardino counties, and rarely Stanislaus and Santa Clara counties Nesting habitat includes dense, low shrubby vegetation in riparian areas, brushy fields, young second-growth woodland, scrub oak, coastal chaparral and mesquite brushland. Winters in southern Baja California Sur.	April 1-July 31	Absent; there is no suitable habitat onsite.
Yellow-billed magpie (*Pica nuttallii*)	-	-	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings.	April-June	Potential; larger trees onsite represent potential nesting habitat.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Oak titmouse (*Baeolophus inornatus*)			BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree)	March-July	Absent; there is no suitable habitat onsite.
Wrentit (*Chamaea fasciata*)	-	-	BCC	Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens.	March-August	Absent; there is no suitable habitat onsite.
California thrasher (*Toxostoma redivivum*)	-	-	BCC	Resident and endemic to coastal and Sierra Nevada-Cascade foothill areas of California. Nests are usually well hidden in dense shrubs, including scrub oak, California lilac, and chamise.	February-July	Absent; there is no suitable habitat onsite.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Lawrence's goldfinch (*Spinus lawrencei*)	-	-	BCC	Breeds in Sierra Nevada and inner Coast Range foothills surrounding the Central Valley and the southern Coast Range to Santa Barbara County east through southern California to the Mojave Desert and Colorado Desert into the Peninsular Range. Nests in arid and open woodlands with chaparral or other brushy areas, tall annual weed fields, and a water source (e.g., small stream, pond, lake), and to a lesser extent riparian woodland, coastal scrub, evergreen forests, pinyon-juniper woodland, planted conifers, and ranches or rural residences near weedy fields and water.	March-September	Absent; there is no suitable habitat onsite.
Song sparrow "Modesto" (*Melospiza melodia heermanni*)	-	-	BCC, SSC	Resident in central and southwest California, including Central Valley; nests in marsh, scrub habitat	April-June	Absent; there is no suitable habitat onsite.
San Clemente spotted towhee (*Pipilo maculatus clementae*)	-	-	BCC, SSC	Resident on Santa Catalina and Santa Rosa Islands; extirpated on San Clemente Island, California. Breeds in dense, broadleaf shrubby brush, thickets, and tangles in chaparral, oak woodland, island woodland, and Bishop pine forest.	April-July	Absent; there is no suitable habitat onsite. This subspecies does not occur in the region.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			
Tricolored blackbird (*Agelaius tricolor*)	-	CT	BCC, SSC, SJMSCP	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta Counties south to San Bernardino, Riverside and San Diego Counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen Counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields.	March-August	Absent; there is no suitable habitat onsite.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	-	-	BCC, SSC	Breeds in salt marshes of San Francisco Bay; winters San Francisco south along coast to San Diego County	March-July	Absent; there is no suitable habitat onsite. This subspecies does not occur in the region.
Mammals						
Riparian brush rabbit *(Sylvilagus bachmani riparius)*	FE	CE	-	Riparian brush rabbits inhabit dense, brushy areas of valley riparian forests marked by extensive thickets of California wild rose (*Rosa californica*), California blackberries (*Rubus ursinus*), and willows (*Salix* spp.). Thriving mats of low-growing vines and shrubs serve as ideal living sites where they build tunnels under and through the vegetation.	Any season	Absent; there is no suitable habitat onsite.

Table 4.6-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	FESA	CESA/ NPPA	Other			

Status Codes NOTE:

FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
FE	FESA listed, Endangered.
FT	FESA listed, Threatened.
FC	Candidate for FESA listing as Threatened or Endangered.
BCC	USFWS Bird of Conservation Concern (USFWS 2008).
CR	CESA- or NPPA-listed, Rare.
CT	CESA- or NPPA-listed, Threatened.
CE	CESA or NPPA listed, Endangered.
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians).
CDFW WL	CDFW Watch List
SSC	CDFW Species of Special Concern (CDFW, updated July 2017).
SJMSCP	SJMSCP Covered Species
1B	CRPR/Rare or Endangered in California and elsewhere.
2B	Plants rare, threatened, or endangered in California but more common elsewhere.
4	CRPR/Plants of Limited Distribution – A Watch List.
0.1	Threat Rank/Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80 percent occurrences threatened / moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known)
Delisted	Formally Delisted (delisted species are monitored for five years).

Plants

There is one potential special-status plant, Sanford's arrowhead, which may occur within the Study Area.

Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is not listed pursuant to the federal or California ESAs but is designated as a CRPR 1B.2 species. This species is a perennial rhizomatous herb that occurs in shallow, freshwater marshes and swamps (CNPS 2020). Sanford's arrowhead blooms from May through October and is known to occur at elevations ranging from sea level to 2,133 feet above MSL (CNPS 2020). Sanford's arrowhead is endemic to California; the current range of this species includes Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Marin, Napa, Orange, Placer, Sacramento, San Bernardino, San Joaquin, Shasta, Solano, Tehama, Tulare, Ventura, and Yuba counties; it is believed to be extirpated from both Orange and Ventura counties (CNPS 2020). The irrigation ditch running along the northern boundary represents onsite marginally suitable habitat for this species.

Invertebrates

The Study Area is comprised entirely of agricultural or disturbed habitats. There is no suitable habitat for special-status invertebrates.

Fish

The Study Area is comprised primarily of agricultural or disturbed habitats and includes the south half of the agricultural ditch running along the northern site boundary. There is no suitable habitat for special-status fish.

Amphibians

The Study Area is comprised entirely of agricultural or disturbed habitats. There is no suitable habitat for special-status amphibians.

Reptiles

The Study Area supports marginally suitable habitat for two special-status reptiles: giant garter snake (*Thamnophis gigas*) and northwestern pond turtle (*Actinemys marmorata*). The following is a brief discussion of special-status reptiles with the potential to occur within the Study Area.

Giant Garter Snake

The giant garter snake is listed as a threatened species pursuant to both the California and federal ESAs and is a San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) covered species (the SJMSCP is discussed further in Section 4.6.2.2 below). Giant garter snakes typically inhabit perennial ponds, marshes, slow-moving streams, and agricultural ditches containing adequate water during the spring and summer months. Giant garter snakes are most active from early spring through mid-fall (USFWS 1999). The giant garter snake is endemic to the floors of the Sacramento and San Joaquin valleys of California and probably occurred historically from Butte County south to Buena Vista Lake in Kern County (USFWS 1999). The irrigation ditch and adjacent uplands located along the northern border represents marginally suitable habitat for giant garter snake. The intermittent nature of the irrigation ditch, absence of dense emergent vegetation cover in the channel, and farmed adjacent uplands reduces, but does not eliminate, the likelihood for giant garter snake presence in the Study Area.

Northwestern Pond Turtle

The northwestern pond turtle is not listed and protected under either the federal or California ESAs but is considered a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC) and a SJMSCP covered species. They can occur in a variety of waters including ponds, lakes, streams, reservoirs, settling ponds of wastewater treatment plants, and other permanent and ephemeral wetlands (Bury et al. 2012). In streams and other lotic features, they generally require slack or slow water microhabitats and basking areas such as logs, rocks, banks, and brush piles for thermoregulation (Bury et al. 2012). The intermittent nature and shallow depths of the irrigation ditch reduces, but does not eliminate, the likelihood for northwestern pond turtle presence in the Study Area.

Birds

The Study Area supports potentially suitable nesting and foraging habitat for several special-status birds, including white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), Swainson's hawk (*Buteo swainsoni*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), and yellow-billed

magpie (*Pica nuttallii*). The following is a brief discussion of special-status birds with the potential to occur within the Study Area.

White-Tailed Kite

White-tailed kite is not listed pursuant to either the federal or California ESAs; however, the species is fully protected pursuant to Section 3511 of the California Fish and Game Code and is a SJMSCP covered species. This species is a common resident in the Central Valley and the entire length of the California coast, and all areas up to the Sierra Nevada foothills and southeastern deserts (Dunk 2020). In northern California, white-tailed kite nesting occurs from March through early August, with nesting activity peaking from March through June. Nesting occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands (Dunk 2020). The trees located within the onsite ruderal areas and in ruderal areas bordering the Study Area represent potential nesting habitat for this species.

Cooper's Hawk

Cooper's hawk is not listed pursuant to either the federal or California ESAs; however, it is a CDFW "watch list" species and a SJMSCP covered species. Typical nesting and foraging habitats include riparian woodland, dense oak woodland, and other woodlands near water. Cooper's hawk nest throughout California from Siskiyou County to San Diego County including the Central Valley (Rosenfield et al. 2020). Breeding occurs during March through July, with a peak from May through July. The trees located within the onsite ruderal areas and in ruderal areas bordering the Study Area represent potential nesting habitat for this species.

Swainson's Hawk

The Swainson's hawk is listed as a threatened species and protected pursuant to the California ESA and a SJMSCP covered species. This species nests in North America (Canada, western U.S., and Mexico) and typically winters from South America north to Mexico. However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta (Bechard et al. 2020). In California, the nesting season for Swainson's hawk ranges from mid-March to late August.

Swainson's hawks nest within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole (*Microtus californicus*), California ground squirrel, ring-necked pheasant (*Phasianus colchicus*), many passerine birds, and grasshoppers (*Melanopulus* species). Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, disking, and irrigating (Estep 1989). The removal of vegetative cover by such farming activities results in more readily available prey items for this species. The trees located within the onsite ruderal areas and in ruderal areas bordering the Study Area represent potential nesting habitat for this species. Suitable Swainson's hawk foraging habitat onsite is limited to the fallow agricultural field.

Burrowing Owl

The burrowing owl is not listed pursuant to either the federal or California ESAs; however, it is designated as a BCC by the USFWS, an SSC by the CDFW, and is a SJMSCP covered species. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds (Poulin et al. 2020). This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as concrete culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement (CDFG 2012). The breeding season typically occurs between February 1 and August 31 (CDFG 2012). No burrowing owls or sign of presence were observed during the initial site assessment in May 2020, but there are ground squirrel burrows scattered along the irrigation ditch adjacent upland, including within the vineyard, which represent potential habitat for burrowing owls.

Loggerhead Shrike

The loggerhead shrike is not listed pursuant to either the federal or California ESAs; but is considered a BCC by the USFWS, an SSC by the CDFW, and is a SJMSCP covered species. Loggerhead shrikes nest throughout California except the northwestern corner, montane forests, and high deserts (Small 1994). Loggerhead shrikes nest in small trees and shrubs in open country with short vegetation such as pastures, old orchards, mowed roadsides, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands (Yosef 2020). The nesting season extends from March through July. Small trees and shrubs in the ruderal areas onsite and adjacent to the site represent potentially suitable nesting habitat for this species.

Yellow-Billed Magpie

The yellow-billed magpie is not listed pursuant to either the federal or California ESAs but is considered a USFWS BCC. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late-January to mid-February, which may take up to six to eight weeks to complete, with eggs laid during April-May, and fledging during May-June (Koenig and Reynolds 2020). The young leave the nest at about 30 days after hatching (Koenig and Reynolds 2020). Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004-2006 (Koenig and Reynolds 2020). The trees located within the ruderal areas onsite and bordering the Study Area represent potential nesting habitat for this species.

Migratory Bird Treaty Act Protected Birds

While not considered special status as previously defined, the Study Area supports potential nesting habitat for other, more common, bird species that are protected under the MBTA and the Fish and Game Code of California. These could include common species such as northern mockingbird and house finch, among others. Trees, shrubs, and annual grassland onsite and immediately adjacent the site represents potential nesting habitat for protected birds.

Mammals

The Study Area is comprised entirely of agricultural or disturbed habitats. There is no suitable habitat for special-status mammals.

4.6.1.6 Sensitive Natural Communities

No sensitive natural communities were found onsite during the field assessment.

4.6.1.7 Wildlife Movement/Corridors

The Study Area is comprised of agricultural lands and does not support significant wildlife habitat. It is located in an agricultural setting surrounded by roads. The irrigation canal located along the northern boundary may support localized wildlife movement. However, there are no signification habitat features (e.g., wetlands) within or adjacent to the Study Area. The Survey Area does not support known nursery sites or mule deer fawning areas (CDFW 2020). No nursery sites were identified during the field assessment.

4.6.1.8 Critical Habitat

There is no designated Critical Habitat within the Project site.

4.6.1.9 Oak Trees

Native oak trees (e.g., Valley and blue oak [*Quercus douglasii*]) are present along the northern and western boundaries and centrally located in the southern portion of the Survey Area (see Figure 4.6-1).

4.6.2 Regulatory Setting

4.6.2.1 Federal Regulations

Endangered Species Act

The federal ESA protects plants and animals that are listed as endangered or threatened by USFWS and the National Marine Fisheries Service (NMFS). Section 9 of the federal ESA prohibits, without authorization, the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant under federal jurisdiction and removing, cutting, digging up, damaging, or destroying any listed plant in any other area in knowing violation of state law (16 U.S. Code [USC] 1538).

Under Section 7 of the federal ESA, federal agencies are required to consult with USFWS and/or NMFS if their actions, including permit approvals and funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion (BO), USFWS and NMFS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the

species. Section 10 of federal ESA provides for the issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

Section 7 Consultation

Section 7 of the federal ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. If direct and/or indirect effects will occur to critical habitat that appreciably diminish the value of critical habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the federal lead agency must prepare a biological assessment (BA) for the purpose of analyzing the potential effects of the proposed Project on listed species and critical habitat to establish and justify an "effect determination." Often a third-party, non-federal applicant drafts the BA for the lead federal agencies. The USFWS/NMFS reviews the BA; if it concludes that the Project may adversely affect a listed species or its habitat, it prepares a BO. The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat.

Critical Habitat

Critical Habitat is defined in Section 3 of the federal ESA as:

1. the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the federal ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and

2. specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features essential to the conservation of the species (16 USC 1533). Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

1. Space for individual and population growth and for normal behavior.

2. Food, water, air, light, minerals, or other nutritional or physiological requirements.

3. Cover or shelter.

4. Sites for breeding, reproduction, or rearing (or development) of offspring.

5. Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized under the MBTA, USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of nongame birds in § 3800, migratory birds in § 3513, and birds of prey in § 3503.5 of the California Fish and Game Code.

U.S. Fish and Wildlife Service Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates USFWS "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA." To meet this requirement, USFWS published a list of BCC (USFWS 2008) for the U.S. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS's highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the USACE. The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (USEPA) also has authority over wetlands, including the authority to veto permits issued by USACE under CWA Section 404(c).

Projects involving activities that have no more than minimal individual and cumulative adverse environmental effects may meet the conditions of one of the Nationwide Permits already issued by USACE (Federal Register 82:1860, January 6, 2017). If impacts on wetlands could be substantial, an individual permit is required. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

4.6.2.2 State and Local Regulations

California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) protects species of fish, wildlife, and plants listed by the State as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the California ESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful projects under permits issued by CDFW.

Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. Fully protected species are identified in the California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing incidental take permits for fully protected species under the California ESA. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

Native Plant Protection Act

The NPPA of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare." The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains a number of exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under the NPPA. Plants listed as rare under the NPPA are not protected under the California ESA but are still protected under the provisions of the NPPA. The Fish and Game Commission no longer lists plants under the NPPA, referring all listings to the California ESA.

California Fish and Game Code Special Protections for Birds

In addition to protections contained within the California ESA and California Fish and Game Code § 3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain birds.

Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.

Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.

Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests

Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic non-native species, or any part of these birds.

Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires individuals or agencies to provide a Notification of Lake or Streambed Alteration to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and wildlife resources. The final proposal mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alternation Agreement.

Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)]. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, which are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities.

California Environmental Quality Act

In accordance with CEQA Guidelines § 15380, a species or subspecies not specifically protected under the federal or California ESAs or NPPA may be considered endangered, rare, or threatened for CEQA review purposes if the species meets certain criteria specified in the Guidelines. These criteria include definitions similar to definitions used in the federal ESA, the California ESA, and the NPPA. Section 15380 was included in the CEQA Guidelines primarily to address situations in which a project under review may have

a significant effect on a species that has not been listed under the federal ESA, the California ESA, or the NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as SSC by CDFW and plants identified by the CNPS as rare, threatened, or endangered may meet the CEQA definition of rare or endangered.

Species of Special Concern

SSC are defined by the CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under federal ESA, the California ESA, or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not State) threatened or endangered or meets the State definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status.
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for State threatened or endangered status.
- SSC are typically associated with habitats that are threatened.

Depending on the policy of the lead agency, projects that result in substantial impacts to SSC may be considered significant under CEQA.

California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2020), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academia, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere.
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere.
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere.
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere.
- Rare Plant Rank 3 – a review list of plants about which more information is needed.

- Rare Plant Rank 4 – a watch list of plants of limited distribution.

Additionally, CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 1 through 3, with 1 being the most threatened and 3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat).
- Threat Rank 0.2 – Moderately threatened in California (20-80 percent of occurrences threatened/moderate degree and immediacy of threat).
- Threat Rank 0.3 – Not very threatened in California (<20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or different protection (CNPS 2020).

Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2, and 3 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 4 and at the discretion of the CEQA lead agency.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The key purpose of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) (San Joaquin Council of Governments 2000) is to:

- provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy;
- preserve landowner property rights;
- provide for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the federal ESA or the California ESA;
- provide and maintain multiple-use Open Space which contribute to the quality of life of the residents of San Joaquin County; and
- accommodate a growing population while minimizing costs to project proponents and society at large.

The SJMSCP, in accordance with federal ESA Section 10(a)(1)(B) and California ESA Section 2081(b) Incidental Take Permits, provides compensation for the Conservation of Open Space to non-Open Space uses that affect the plant, fish, and wildlife species covered by the SJMSCP. Among other activities, the SJMSCP compensates for conversions of open space for urban development.

San Joaquin County Ordinance, Division 15, Chapter 9-1505 - Trees

The intent of Division 15, Chapter 9-1505 of the Ordinance Code of San Joaquin County, California is to preserve the County's tree resources, The removal of a Native Oak Tree, Heritage Oak, or Historical Tree shall require an approved improvement plan application, as specified in Chapter 9-884 of the Title, and shall be subject to the provisions of this Chapter, unless exempted by Section 9-1505.8 or 9-1505.9.

4.6.3 Environmental Impacts and Mitigation Measures

4.6.3.1 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this EIR, implementation of the project would be considered to have a significant adverse impact on biological resources if it would:

- 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 CDFW, NMFS, or USFWS, and meets the definition of Section 15380 (b), (c), or (d) of the CEQA Guidelines.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.), either individually or cumulatively, through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, recovery plan, or federal Biological Opinion.

4.6.3.2 Methods of Analysis

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under § 15380 of the CEQA Guidelines;

- are identified as a species of special concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- are birds identified as birds of conservation concern (BCC) by the U.S. Fish and Wildlife Service (USFWS);
- are considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California," "plants about which more information is needed," or "plants of limited distribution – a watch list" (i.e., species with a California Rare Plant Rank [CRPR] of 1B, 2, 3, or 4);
- are plants listed as rare under the California Native Plant Protection Act (NPPA) (California Fish and Game Code, § 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, § 3511 (birds), § 4700 (mammals), § 5050 (amphibians and reptiles), and § 5515 (fishes).

4.6.3.3 Project Impacts and Mitigation Measures

Impact 4.6-1 The proposed project could directly or indirectly affect special-status plant and wildlife species and/or their habitats.
Impact Determination: *less than significant with mitigation incorporated*

Threshold:	*Substantial adverse impact, either directly or through habitat modifications, on any plant fish or wildlife species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW, NMFS, or USFWS.*

Sanford's Arrowhead

The existing Woodbridge Irrigation District irrigation canal centerline defines the northwest project boundary. As such, the south bank of the canal is located onsite and represents potential suitable habitat for Sanford's arrowhead. Project development plans include creation of a 100-foot wide buffer along the canal's south bank where it occurs onsite (see Site Plan Figure 3-4). As discussed in the project description, one purpose of this buffer is to address land use compatibility issues related to existing agricultural operations (such as noise, dust, and herbicide/pesticide application) that occur immediately north of the Project site. To accomplish this, the buffer area would be planted with trees and shrubs to create a uniform canopy and "vegetative screen" which would also result in resource benefits. As discussed in the project description, to reduce the area required for onsite stormwater detention, the buffer area may also accommodate a linear retention basin. All buffer area improvements, including the planting plan and any proposed retention basin, would be designed to ensure occurrences of Sanford's arrowhead are protected.

While the likelihood of Sanford's arrowhead occurrence within the buffer areas is considered low due to the intermittent nature of the canal, potential presence cannot be ruled out. Therefore, any construction ground disturbance within the buffer area is considered a potentially significant impact to Sanford's arrowhead. With implementation of Mitigation Measures **4.6-1a, 4.6-1b** and **4.6-1c**, this impact would be reduced to **less than significant with mitigation incorporated**.

Western Pond Turtle

The Woodbridge Irrigation District irrigation canal represents potential habitat for western pond turtle. The SJMSCP only addresses impacts to potential western pond turtle nesting habitat, of which there is none within the Study Area. However, the site supports potential upland habitat, within the northern buffer described above and the development area, which may be used by foraging and transitory turtles. As such, project construction presents a potentially significant impact to western pond turtle. With implementation of Mitigation Measures **4.6-1a, 4.6-1b** and **4.6-1d,** impacts would be **less than significant with mitigation incorporated**.

Giant Garter Snake

The Woodbridge Irrigation District irrigation canal and adjacent uplands located along the northern border buffer represents marginally suitable habitat for giant garter snake. The intermittent nature of the irrigation ditch, absence of dense emergent vegetation cover in the channel, and farmed adjacent uplands reduces, but does not eliminate, the likelihood for giant garter snake presence in the Study Area. As such Project development represents a potentially significant impact to giant garter snake. With implementation of Mitigation Measures **4.6-1a, 4.6-1b, 4.6-1e** and **4.6-1f,** impacts would be **less than significant with mitigation incorporated**.

Swainson's Hawk and other Migratory Birds and Raptors

Mature trees, including native oaks, which could provide suitable nesting habitat for Swainson's Hawk and other migratory birds and raptors are located onsite within ruderal areas as shown on Figure 4.6-1. Trees that provide suitable nesting habitat are also located adjacent the project site. Project construction is expected to occur during the nesting season for Swainson's Hawk and other migratory birds (generally March through August) and could result in the disturbance of active nests. Nest tree removal or construction disturbance (noise or activity) during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. This would be considered a potentially significant impact to Swainson's Hawk and other raptors or nesting migratory birds. With implementation of Mitigation Measures **4.6-1a, 4.6-1b** and **4.6-1g, impacts would be less than significant with mitigation incorporated**.

Indirect impacts to Swainson's Hawk could also result from the loss of the ±10-acre fallow agricultural field located on the Project's east side. This fallow field provides suitable Swainson's Hawk foraging habitat. Because only a relatively small area of suitable foraging habitat would be lost, and due to an abundance of foraging habitat in the Project vicinity, the proposed project is not expected to adversely affect Swainson's Hawk foraging and this is considered a **less than significant impact**.

Burrowing Owl

The Project site exhibits evidence of ground squirrels as several ground squirrel burrows are located on the property, particularly along the northwest site boundary adjacent the Woodbridge Irrigation District canal. No burrowing owls were observed onsite, and no indication of burrowing owl use of the site was noted during field surveys. However, the presence of squirrel burrows indicates the potential for burrowing owls to inhabit the site. Grading and other construction activities, including within the

northern canal buffer for possible stormwater retention development and, landscape plantings to buffer agricultural activities north of the canal, could result in burrowing owl mortality which would be considered a significant impact. With implementation of Mitigation Measures **4.6-1a, 4.6-1b** and **4.6-1h,** impacts to burrowing owl would be **less than significant with mitigation incorporated**.

Mitigation Measures

Implementation of the following mitigation measures would ensure all biological impacts are reduced to less than significant under CEQA. As an alternative, the applicant can seek coverage for certain species under the SJMSCP. Participation in the SJMSCP is voluntary. Should the Project participate, mitigation would be implemented for those species covered by the SJMSCP according to the SJMSCP. Under this approach, Draft EIR mitigation measures would only be implemented for the balance of species impacts identified in this Draft EIR but not covered by the SJMSCP. Should the Project not participate in the SJMSCP, all recommended Draft EIR mitigation measures would be implemented.

4.6-1a: Conduct Environmental Awareness Training for Construction Personnel.

Before any construction work occurs on the Project site, including grading, tree and/or vegetation removal (clear and grub), the County shall retain a qualified biologist (familiar with the resources in the area) to conduct a mandatory contractor/worker environmental awareness training for construction personnel. The awareness training will be provided to all construction personnel (contractors and subcontractors) prior to beginning construction to brief them on the need to avoid effects on sensitive biological resources adjacent to construction areas and the penalties for not complying with applicable state and federal laws and permit requirements. The biologist will inform all construction personnel about the life history and habitat requirements of special-status species with potential for occurrence onsite, the importance of maintaining habitat, and the terms and conditions of required permit conditions. The environmental training will also cover general restrictions and guidelines that must be followed by all construction personnel to reduce or avoid effects on sensitive biological resources during project construction.

Timing/Implementation: *Prior to construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.6-1b: Install Fencing and/or Flagging to Protect Sensitive Biological Resources.

Prior to construction, the construction contractor shall install high-visibility orange construction fencing and/or flagging, as appropriate, along the perimeter of the work area when adjacent to Environmentally Sensitive Areas (ESAs) (e.g., special-status species habitat, and active bird nests, native oaks, and surface water features). The County will ensure that the final construction plans show known locations where fencing will be installed (such as along the Woodbridge Irrigation Canal southern bank). The plans shall also define how to locate appropriate ESA fencing which shall include all locations identified on the plans and additional locations identified by a qualified biologist as part

of an initial field walk with the lead contractor. This may result in identification of ESAs within the northern buffer that require protection (based on final planting and drainage plans). The contractor shall ensure ESA fencing is maintained throughout the duration of the construction period. If the fencing is removed, damaged, or otherwise compromised during the construction period, construction activities shall cease until the fencing is repaired or replaced. The project's special provisions package shall provide clear language regarding acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. All temporary fencing shall be removed upon completion of construction.

Timing/Implementation: *Prior to construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.6-1c: Sanford's Arrowhead.

Prior to ground disturbance within the northern boundary proposed 100-foot buffer, the following actions shall be implemented to avoid potential impacts to Sanford's arrowhead. If no ground disturbance occurs within the buffer area, no mitigation is required.

- Perform focused plant surveys according to USFWS, CDFW, and CNPS protocols. Surveys should be timed according to the blooming period for target species (May through October) and known reference populations, if available.
- The USFWS generally considers plant survey results valid for approximately three years. Therefore, follow-up surveys may be necessary if Project implementation occurs after this three-year window.
- If Sanford's arrowhead are found, Environmentally Sensitive Areas (ESAs) shall be established around the plants as necessary to clearly demarcate areas for avoidance consistent with Mitigation Measure **4.6-1b**. Avoidance measures and the specific avoidance zone distance would be determined in coordination with appropriate resource agencies (CDFW and/or USFWS).
- If Sanford's arrowhead are found and avoidance of the species is not possible, additional measures such as seed collection and/or translocation may be developed in consultation with the appropriate agencies.
- If no Sanford's arrowhead are found, no further measures pertaining to special-status plants are necessary.

Timing/Implementation: *Prior to ground disturbance within the norther buffer area*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.6-1d: Western Pond Turtle.

The following actions shall be implemented to avoid impacts to western pond turtle.

- A western pond turtle preconstruction survey shall be conducted by a qualified biologist within 14 days prior to the initiation of ground disturbance (e.g., tree/vegetation removal, mass grading). The survey shall consist of the entire Project site, including accessible areas within 100 feet (where feasible).
- If individual western pond turtles are found during the preconstruction survey, a qualified biologist with a CDFW Scientific Collecting Permit shall relocate the individuals, with the concurrence of CDFW, to a site with suitable habitat. Relocation methods shall be approved by CDFW.

Timing/Implementation: *Prior to construction ground disturbance*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.6-1e: Protect Water Quality and Minimize Sedimentation Runoff to Non-Wetland Waters (Woodbridge Irrigation Canal).

Project construction shall comply with all construction site BMPs specified in the Storm Water Pollution Prevention Plan, and any other permit conditions to minimize the introduction of construction-related contaminants and mobilization of sediment to non-wetland waters in and adjacent to the project area. These BMPs will address soil stabilization, sediment control, wind erosion control, vehicle tracking control, non-stormwater management, and waste management practices. The BMPs will be based on the best conventional and best available technology.

Timing/Implementation: *Prior to and during construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.6-1f: Giant Garter Snake.

Prior to ground disturbance within 200 feet of the Woodbridge Irrigation District canal, consistent with the SJMSCP, the following actions shall be implemented to avoid potential impacts to giant garter snake:

- Construction shall occur during the active period for the snake, between May 1 and October 1. SJCOG, with concurrence of the permitting Agencies, shall determine if additional measures are necessary to minimize and avoid take for construction between October 2 and April 30.
- Limit vegetation clearing within 200 feet of the banks of the Woodbridge Irrigation District canal to the minimum necessary.

- Where feasible, confine movement of heavy equipment within 200 feet of the banks of the Woodbridge Irrigation District canal to existing farm roads to minimize habitat disturbance.
- Prior to ground disturbance, all onsite construction personnel shall be given instruction regarding the presence of SJMSCP Covered Species and the importance of avoiding impacts to these species and their habitats (Per Mitigation Measure **4.6-1a**).
- Install temporary fencing at the edge of the construction area and the adjacent Woodbridge Irrigation District canal southern bank (Per Mitigation Measure **4.6-1b)**.
- Restrict working areas, spoils and equipment storage and other project activities to areas outside of the proposed northern buffer area.
- Maintain water quality and limit construction runoff into the irrigation ditch through best-management-practices (Per Mitigation Measure **4.6-1e**).
- A preconstruction survey for giant garter snake shall occur prior to construction activities and within 24 hours of ground disturbance.

Timing/Implementation: *Prior to ground disturbance within 200 feet of the Woodbridge Irrigation District canal,*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.6-1g: Conduct Preconstruction Surveys for Nesting Migratory Birds and Raptors.

The Project Area supports suitable nesting habitat for a variety of special-status birds and birds protected under the MBTA. To minimize impacts to protected bird and active nests during construction, the following measures are required:

- Conduct a pre-construction nesting raptor and bird survey of all suitable habitat on the Project site within 14 days of the commencement ground disturbance (e.g., tree/vegetation removal, mass grading) during the nesting season (February 1 – August 31). Where accessible, surveys shall also be conducted within 100 feet of the Project site.
- If active nests are found, a no-disturbance buffer around the nest shall be established. Per the SJMSCP, a 100-foot buffer shall be established and maintained during the nesting season for white-tailed kite, Cooper's hawk, loggerhead shrike, yellow-billed magpie, and other birds protected under the MBTA.
- The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary.

In addition to the above, the following SJMSCP Incidental Take Minimization Measure shall be implemented should a known Swainson's hawk nest tree (i.e., trees that hawks are known to have nested in within the past three years or trees, such as large oaks, which

the hawks prefer for nesting) become occupied by a Swainson's hawk during construction activities:

- If a nest tree becomes occupied during construction activities, then all construction activities shall remain a distance of two times the dripline of the tree, as measured from the nest.
- If the Applicant elects to remove a nest tree, the nest trees may be removed between September 1 and February 15, when the nests are unoccupied.

Timing/Implementation: *Prior to construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.6-1h: Burrowing Owl.

Prior to site grading/ground disturbance, the project site shall be surveyed for burrowing owl. Should it be determined that burrowing owl are present, the following shall be implemented:

- During the non-breeding season (September 1 through January 31) burrowing owls occupying the Project site should be evicted from the Project site by passive relocation as described in the CDFW's Staff Report on Burrowing Owls (CDFG 2012). Passive relocation is a technique of installing one-way doors in burrow openings to temporarily or permanently evict burrowing owls and prevent burrow re-occupation (CDFG 2012).
- During the breeding season (February 1 through August 31) occupied burrows shall not be disturbed and shall be provided with a 75-meter protective buffer until and unless SJCOG, with concurrence of the permitting Agencies, or unless a qualified biologist approved by the permitting Agencies, verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed.

Timing/Implementation: *Prior to site grading/ground disturbance*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

Impact 4.6-2 The proposed project could affect riparian habitat or sensitive natural communities Impact Determination: *No Impact*

Threshold:	*Substantial adverse impact on any riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW, NMFS, or USFWS.*

There is no riparian habitat or sensitive natural communities onsite. **No impact** would occur.

Mitigation Measures

No mitigation is required.

Impact 4.6-3 The proposed project would not require construction or fill within waters of the U.S. and waters of the state.
Impact Determination: *No Impact*

Threshold:	*Substantial adverse impact on federally, state or locally protected wetlands and waters, either individually or cumulatively, through direct removal, filling, hydrological interruption, or other means.*

The only aquatic resource located within the Study Area is the Woodbridge Irrigation District canal located along the northwest site boundary. The canal would be protected by a 100-foot onsite buffer. No fill of waters of the U.S. or State is proposed as a result of project implementation. Consequently, there would be **no impact**.

Mitigation Measures

No mitigation is required.

Impact 4.6-4 The proposed project could affect wildlife and/or fish movement and/or migration.
Impact Determination: *less than significant*

Threshold:	*Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.*

Wildlife potentially use the Project site for localized movement/migration in particular along the Woodbridge Irrigation Canal. The Project includes establishing an onsite 100-foot buffer along the south side of the canal which would enhance habitat values and preserve the existing ability for wildlife movement or migration across the property. Given this corridor would be preserved, Project development would not constitute a significant loss of available migration habitat in the area. Related impacts are considered **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.6-5 The proposed project is consistent with local policies and ordinances associated with protection of biological resources.
Impact Determination: *less than significant*

Threshold:	*Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

Oak trees in San Joaquin County are protected under Title 9 (Development Title), Division 15, Chapter 9-1505 of the Ordinance Code of San Joaquin County, California. Four native oaks are found along the northern and western boundaries and near the mid-point of the southern boundary. At this time, it is expected that onsite native oaks will be avoided and retained as part of site planning and development. Should avoidance not be possible, any removals would be subject to the replacement requirements outlined in Section 9-1505.4 of the above ordinance. The ordinance includes requirements for replacement stock, planting location and timing, the number and type of replacement trees and maintenance and monitoring requirements. The ordinance requires that the applicant provide a performance bond or other financial security to replant any replacement tree found not to be alive at the end of the required three (3) year maintenance and monitoring period. Compliance with ordinance requirements ensures potential impacts to native oaks would remain less than significant. No mitigation is required.

Mitigation Measures

None required.

Impact 4.6-6 The proposed project is consistent with HCPs, NCCPs, or other conservation plans. Impact Determination: *less than significant*

Threshold:	*Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, recovery plan, or federal Biological Opinion.*

The Proposed Project is located within the boundaries of and would be subject to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) (San Joaquin Council of Governments 2000). The Project site is located within the SJMSCP "Central Zone" within the Unmapped Land Use Area. Participation in the SJMSCP is voluntary. Should the Project participate, it would be subject to the following categories of preconstruction surveys conducted by the Joint Powers Agency as outlined in the SJMSCP:

- The San Joaquin Council of Governments (SJCOG) shall conduct preconstruction surveys to verify vegetation types affected by the project and to determine if SJMSCP Covered Species are present and, if present, attaching Incidental Take Minimization Measures as conditions of project approval (see SJMSCP Section 5.2.2.5 for survey methodologies). These preconstruction surveys shall be conducted in the field when a project is located on suitable habitat for one or more of the SJMSCP Covered Species.
- Preconstruction surveys conducted prior to (or, for some Incidental Take Minimization Measures, during) ground-disturbing activities to determine if SJMSCP Covered Species have been successfully relocated and/or to determine if other Incidental Take Minimization Measures have been implemented, as specified in the SJMSCP conditions of approval.

Consistent with the SJMSCP, the Project is required to pay associated impact fees and implement the above preconstruction surveys to confirm potential impacts to covered species have been appropriately

addressed. Doing so would ensure Project consistency with the SJMSCP and related potential impacts are considered less than significant.

Mitigation Measures

Should the Project participate in the SJMSCP, it would be required to comply with SJMSCP fee program, survey requirements, and Incidental Take Minimization Measures. No additional CEQA mitigation for covered species is required.

4.6.4 Cumulative Impacts

The geographic area considered for analysis of biological resource cumulative impacts is San Joaquin County. Cumulative impacts to biological resources including special-status species, sensitive habitats, wetlands and other waters of the U.S. would occur primarily within the spheres of influence of existing cities as a result of cumulative development allowed by the incorporated cities. However as discussed in the San Joaquin County 2035 General Plan EIR, cities have General Plan policies that would reduce impacts on biological resources. Furthermore, cumulative development is required to comply with the SJMSCP, which would minimize impacts to special status species. As such, city general plan policies, the SJMSCP, and the regulatory mechanisms described in the regulatory setting of this Draft EIR would ensure San Joaquin County cumulative biological impacts are minimized and mitigated to a less than significant level.

As discussed above, because they do not occur onsite, the Proposed Project is found to have less than significant or no impact on sensitive natural communities, waters of the U.S. and State, and fish and wildlife movement/migration corridors. With proposed mitigation, the project would have less than significant impacts on sensitive species and would also be consistent with local policies and ordinances associated with protection of biological resources. As such the project would result in a less than cumulatively-considerable impact on biological resources. No additional mitigation is required.

Mitigation Measures

None required.

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4.7 CULTURAL RESOURCES

This section considers and evaluates the potential impacts of the Proposed Project on cultural resources. Cultural resources are defined as pre-contact (prehistoric) and historic sites, buildings, objects, structures, and districts or any other physical evidence associated with human activity considered important to a culture, or a community for scientific, traditional, or religious reasons. This section is based on the Cultural Resources Inventory Report prepared by ECORP Consulting, Inc. (2020). The information provided below is an abridged version of this report and is provided here to afford a brief context of the potential cultural resources in the Project area.

Due to the sensitive nature of cultural resources, which is restricted from public distribution by state and federal law, the cultural resources report is not included in the EIR appendices; however, all pertinent information necessary for impact determinations is included in this section. A redacted version of the cultural resources report that does not include site records or locations may be obtained by contacting the County.

While much of this section includes Native American pre-contact and historic information, *Section 4.18 Tribal Cultural Resources* of this document includes further analysis of the ethnography of the Project area. Please refer to *Section 4.18 for Tribal Cultural Resources*.

4.7.1 Environmental Setting

4.7.1.1 Regional Pre-Contact History

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Although small animal bones and plant grinding tools are rarely found within archaeological sites of this period, small game and floral foods were probably exploited on a limited basis. A lack of deep cultural deposits from this period suggests that groups included only small numbers of individuals who did not often stay in one place for extended periods.

Around 8,000 BP, there was a shift in focus from hunting towards a greater reliance on plant resources. This period, which extended until around 5,000 years BP, is sometimes referred to as the Millingstone Horizon. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period. In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. During this period, new peoples from the Great Basin began entering southern California. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples (ECORP 2020).

4.7.1.2 Ethnography

The Project Area lies just north of Bear Creek, within the territorial boundaries of the Penutian-speaking Miwok. The Miwok people have been divided by anthropologists into four regional groups: the Bay Miwok, Coast Miwok, Plains Miwok, and the Sierra Miwok. The Project Area is in the southern portion of the Plains Miwok territory, which includes land in the Central Valley North of Bear Creek along the Mokelumne, Cosumnes, and Sacramento rivers (Levy 1978).

Miwok settlement and subsistence patterns were coordinated with the seasonal ripening of plant foods and the movements and migration of game animals. Valley flooding may have induced certain species, such as elk, antelope, and bears, to migrate to higher ground in the lower valley foothill belt of the Sierra. Anadromous fish, such as steelhead and salmon, migrated up the main rivers and tributaries (Levy 1978). The primary political unit was the *tribelet* (Kroeber 1932) with a range of 100 to 300 people (Levy 1978). Plains Miwok used semi-subterranean earth roundhouses were constructed for ceremonial purposes. After the death of a chief, the roundhouse would be burned as part of the Miwok mourning ceremony (Levy 1978).

4.7.1.3 Regional History

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port.

Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, presidios (forts), and pueblos (towns) were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego de Alcalá in 1769 and ending with the Mission San Francisco Solano in Sonoma established in 1823. The Spanish took little interest in the area and did not establish any missions or settlements in the Central Valley.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California with its capital at Monterey. In 1827, American trapper Jedediah Smith traveled along the Sacramento River and into the San Joaquin Valley to meet other trappers of his company who were camped there, but no permanent settlements were established by the fur trappers.

The Mexican government closed the missions in the 1830s and former mission lands, as well as previously unoccupied areas, were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or "ranchos". During the Mexican period there were small towns at San Francisco (then known as Yerba

Buena) and Monterey. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

John Sutter, a European immigrant, built a fort at the confluence of the Sacramento and American Rivers in 1839 and petitioned the Mexican governor of Alta California for a land grant, which he received in 1841. Sutter built a flour mill and grew wheat near the fort. Gold was discovered in the flume of Sutter's lumber mill at Coloma on the South Fork of the American River in January 1848. The discovery of gold initiated the 1849 California Gold Rush, which brought thousands of miners and settlers to the Sierra foothills east and southeast of Sacramento.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General's office. Land outside the land grants became federal public land which was surveyed into sections, quarter-sections, and quarter-quarter sections. The federal public land could be purchased at a low fixed price per acre or could be obtained through homesteading (after 1862) (ECORP 2020).

4.7.1.4 Project Area History

Captain Charles Weber, leader of one of the first overland parties to travel in the San Joaquin Valley, was favorably impressed by the Stockton area's abundance of fertile lands and oaks on the banks of the San Joaquin River (Costello and Brejla 2003). Although he ended up settling further west in San Jose, he formed a partnership with William Gulnac, a blacksmith who became a naturalized Mexican citizen. Eventually, the two men founded a colony at Campo de los Franceses, also known as French Camp, and in 1844 they were successful in receiving a land grant from the Mexican Governor of Alta California under that name at the future site of Stockton (Costello and Brejla 2003).

The entire Stockton area was part of the Campo de los Franceses land grant, the second largest of the many land grants made by the Mexican government. It was later sold and, with the assistance of Weber, the town of Tuleberg was founded on the south side of the Stockton Channel. The town was renamed in 1849 for Commodore Robert F. Stockton, U.S. Navy, becoming the first town name in California not of Spanish or Native American origin (McElhiney 1992). The City of Stockton was officially incorporated on July 23, 1850 and the first City election was held only one day later (City of Stockton 2020).

During the Gold Rush, numerous claims were worked along the American River and on the upper reaches of the Cosumnes River. Many miners traveled into the Sierra Nevada via the San Joaquin Valley, and a number returned to the area around Stockton to start farms and ranches to supply the gold camps with meat and other comestibles. The city became a major commercial hub, with flour mills, grain and flour exporting facilities, and factories for agricultural equipment such as harvesters and track-type tractors. In addition, boat building, which began in the 1850s, provided many of the paddle wheel steamers that plied the Delta and the San Joaquin and Sacramento rivers from 1849 to 1938 (McElhiney 1992).

Prior to 1851, San Joaquin County was considered only good for grazing and hunting. There were immense herds of cattle and some horses ranging the valley. After 1851 the land was increasingly used for cultivation, as disillusioned gold miners turned to the natural riches of the San Joaquin Valley. The more arid soils west of the river were cultivated mainly for wheat; the land east of the river produced wheat, barley, potatoes, corn, fruit, and vegetables (Thompson and West 1880; Lewis Publishing Company 1890).

Stockton experienced rapid growth through the turn of the twentieth century. It was not heavily damaged by the 1906 San Francisco earthquake, and the community sent supplies by boat to San Francisco. A large number of people who had been displaced by the earthquake came to Stockton, including a number of people from China. This influx of residents made Stockton's Chinatown the largest in California. Despite the floods in the early twentieth century, there was a Stockton building boom, particularly downtown. At this time, residential development increased in subdivisions around Stockton (Architectural Resources Group 2000).

During World Wars I and II, Stockton increased its manufacturing and support for the war efforts though increased ship and tank building. During World War II, civilian shipping to and from the Port of Stockton was suspended, which resulted in greater use of rail and roads for shipping (Architectural Resources Group 2000).

In 1933, the Port of Stockton opened, becoming the first and largest inland seaport in California. During the Great Depression in the 1930s, the Deep-Water Channel to the Port was expanded, which provided many jobs. The Depression did not hit the region as hard as surrounding areas and an economic boom during this time saw construction of significant private and publicly funded buildings, including a movie palace, railroad depot, a museum, post office, and county hospital (Architectural Resources Group 2000).

Stockton has historically been largely an agricultural community due to the rich peat soils and temperate climate. The need for additional housing created urban sprawl that spread housing developments outside of the city limits and into agricultural lands in the 1990s and 2000s (City of Stockton 2020).

4.7.1.5 Known Cultural Resources in the Project Area

The efforts to identify cultural resources within the Project Area consisted of a records search of the California Historical Resources Information System (CHRIS) at the Central California Information Center (CCIC), a review of historic maps, photographs, records on file with the Office of Historic Preservation, ethnographic information, literature pertaining to the Project Area and surrounding region, a review of geological and soils data, and an archaeological pedestrian survey using transects spaced 15 meters apart and are outlined in the *Methods* section below. The cultural resources study (ECORP 2020) identified two historic period cultural resources within the project site: GW-001, a road and corral; and GW-002, a segment of the Woodbridge Irrigation District agricultural canal.

4.7.2 Regulatory Framework

4.7.2.1 Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) requires that federal agencies take into account the effects of their undertakings in advance on the National Register of Historic Places (NRHP), which is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service (NPS) and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a historic district can also be included in the NRHP.[1] The criteria for listing in the NRHP include resources that:

a) are associated with events that have made a significant contribution to the broad patterns of history;
b) are associated with the lives of persons significant in our past;
c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) have yielded or may likely yield information important in prehistory or history.

4.7.2.2 State

California Register of Historical Resources

The California Register of Historic Resources (CRHR) is used by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The CRHR is the authoritative guide to the state's significant historical and archaeological resources. This program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and affords certain protections under CEQA.

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both historical resources and unique archaeological resources. Pursuant to PRC § 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect

[1] A [historic] district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development (NPS 1983).

on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

"Historical resource" is a term with a defined statutory meaning (PRC § 21084.1). Under CEQA Guidelines Section 15064.5(a), historical resources include the following:

- A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC § 5024.1).
- A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (PRC Section 5024.1), including the following:

  a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

  b) Is associated with the lives of persons important in our past;

  c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

  d) Has yielded, or may be likely to yield, information important in prehistory or history.

The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC § 5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC § 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC §§ 5020.1(j) or 5024.1.

Historical resources are usually 45 years old or older and must meet at least one of the criteria for listing in the CRHR, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA

unless a preponderance of evidence indicates otherwise (PRC § 5024.1 and California Code of Regulations (CCR), Title 14, § 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

CEQA also requires lead agencies to determine if a proposed project would have a significant effect on unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083.2 regarding unique archaeological resources. A unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria.

> "Unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> - Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> - Has a special and particular quality such as being the oldest of its type or the best available example of its type.
> - Is directly associated with a scientifically recognized important prehistoric or historic event or person."

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (14 CCR Section 15064[c][4]).

If the project would result in a significant impact to a historical resource or unique archaeological resource, treatment options under PRC § 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource).

Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered, as follows:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been

made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

CEQA Guidelines Section 15064.5(e) requires that excavation activities stop whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to § 15064.5(f), these provisions should include "an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

4.7.2.3 Local

San Joaquin County 2035 General Plan Policy Document

The San Joaquin County 2035 General Plan emphasizes the importance of cultural and historic resources in the County. The County is committed to ensuring that development occurs in a manner that limits impacts to natural and cultural resources and will avoid development in areas in naturally and culturally sensitive areas whenever possible, especially in the Delta. Preserving these resources is important and their protection needs to be considered during the planning, permitting, and construction of any new development.

The following policies relates to cultural resources and historic preservation:

ED-5.5: *Heritage Tourism.* The County shall encourage programs that promote the history and culture of San Joaquin County to increase heritage tourism opportunities.

NCR-6.1: *Protect Historical and Cultural Resources.* The County shall protect historical and cultural resources and promote expanded cultural opportunities for residents to enhance the region's quality of life and economy.

NCR-6.2: *No Destruction of Resources.* The County shall ensure that no significant architectural, historical, archeological, or cultural resources are knowingly destroyed through County action.

NCR-6.3: *Encourage Public and Private Preservation Efforts.* The County shall continue to encourage efforts, both public and private, to preserve the historical and cultural heritage of San Joaquin County and its communities and residents.

NCR-6.4: *Registration of Historic Properties*. The County shall encourage owners of eligible historic properties to apply for State and Federal registration, to participate in tax incentive programs for historical restoration, and to enter into Mills Act Contracts.

NCR-6.5: *Protect Archeological and Historical Resources.* The County shall protect significant archeological and historical resources by requiring an archeological report be prepared by a qualified cultural resource specialist prior to the issuance of any discretionary permit or approval in areas determined to contain significant historic or prehistoric archeological artifacts that could be disturbed by project construction.

NCR-6.6: *Tribal Consultation.* The County shall consult with Native American tribes regarding proposed development projects and land use policy changes consistent with the State's Local and Tribal Intergovernmental Consultation requirements.

NCR-6.7: *Adaptive Reuse of Historic Structures.* The County shall encourage the adaptive reuse of architecturally significant or historic buildings if the original use of the structure is no longer feasible and the new use is allowed by the underlying land use designation and zoning district.

NCR-6.8: *Land Use and Development.* The County shall encourage land uses and development that retain and enhance significant historic properties and sustain historical community character.

NCR-6.9: *Educational Programs.* The County shall support educational and outreach programs that promote public awareness of and support preservation of historical and cultural resources.

4.7.3 Environmental Impacts and Mitigation Measures

4.7.3.1 Thresholds of Significance

Following PRC §§ 21083.2 and 21084.1, and § 15064.5 and Appendix G of the CEQA Guidelines, historical resource impacts are considered to be significant if the project would result in a positive response to any of the following questions:

1. Would the project cause a substantial adverse change in the significance of a Historical Resource pursuant to CEQA Guidelines Section 15064.5?

2. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

3. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

State CEQA Guidelines Section 15064.5 defines *substantial adverse change* as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

CEQA Guidelines Section 15064.5(b)(2) defines *materially impaired* for purposes of the definition of substantial adverse change as follows:

> The significance of an historical resource is materially impaired when a project:
>
> (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
>
> (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
>
> (C) Demolishes or materially alters in an adverse manner those physical characteristics of a Historical Resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources and unique archaeological resources;
- Evaluate the significance of the potential historical resources; and
- Evaluate the effects of the project on eligible (significant) historical resources and unique archaeological resources.

4.7.3.2 Methods of Analysis

Records Search and Literature Review

A records search was conducted for the property at the Central California Information Center (CCIC) of the CHRIS at California State University, Stanislaus by CCIC staff on March 26, 2020. The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile radius of the proposed Project location, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

In addition to the official records and maps for archaeological sites and surveys in San Joaquin County, the following historic references were also reviewed: Historic Property Data File for San Joaquin County (OHP 2012); *The National Register Information System* (National Park Service [NPS] 2020); *Office of Historic Preservation, California Historical Landmarks* (OHP 2020); *California Historical Landmarks* (OHP 1996 and updates); *California Points of Historical Interest* (OHP 1992 and updates); *Directory of Properties in the Historical Resources Inventory* (1999); *Caltrans Local Bridge Survey* (Caltrans 2019); *Caltrans State Bridge Survey* (Caltrans 2018); and *Historic Spots in California* (Kyle 2002).

Other references examined included a RealQuest Property Search, historic General Land Office (GLO) plat maps and land patent records (Bureau of Land Management [BLM] 2020), historical maps and aerial photographs of the Project Area to inform about past property uses and built environment. Ethnographic literature and maps were reviewed to determine whether Native American pre-contact villages or resources were located in the vicinity of the Project Area.

In addition to the record search, ECORP contacted the California Native American Heritage Commission (NAHC) on March 25, 2020 to request a search of the Sacred Lands File for the Project Area to determine whether or not Sacred Lands have been recorded by California Native American tribes within the Project Area. Native American Sacred Lands may coincide with archaeological sites.

ECORP mailed letters to the San Joaquin County Historical Society on March 25, 2020 to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area.

Pedestrian Survey

On March 14, 2020, ECORP subjected the Project area to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (NPS 1983) using transects spaced 15 meters apart. ECORP expended 0.5 person-day in the field. At that time, the ground surface was examined for indications of surface or subsurface cultural resources. The general characteristics of the ground surface were inspected for indications of subsurface deposits that may be present on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

Results

The records search did not identify any cultural resources within 0.5 mile of the Project Area. The nearest NRHP listed properties are five miles south of the Project Area. The nearest California Landmarks are located five miles north of the Project Area. The historic period maps and literature indicated that the Project Area was historically agricultural lands and was largely undeveloped until at least 1910 when an earthen canal was present, and by 1949 when an unimproved dirt road and a structure, a corral, were present. The nearest native American Villages indicated in ethnographic literature were along the Mokelumne River six miles north of the Project Area. The RealQuest property search did not indicate any buildings or structures within the Project Area.

A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project Area. No responses to the letters sent to the San Joaquin Historical Society have been received as of the preparation of this document.

Ultimately, no potential Historical Resources were identified within 0.5 mile of the Project Area through the records search or literature review.

During the pedestrian survey, two historic period cultural resources were identified: GW-001, a corral and dirt access road, and GW-002, a segment of the Woodbridge Irrigation District agricultural canal. GW-001 consists of the remains of a wooden corral and associated north-south trending dirt access road traveling north to the corral, which were present by 1949. The corral measures approximately 80 feet east-west by 55 feet north-south and is approximately five feet tall. The corral is made of wooden posts and boards that were once painted white but are now faded. A loading chute is located at the southern end of the corral, facing the access road. The corral also contains two pens and a concrete water trough. The dirt access road is approximately 30 feet wide and 645 feet long. The dirt access road appears as an unimproved roadway on the 1955 USGS Lodi South, California topographic map. According to the topographic map, the road leads to the southeastern portion of a structure, presumed to have represented the corral.

GW-002 consists of a 0.5-mile-long segment of the Woodbridge Irrigation District agricultural canal. It is an open earthen canal measuring 20 to 25 ft wide and ranging between 4 and 10 ft deep. The canal is present on USGS maps by 1910 and was built as part of regional reclamation efforts in support of large-scale agricultural development in California in the late nineteenth and early twentieth centuries. This canal segment represents the natural waterway that has been managed and maintained over time, and has not been fortified with structural improvements such as concrete or cobble lining; this segment is part of a larger network of canals, pipelines, and laterals drawing water from the Mokelumne River 6.5 miles north of the Project Area southward for agricultural irrigation. It is currently in use for this purpose.

ECORP carried out historical and archival research to evaluate both resources within their respective historic contexts (ranching and agriculture, and water conveyance in the Central Valley and San Joaquin County). Archival research uncovered no evidence that these resources are associated with an important historical person or event or contributed to the broad patterns of history; they do not represent examples of any established architectural style or have uniquely artistic traits, and they do not have the potential to yield information important in pre-contact history or history. Therefore, they were evaluated as not

eligible for the NRHP or CRHR as individual resources and do not contribute to any known or suspected historic districts. They are not considered Historical Resources or unique archaeological resources under CEQA. The methods and results of the study are provided in the confidential Cultural Resources Inventory and Evaluation Report (ECORP 2020).

The potential exists for buried pre-contact archaeological sites in the Project Area, given the likelihood of pre-contact archaeological sites to be located along perennial waterways and the Holocene landform on which the Project Area is situated. Alluvium deposited by Bear Creek and Pixley Slough to the north and south of the Project Area may have buried archaeological sites, and aerial photograph review shows the Project Area has been subject to past periods of inundation. These factors increase the likelihood that any potential resources existing in the Project Area are surface.

Project Impact Analysis

Impact 4.7-1 Potential for Impacts to Historical Resources.
Impact Determination: *less than significant with mitigation incorporated*

Threshold:	*Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?*

The Cultural Resources Inventory Report identified two resources from the historical period and evaluated them for historical significance. GW-001 consists of the remains of a wooden corral and associated north-south trending dirt access road traveling north to the corral. GW-002 consists of a 0.5-mile-long segment of the Woodbridge Irrigation District agricultural canal. Both resources have been evaluated for significance and neither is considered a historical resource or unique archaeological resource. Therefore, the construction and operation of the Project will not result in the removal or alteration of any Historical Resource.

However, excavations that occur in association with development of the Project could affect unknown Historical Resources buried on the property, and if so, the resulting damage would be considered a potentially significant impact requiring mitigation. With implementation of Mitigation Measure 4.7-1a, impacts would be **less than significant with mitigation incorporated**.

Mitigation Measures

4.7-1a: Unanticipated Discovery

If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, then work may resume immediately and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, then he or she shall immediately notify the County and lead federal agency. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be eligible for inclusion in the NRHP or CRHR. Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

Impact 4.7-2 ***Potential for Impacts to Archaeological Resources.***
Impact Determination: ***less than significant with mitigation incorporated***

Threshold:	*Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?*

The Project area was investigated by a professional archaeologist, who concluded that there were no known unique archaeological resources within the Project area. However, there is alluvium deposited from Bear Creek and Pixley Slough present to the north and south of the Project Area and the Project Area is situated on a Holocene landform, increasing the likelihood that any potential resources existing in the Project Area could be subsurface. Miwok territory encompasses the Project Area and pre-contact villages were often located along waterways such as Pixley Slough and Bear Creek. Therefore, there is a potential for buried pre-contact archaeological resources on the property. For this reason, the Proposed Project may result in a potentially significant impact to unknown unique archaeological resources. With implementation of Mitigation Measure 4.7-1a, this impact would be **less than significant with mitigation incorporated**.

Mitigation Measures

Implement Mitigation Measure **4.7-1a** (presented above).

Impact 4.7-3 **Potential for Impacts to Human Remains.**
Impact Determination: ***less than significant with mitigation incorporated***

Threshold:	*Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?*

No human remains have been identified in the Project area. However, implementation of the Proposed Project would include ground-disturbing construction activities that could result in the inadvertent disturbance of currently undiscovered human remains, and if so, this would result in a significant impact.

Procedures of conduct following the discovery of human remains on non-federal lands are mandated by Health and Safety Code § 7050.5, by PRC § 5097.98, and by CEQA in California Code of Regulations (CCR) § 15064.5(e). According to these provisions, should human remains be encountered, all work in the immediate vicinity of the remains must cease, and any necessary steps to ensure the integrity of the immediate area must be taken. The remains are required to be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. The San Joaquin County Coroner would be immediately notified, and the coroner would then determine whether the remains are Native American. If the coroner determines the remains are Native American, the coroner has 24 hours to notify the NAHC, which will in turn notify the person identified as the most likely descendant (MLD) of any human remains. Further actions would be determined, in part, by the desires of the MLD, who has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery.

With implementation of Mitigation Measure 4.7-3a Human Remains Discovery, this impact would be **less than significant with mitigation incorporated**.

Mitigation Measures

4.7-3a: Human Remains Discovery

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

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.7.4 Cumulative Impacts

The cumulative setting associated with the Proposed Project includes Project implementation in association with buildout of the San Joaquin County 2035 General Plan. The Existing Setting subsection above provides an overview of cultural resources and the history of the region.

Approach to Assessing Cumulative Impact on Cultural Resources

Section 15130 (a) of the California State CEQA Guidelines states:

> An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

According to the San Joaquin County 2035 General Plan EIR, county policy provides for the protection of archaeological resources and human remains with the implementation of Policies NCR-6.5 and NCR-6.6. These policies are supplemented by state regulations and CEQA mitigation which provide protection of human remains. The San Joaquin County 2035 General Plan finds that implementation of these policies and additional mitigation required at the project level would reduce cumulative impacts on archaeological resources, as well as human remains, to a less than significant level. With Mitigation Measures **4.7-1a** and **4.7-3a** incorporated, the direct impacts on cultural resources associated with the Proposed Project would be reduced to a less than significant level. Therefore, the Proposed Project impacts to unique archaeological resources, as well as human remains are considered less than cumulatively considerable.

According to the General Plan EIR, implementation of San Joaquin County 2035 General Plan policies may result in a "substantial adverse change" (physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings) to historic resources through various development activities for which no possible mitigation may be available to maintain the historic integrity of the affected resource or its surroundings. For this reason, cumulative impacts to historical resources were found to be significant and unavoidable by the General Plan EIR (General Plan EIR Cumulative Impact 4.E-6). As discussed above, no historic resources were found on the project site during surveys. Should they be found, Mitigation Measure **4.7-1a** would be implemented. Nonetheless, as discussed in the San Joaquin County 2035 General Plan EIR, even with implementation of mitigation there remains the possibility that an unknown subsurface historic resource could be damaged to the point that it no longer maintains historic integrity or that of its surroundings. Therefore, the Project results in a **cumulatively considerable contribution to this existing historic resource cumulative impact.**

The San Joaquin County 2035 General Plan provides for the protection of historical resources through implementation of existing General Plan Policies NCR-6.1-4, NCR-6.7, NCR-7, and NCR-8.

Mitigation Measures

No additional feasible mitigation has been identified to further reduce this existing historic resource cumulative impact.

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4.8 ENERGY

This section describes the environmental and regulatory setting for energy, including applicable plans, policies, regulations, and/or laws. This section also describes the potential for energy impacts that would result from the Proposed Project.

4.8.1 Environmental Setting

Energy relates directly to environmental quality. Energy use can adversely affect air quality and other natural resources. The vast majority of California's air pollution is caused by burning fossil fuels. Consumption of fossil fuels is linked to changes in global climate and depletion of stratospheric ozone. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes (auto, carpool, and public transit); vehicle speeds; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy. In addition, residential, commercial, and industrial land uses consume energy, typically through the usage of natural gas and electricity.

4.8.1.1 Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear (California Energy Commissions [CEC] 2018a). The Pacific Gas and Electric Company (PG&E) provides electricity and natural gas to the majority of San Joaquin County, including the Project site. It generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. PG&E provides natural gas and electricity to most of the northern two-thirds of California, from Bakersfield and Barstow to near the Oregon, Nevada and Arizona State Line. It provides 5.2 million people with electricity and natural gas across 70,000 square miles. In 2017, PG&E announced that 80 percent of the company's delivered electricity comes from GHG-free sources, including renewables, nuclear, and hydropower.

The California Public Utilities Commission (CPUC) regulates PG&E. The CPUC has developed energy efficiency programs such as smart meters, low income programs, distribution generation programs, self-generation incentive programs, and a California solar initiative. Additionally, the CEC maintains a power plant data base that describes all of the operating power plants in the state by county. San Joaquin County contains 22 power plants generating electricity, of which nine are natural gas-fired, six are solar-powered, four are biomass-powered, two are wind-powered, and one is hydro-powered (CEC 2019).

4.8.1.2 Existing Transmission and Distribution Facilities

The components of transmission and distribution systems include the generating facility, switching yards and stations, primary substation, distribution substations, distribution transformers, various sized transmission lines, and the customers. The United States contains over a quarter million miles of transmission lines, most of them capable of handling voltages between 115 kilovolts (kv) and 345 kv, and a handful of systems of up to 500 kv and 765 kv capacity. Transmission lines are rated according to the

amount of power they can carry, the product of the current (rate of flow), and the voltage (electrical pressure). Generally, transmission is more efficient at higher voltages. Generating facilities, hydro-electric dams, and power plants usually produce electrical energy at fairly low voltages, which is increased by transformers in substations. From there, the energy proceeds through switching facilities to the transmission lines. At various points in the system, the energy is "stepped down" to lower voltages for distribution to customers. Power lines are either high voltage (115, 230, 500, and 765 kv) transmission lines or low voltage (12, 24, and 60 kv) distribution lines. Overhead transmission lines consist of the wires carrying the electrical energy (conductors), insulators, support towers, and grounded wires to protect the lines from lightening (called shield wires). Towers must meet the structural requirements of the system in several ways. They must be able to support both the electrical wires, the conductors, and the shield wires under varying weather conditions, including wind and ice loading, as well as a possible unbalanced pull caused by one or two wires breaking on one side of a tower. Every mile or so, a "dead-end" tower must be able to take the strain resulting if all the wires on one side of a tower break. Every change in direction requires a special tower design. In addition, the number of towers required per mile varies depending on the electrical standards, weather conditions, and the terrain. All towers must have appropriate foundations and be available at a fairly regular spacing along a continuous route accessible for both construction and maintenance. A right-of-way is a fundamental requirement for all transmission lines. A right-of-way must be kept clear of vegetation that could obstruct the lines or towers by falling limbs or interfering with the sag or wind sway of the overhead lines. If necessary, land acquisition and maintenance requirements can be substantial. The dimensions of a right-of-way depends on the voltage and number of circuits carried and the tower design. Typically, transmission line rights-of-way range from 100 to 300 feet in width. The electric power supply grid within San Joaquin County is part of a larger supply network operated and maintained by PG&E that encompasses the entire northern California region. This system ties into yet a larger grid known as the California Power Pool that connects with the San Diego Gas and Electric and Southern California Edison Companies. These companies coordinate the development and operation, as well as purchase, sale, and exchange of power throughout the State of California. Within San Joaquin County, PG&E owns most of the transmission and distribution facilities. Two major 500 megawatt (MW) transmission lines pass through the county, connecting San Joaquin County to the national power grid, allowing the wheeling of power to locations where power is in demand.

The California Independent System Operator (CAISO) manages the flow of electricity across the high-voltage, long-distance power lines (high-voltage transmissions system) that make up 80 percent of California's and a small part of Nevada's grid. This nonprofit public benefit corporation keeps power moving to and throughout California by operating a competitive wholesale electricity market, designed to promote a broad range of resources at lower prices, and managing the reliability of the electrical transmission grid. In managing the grid, CAISO centrally dispatches generation and coordinates the movement of wholesale electricity in California. As the only independent grid operator in the western U.S., CAISO grants equal access to 26,000 circuit miles of transmission lines and coordinates competing and diverse energy resources into the grid where it is distributed to consumers. Every five minutes, CAISO forecasts electrical demand and dispatches the lowest cost generator to meet demand while ensuring enough transmission capacity for delivery of power.

CAISO conducts an annual transmission planning process that uses engineering tools to identify any grid expansions necessary to maintain reliability, lower costs or meet future infrastructure needs based on public policies. CAISO engineers design, run and analyze complex formulas and models that simulate grid use under wide-ranging scenarios, such as high demand days coupled with wildfires. This process includes evaluating power plant proposals submitted for study into the interconnection queue to determine viability and impact to the grid. The long-term comprehensive transmission plan, completed every 15 months, maps future growth in electricity demand and the need to meet state energy and environmental goals that require the CAISO grid to connect to renewable-rich, but remote areas of the Western landscape. CAISO promotes energy efficiency through resource sharing. CAISO electricity distribution management strategy designed so that an area with surplus electricity can benefit by sharing megawatts with another region via the open market. This allows the dispatch of electricity as efficiently as possible. By maximizing megawatts as the demand for electricity increases, CAISO helps keep electricity flowing during peak periods.

4.8.1.3 Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g. of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all non-residential uses in San Joaquin County from 2015 to 2019 is shown in Table 4.8-1. As indicated, the demand has increased slightly since 2015.

Table 4.8-1. Non-Residential Electricity Consumption in San Joaquin County 2014-2018

Year	Electricity Consumption (kilowatt hours)
2019	3,690,226,564
2018	3,844,160,923
2017	3,760,431,331
2016	3,674,152,711
2015	3,399,234,078

Source: CEC 2020

The natural gas consumption associated with all non-residential uses in san Joaquin County from 2015 to 2019 is shown in Table 4.8-2. As indicated, the demand has increased since 2015.

Table 4.8-2. Non-Residential Natural Gas Consumption in San Joaquin County 2015-2019

Year	Natural Gas Consumption (therms)
2019	170,240,545
2018	159,845,616
2017	114,157,133
2016	115,649,193
2015	114,865,076

Source: CEC 2020

Automotive fuel consumption in San Joaquin County from 2015 to 2019 is shown in Table 4.8-3. Fuel consumption has slightly increased between 2015 and 2019.

Table 4.8-3. Automotive Fuel Consumption in San Joaquin County 2015-2019

Year	Total Fuel Consumption (gallons)
2019	388,078,220
2018	405,951,540
2017	395,321,645
2016	390,937,630
2015	386,591,210

Source: CARB 2017

4.8.2 Regulatory Setting

4.8.2.1 State

California Energy Efficiency Standards for Residential & Nonresidential Buildings (Title 24)

Title 24, California's energy efficiency standards for residential and nonresidential buildings, were established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. California's energy efficiency standards are updated

on an approximate three-year cycle. These standards are a unique California asset that have placed the state on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 standards are a major step toward meeting Zero Net Energy. According to the California Energy Commission, single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards and nonresidential buildings will use about 30 percent less energy (due mainly to lighting upgrades) (CEC 2018b). The most significant efficiency improvement to the residential Standards include the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. These new standards apply only to certain nonresidential building types, as specified in the requirements.

California Green Building Standards

The California Green Building Standards Code (CCR, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CALGreen also has voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2016 and went into effect January 1, 2017.

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law Senate Bill 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation by the state's utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the California Public Utilities Commission (CPUC).

The CEC has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds carbon dioxide per megawatt-hour. This would encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of greenhouse gas emissions;
- Require posting of notices of public deliberations by publicly owned utilities on long- term investments on the CEC website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the state's standards for environmental impact; and

- Establish a public process for determining the compliance of proposed investments with the emissions performance standard (Perata, Chapter 598, Statutes of 2006).

Executive Order B-55-18

In September 2018 Governor Jerry Brown Signed EO B-55-18, which established 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." Carbon neutrality refers to achieving a net zero carbon dioxide emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for GHG emission reduction. EO B-55-18 requires CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

SB X1-2 of 2011 required that all California electric utilities generate 33 percent of their electricity from renewables by the end of 2020. SB X1-2 also required the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly owned electric utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

4.8.2.2 Local

San Joaquin County 2035 General Plan

The following County energy conservation strategies have been described and incorporated in the Gap Analysis of the San Joaquin County 2035 General Plan:

- Energy Strategy 1: Renewable Energy/PACE Program. The County shall develop and implement an incentive program to encourage the installation of solar hot water heaters and solar PV on existing and new developments. The County shall establish a Property Assessed Clean Energy (PACE) (AB 811) program and for residential and commercial energy efficiency retrofit projects.
- Energy Strategy 2: Participation in PG&E Renewable Energy. The County shall participate in PG&E's Renewable Energy programs.
- Transportation Strategy 1: Complete Streets. The County shall encourage the development of complete streets.
- Water and Wastewater Strategy 1: Water Conservation. The County shall achieve a 20 percent reduction in water and wastewater in 2020.

4.8.3 Environmental Impacts and Mitigation Measures

4.8.3.1 Thresholds of Significance

CEQA Guidelines Appendix G states that a project may have a significant effect on the environment if implementation would result in any of the following:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or,
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.8.3.2 Methods of Analysis

Levels of construction and operational related energy consumption estimated to be consumed by the Project include the number of kWh of electricity, therms of natural gas and gallons of gasoline. Modeling was based on Project specific information such as the estimated traffic trip generation rates from KD Anderson and Associates (2020) and Project site plans. The amount of total construction-related fuel used was estimated using ratios provided in the Climate Registry's General Reporting Protocol (2016) for the Voluntary Reporting Program, Version 2.1. Electricity and natural gas consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use computer model designed to quantify resources associated with both construction and operations from a variety of land use projects. Operational automotive fuel consumption has been calculated with EMFAC 2017. EMFAC 2017 is a mathematical model that was developed to calculate emission rates and rates of gasoline consumption from motor vehicles that operate on highways, freeways, and local roads in California.

4.8.3.3 Project Impacts and Mitigation Measures

Impact 4.8-1: Wasteful or Inefficient Energy Use.
Impact Determination: *Less than significant*

Threshold:	*Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

The impact analysis focuses on the four sources of energy that are relevant to the proposed Project: electricity, natural gas, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of electricity and natural gas estimated to be consumed by the Project is quantified and compared to that consumed by all non-residential land uses in San Joaquin County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in San Joaquin County.

The analysis of electricity gas usage is based on CalEEMod modeling conducted by ECORP Consulting (see Draft EIR Appendix F), which quantifies energy use for Project operations. The amount of operational automotive fuel use was estimated using the California Air Resources Board's EMFAC 2017 computer program, which provides projections for typical daily fuel usage in San Joaquin County. The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Energy consumption associated with the Proposed Project is summarized in Table 4.8-4.

Table 4.8-4. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption[1]	3,581,720 kilowatt-hours	0.097
Natural Gas[1]	159,244 therms	0.093
Automotive Fuel Consumption		
Phase 1 Project Construction 2023[2] Phase 2 Project Construction 2029[2] Phase 2 Project Construction 2030[2]	130,542 gallons 143,251 gallons 118,621 gallons	0.033 0.036 0.031
Project Operations - Automotive[3] Project Operations – Helicopter[4] Project Operations Total	561,184 gallons 13,548 gallons 574,732 gallons	0.144 0.003 0.148

Source: [1]CalEEMod (see Appendix D); [2]Climate Registry 2016 (see Appendix D); [3]EMFAC 2017 (see Appendix D); [4]Air Force 2020 Mobile Emissions Guidance (see Appendix D).

Notes: The Project increases in electricity and natural gas consumption are compared with all of the non-residential buildings in San Joaquin County in 2019, the latest data available. The Project increases in gasoline consumption are compared with the countywide fuel consumption in 2019, the most recent full year of data.

As shown in Table 4.8-4, the increase in electricity usage as a result of the Project would constitute 3,581,720 kWh, or a 0.097 percent increase in the typical annual electricity consumption attributable to non-residential uses in San Joaquin County. Electricity use by the Project during operation would be attributable primarily to the hospital buildings. Additionally, Project increases in non-residential natural gas usage across the County would be negligible, 159,244 therms, which equates to a 0.093 percent increase in consumption. For these reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

As further indicated in Table 4.8-4, the Project's fuel consumption during the construction period is estimated to be 130,542 gallons of fuel during Phase 1,143,251 gallons of fuel during the first year of Phase 2, and 118,621 gallons of fuel during the second year of Phase 2. Construction would increase the annual gasoline fuel use in the county by 0.033 percent during the year Phase 1 is constructed, 0.036 percent during the first year of Phase 2, and 0.031 percent during the second year of Phase 2. As such, Project construction would have a nominal effect on local and regional energy supplies. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy

efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would conserve the use of their supplies to minimize costs and maximize profit. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and require recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

As indicated in Table 4.8-4, the Project is estimated to consume 561,184 gallons of automotive fuel per year during operation, which would increase the annual countywide automotive fuel consumption by 0.144 percent. The amount of operational automotive fuel use was estimated using EMFAC 2017 computer program, which provides projections for typical daily fuel usage in San Joaquin County. This analysis conservatively assumes that all 3,975 anticipated automobile trips projected to be generated by the Project (KD Anderson and Associates 2020) would be novel to San Joaquin County. The Project would not result in any unusual characteristics that would result in excessive long-term operational automotive fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

As indicated in Table 4.8-4, the Project is estimated to consume 13,548 gallons of aviation fuel per year, which would increase the annual countywide automotive fuel consumption by 0.003 percent. All helicopter fuel use would be utilized for emergency response and emergency preparedness, and as such the use of fuel by the Project for helicopter operation would not constitute an inefficient, wasteful, or unnecessary consumption of energy. Furthermore, several aircraft manufacturers are currently demonstrating technologies that reduce fuel burn. It is expected these technologies will become more prevalent in aircraft. Additionally, enhanced implementation of efficient aircraft operations can reduce fuel burn through operational improvements. For example, in 2014 the Federal Aviation Administration (FAA) completed the baseline ground infrastructure for Automatic Dependent Surveillance-Broadcast (ADS-B), the satellite-based successor to radar that provides increased situational awareness and airspace efficiency. A system known as En Route Automation Modernization (ERAM) can be used in place of the legacy HOST automation system that the FAA has used to control high-altitude airspace since the 1970s. ERAM increases air traffic flow and improves automated navigation and conflict detection services. Alternative fuels are also being produced, specifically bio-Jet Fuel, and could potentially be offered at the Project. Several government agencies have recently formalized the intent to support the goal of one billion gallons of bio-Jet Fuel production capacity and use for the Aviation Enterprise.

For these reasons, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 4.8-2: Potential Conflicts with Energy Use Plans.
Impact Determination: *Less than significant*

Threshold:	*Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

The Project would be designed in a manner that is consistent with relevant energy conservation plans, such as the energy conservation strategies contained in the San Joaquin County 2035 General Plan, designed to encourage development that results in the efficient use of energy resources. All development in unincorporated San Joaquin County is required to adhere to all jurisdictional-adopted policy provisions, including those related to energy conservation. Additionally, the Project would be influenced by SB 100 and would achieve 100 percent clean and carbon free electricity by 2040. The Project would not conflict or obstruct any local or state plans for renewable energy or energy efficiency. This impact is **less than significant**.

Mitigation Measures

No mitigation is required.

4.8.4 Cumulative Impacts

Project level energy impacts were determined to be less than significant. As such, the Project's contribution to energy impacts is found to be **less than cumulatively considerable**.

Mitigation Measures

None required.

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4.9 GEOLOGY AND SOILS

The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the Project site and regional vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards and erosion. Additionally, this section analyzes the projects impacts to known and unknown paleontological resources. This section is based on the following: Stockton General Plan 2035, Stockton General Plan 2035 EIR, Natural Resource Conservation Service (NRCS) web soil survey (NRCS 2020), and the online interactive Fault Map provided by the U.S. geological Survey (USGS). There were no comments received during the NOP scoping process related to this environmental topic.

4.9.1 Environmental Setting

4.9.1.1 Soils

The site is located north of the city of Stockton between West Lane and Ham Lane approximately 550 feet north of Eight Mile Road. The majority of the 42.4-acre Project site is level terrain and is currently used for agricultural production and is planted with vineyard. According to the *Web Soil Survey* (NRCS 2020a), there is one soil unit mapped within the Study Area: (180) Jacktone clay, 0 to 2 percent slopes (Figure 4.6-2). This soil unit contains hydric components (NRCS 2020b). If the unit is used for urban development, the main limitations are high shrink-swell potential, slow permeability, depth to the hardpan, and low strength. Properly designing foundations and footings and diverting runoff away from buildings helps to prevent the structural damage caused by shrinking and swelling. Properly designing buildings can offset the limited ability of the soil to support a load. (Soil Conservation Service 1992).

4.9.1.2 Faults

A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases in fault creep. Most faults are the result of repeated displacements over a long period of time.

Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness.

Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking. The State of California designates faults as active, potentially active, and inactive depending on how recent the movement that can be substantiated for a fault. Table 4.9-1 presents the California fault activity rating system.

Table 4.9-1. California Fault Activity Rating System

Fault Activity Rating	Geologic Period of Last Rupture	Time Interval (years)
Active (A)	Holocene	Within last 11,000 years
Potentially Active (PA)	Quaternary	11,000 to 1.6 million years
Inactive (I)	Pre-Quaternary	Greater than 1.6 million years

Source: California Geological Survey.

The Interactive Fault Map provided by the USGS identifies potential seismic sources within 24 miles of the Project site. Two of the closest known faults classified as active by the California Geological Survey are the Foothills Fault, located approximately 24 miles to the east, and the Antioch Fault, located approximately 27 miles to the west. The nearest Alquist-Priolo Fault Zone (see Regulatory Setting), the Greenville Fault, is located approximately 29 miles to the southwest of the site.

4.9.1.3 Seismicity

The amount of energy available to a fault is determined by considering the slip-rate of the fault, its area (fault length multiplied by down-dip width), maximum magnitude, and the rigidity of the displaced rocks. These factors are combined to calculate the moment (energy) release on a fault. The total seismic energy release for a fault source is sometimes partitioned between two different recurrence models, the characteristic and truncated Gutenberg-Richter (G-R) magnitude frequency distributions. These models incorporate our knowledge of the range of magnitudes and relative frequency of different magnitudes for a particular fault. The partition of moment and the weights for multiple models are given in the following summary.

Earthquakes are generally expressed in terms of intensity and magnitude. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. By comparison, magnitude is based on the amplitude of the earthquake waves recorded on instruments, which have a common calibration. The Richter scale, a logarithmic scale ranging from 0.1 to 9.0, with 9.0 being the strongest, measures the magnitude of an earthquake relative to ground shaking.

According to the California Geological Survey's Probabilistic Seismic Hazard Assessment Program, San Joaquin County is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong. As a result of these factors the California Geologic Survey (CGS) has defined the entire county as a seismic hazard zone. The Uniform Building Code places all of California in the zone of greatest earthquake severity because recent studies indicate high potential for severe ground shaking.

Paleontology

A Paleontological Records search was conducted by Kenneth L. Finger, Ph.D. on October 12, 2020. This section is based on findings of that search. The entire project site and surrounding one-mile area is on the late Pleistocene Modesto Formation, which is subdivided into upper (Qm2) and lower members (Qm1). The surface of the project site includes both members, with the upper one denoted by its sedimentary facies as Qm2f.

The paleontological records search on the UCMP (University of California Museum of Paleontology) database revealed nine late Pleistocene vertebrate localities in the Modesto Formation. Three of the localities were discovered during the recent South Stockton Six-Lane Project on-State Route 99, but their collected specimens have yet to be entered into the database. Another three localities are in Stanislaus County and they yielded a composite assemblage that includes *Megalonyx jeffersonii* (Jefferson's ground sloth), *Mammuthus columbi* (Columbian mammoth), *Bison latifrons* (long-horned bison), and *Camelops* (extinct camel), indicative of the Rancholabrean NALMS (North American Land Mammal Stage, 240,000–11,000 yBP). The other three localities, one in Yolo County and two in Fresno County, yielded unidentified elements of rodent, snake, and mammoth. Two plant localities are also listed for the Modesto Formation, one in Fresno County and the other in Sutter County, but their specimens also await database entry.

4.9.2 Regulatory Setting

4.9.2.1 Federal

Clean Water Act Section 402p.

The Clean Water Act (CWA) was amended in 1987 to include Section 402p. This amendment created a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination Service (NPDES) program. The State Water Resources Control Board (SWRCB) is responsible for implementing the NPDES program. Pursuant to the state's Porter-Cologne Act, it delegates implementation responsibility to California's nine Regional Water Quality Control Boards (RWQCB).

Under the NPDES Phase II Rule, any construction project disturbing greater than or equal to 1.0 acre must obtain coverage under the state's Construction General Permit (CGP) for stormwater discharges associated with construction activity. The purpose of the Phase II Rule is to avoid or mitigate the effects of construction activities, including earthwork, on surface waters. CGP applicants are required to file a Notice of Intent to Discharge Stormwater with the regulating RWQCB and to prepare a Stormwater Pollution Prevention Plan (SWPPP) Best Management Practices (BMP) that would be implemented to avoid adverse effects on water quality.

Federal Land Policy and Management Act (FLPMA) (43 USC 1701).

Federal law, including the Federal Land Policy and Management Act (FLPMA) of 1976 (43 USC 1701), includes objectives such as the evaluation, management, protection, and location of fossils on BLM-managed lands, defines fossils, and lays out penalties for the destruction of significant fossils. Also, NEPA requires the preservation of "historic, cultural, and natural aspects of our national heritage." Most recently,

the Omnibus Public Lands Act refines NEPA and FLPMA guidelines and outlines minimum punishments for removal or destruction of fossils from federal and public lands.

Paleontological Resources Preservation Act (PRPA).

The Paleontological Resources Preservation Act, Title VI, Subtitle D in the Omnibus Public Lands Act of 2009, Public Law 111-011 directs the Secretaries of Interior and Agriculture to manage and protect paleontological resources on federal land using scientific principles and expertise. With the passage of the PRPA, Congress officially recognized the importance of paleontological resources on federal lands by declaring that fossils from federal lands are federal property that must be preserved and protected using scientific principles and expertise.

Code of Federal Regulations, Title 43.

Under Title 43, CFR Section 8365.1-5, the collection of scientific and paleontological resources, including vertebrate fossils, on federal land is prohibited. The collection of a "reasonable amount" of common invertebrate or plant fossils for non-commercial purposes is permissible (43 CFR 8365.1-5).

4.9.2.2 State

California Building Code

The State of California provides minimum standards for building design through the California Building Code (CBC, California Code of Regulations [CCR], Title 24). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the federal UBC, but is modified for California conditions with numerous more detailed and/or more stringent regulations.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, construction on unstable soils, such as expansive soils and areas subject to liquefaction, and Chapter 04 regulates grading activities, including drainage and erosion control.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC Division 2, Chapter 7.5) provides policies and criteria to assist cities, counties, and state agencies in the exercise of their responsibility to prohibit the location of developments and structures for human occupancy across the trace of active faults. In order to assist cities and counties, the State Geologist delineates and compiles maps of earthquake fault zones to encompass all potentially and recently active traces of faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (PRC Division 2, Chapter 7.8 and CCR Title 14, Article 10) provides for a statewide seismic hazard mapping and technical advisory program to assist cities and counties in fulfilling their responsibilities for protecting the public health and safety from the effects of strong ground shaking, liquefaction, landslides or other ground failure and other seismic hazards caused by earthquakes.

4.9.2.3 Local

Per Section 65302 (g) of the California Government Code, the Safety Element of a General Plan shall include policies and implementation measures designed to protect the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards.

San Joaquin County 2035 General Plan

According to the San Joaquin County 2035 General Plan, the geology of San Joaquin County is comprised of high organic alluvium, which is susceptible to earthquake movement. In addition, the western area of the County is underlain by a significant number of Quaternary (current period of geologic time) thrust faults and lateral faults, or is adjacent to such faults west of the County. This increases the likelihood of structural failures due to associated potential earthquake shaking and movement. There is a high probability of a large magnitude earthquake in northern California before 2036. The levee system that exists throughout the County is not designed or constructed to withstand maximum seismic events. Subsidence is also a serious threat to infrastructure, communities, and to California's water supply. The Public Health and Safety Element also contains goals that must be used to guide decisions concerning geologic and seismic hazard conditions. The following relevant and applicable policies from the San Joaquin County 2035 General Plan Public Health and Safety Element have been identified for the Project

PHS-1.7: Emergency Response Facilities Location
The County shall ensure that emergency response facilities and other critical facilities (e.g., hospitals, health care facilities, emergency shelters, Sheriff substations, fire stations) are located to avoid hazardous areas (see Seismic and Geologic and Flood Hazards), and designed to remain functional following a major disaster.PHS-3.1 Consider Geologic Hazards for New Development
The County shall consider the risk to human safety and property from seismic and geologic hazards in designating the location and intensity for new development and the conditions under which that development may occur.

PHS-3.2: Location of Sensitive Land Uses
The County shall not approve any of the following land uses if they are located within one-eighth of a mile of any active fault or on soil that is

highly susceptible to liquefaction: facilities necessary for emergency services; major utility lines and facilities; manufacturing plants using or storing hazardous materials; high occupancy structures, such as multifamily residences and large public assembly facilities; and facilities housing dependent populations, such as prisons, schools, and convalescent centers.

PHS-3.3: Emergency Service Facilities
The County shall require emergency service facilities to be capable of withstanding earthquakes per the California Building Code, Chapter 16, Volume 2, and remain operational to provide emergency response.

PHS-3.4: Liquefaction Studies
The County shall require proposals for new development in areas determined by the County to have high liquefaction potential to include detailed site-specific liquefaction studies.

PHS-3.5: Subsidence or Liquefaction
The County shall require that all proposed structures, utilities, or public facilities within County-recognized areas of near-surface subsidence or liquefaction be located and constructed in a manner that minimizes or eliminates potential damage.

PHS-3.6: Subsidence in the Delta
The County shall promote regional and local efforts to reduce subsidence in the Delta.

PHS-3.7: Erosion Control
The County shall encourage the planting of vegetation to decrease loss of soil by erosion.

4.9.3 Environmental Impacts and Mitigation Measures

4.9.3.1 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on Geology and Soils if it would do any of the following:

- Expose people and structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

  1. 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 known fault?

2 Strong seismic ground shaking;
3. Seismic-related ground failure, including liquefaction; or
4. Landslides.

- Result in substantial soil erosion or the loss of topsoil;
- 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; or
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

4.9.3.2 Methods of Analysis

For the purposes of this DEIR, available USGS and CGS topographical and seismic maps, NRCS soils reports, and other studies that included relevant geologic data, were reviewed, and used to determine whether geological impacts could occur from the construction and operation of the Project. Prior to construction, a site assessment study of the project site would be conducted to characterize specific geotechnical conditions at the site for final design and construction purposes.

4.9.3.3 Project Impacts and Mitigation Measures

Impact 4.9-1: The proposed project could expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including landslides
Impact Determination: le*ss than significant*

Threshold:	*Located near an earthquake fault zone, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, soil that has the potential for landslides.*

Seismic Ground Shaking

The potential for seismic ground shaking in California is expected. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters. Seismic ground shaking at the Project site is expected during the life of the proposed Project. All structures will be built in accordance with the California Building Code's seismic design standards.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e. earthquake) or slow (i.e. fault creep). The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations

within these zones. The Project site does not have surface expression of active faults and fault rupture is not anticipated.

Liquefaction

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet. Soil data from the NRCS Web Soil Survey suggests that the potential for liquefaction is low given that the soils are clayey and the water table is approximately 35 to 40 feet below the ground surface.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Since the potential for liquefaction is low to moderate, the potential for lateral spreading is present. The San Joaquin County 2035 General Plan Draft EIR indicates that with adherence to existing compliance with local building codes and ordinances would avoid or reduce hazards relating to unstable soils and slope failure., the potentially significant impact would be reduced to a less than significant impact.

Landslides

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e., cut and fill). The Project site is essentially flat; therefore, the potential for a landslide in the Project site is non-existent.

Impacts related to the above are **less than significant** with adherence to adopted San Joaquin County 2035 General Plan policy.

Mitigation Measures

None Required.

Impact 4.9-2: The proposed project could result in soil erosion or the loss of top soil.
Impact Determination: *less than significant*

Threshold:	*Substantial soil erosion or the loss of topsoil.*

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e. rock, soil, debris) are loosened, dissolved, or worn away, and transported from one place to another by gravity. Two common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and

steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover.

The NRCS Web Soil Survey identified the erosion potential for the soils in the Project site. Soil property data for each map unit component includes the hydrologic soil group, erosion factors (Kf) for the surface horizon, erosion factor (T), and the representative percentage of sand, silt, and clay in the surface horizon. Erosion factor (K) indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Project site, the erosion factor (Kf) of the soil is 0.20, which is considered a low potential for erosion. Furthermore, the Proposed Project would be required to obtain coverage under the SWRCB General Permit for Storm Water Discharges Associated with Construction Activity because Project activities would result in ground disturbance of more than 1 acre. As a result, the Proposed Project would prepare and implement a SWPPP to prevent construction-related erosion, sediment runoff, and discharge of pollutants into waterways or onto neighboring properties. The SWPPP would require implementation of temporary Best Management Practices for erosion control measures to control erosion from disturbed areas, sedimentation control measures, and post-construction restoration and sediment stabilization measures. Because the Project is required to prepare and implement a SWPPP, potential erosion impacts **are less than significant**.

Mitigation Measures

None required.

Impact 4.9-3: The project could be located on a geologic unit, expansive soils, or soil that is unstable or would become unstable.
Impact Determination: *less than significant*

Threshold:	*Location of the project on a geologic unit, expansive soils, 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.*
Threshold:	*Location of the project on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.*

Expansive Soils

Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. If structures are underlain by expansive soils, it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering.

According to the NRCS Web Soil Survey, the soil at the Project site have a high shrink-swell potential. The NRCS Web Soil Survey indicated that near surface soils within the Project site have medium plasticity, and

the expansion potential of the soil would respond to fluctuations in moisture content. Adherence to existing codes and regulations and implementation of the policies and implementation measures contained in the Health & Safety Element of the San Joaquin County 2035 General Plan would ensure appropriate foundation design for site specific conditions. Additionally, a Geotechnical Report will be prepared prior to project construction and would include recommendations to address site conditions. Therefore, expansive soil impacts are **less than significant** with adherence to adopted San Joaquin County 2035 General Plan policy applicable development standards.

Mitigation Measures

None required.

Impact 4.9-4: The project could be located on 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.
Impact Determination: *No Impact*

Threshold:	*Located on soils incapable of supporting the use of septic tanks or alternative waste water disposal systems (where sewers are not available).*

As discussed in the Chapter 3.0 Project Description and Section 4.12 Hydrology and Water Quality, onsite septic is not proposed. Rather, the Project proposes a "package plant" for onsite wastewater treatment. In addition to typical wastewater treatment, the proposed package plant would be specifically designed to treat hospital use liquid medical waste. Project generated wastewater would be treated to a level that qualifies for National Pollutant Discharge Elimination System (NPDES) permitting with Waste Discharge Requirements (WDRs) issued by the Regional Water Quality Control Board. This level of treatment will allow for either discharge to surface waters or onsite reuse for landscape irrigation, reflecting ponds, and/or agricultural use. Because the Project does not require septic tanks or alternative wastewater disposal systems that rely on infiltration, there would be **no impact**.

Mitigation Measures

None required.

Impact 4.9-5: The project could be located in an area that contains subsurface unique paleontological resources or geologic features.
Impact Determination: *less than significant with mitigation incorporated*

Threshold:	*Located in an area that is known to have unique paleontological resources or geologic features.*

Based on the paleontological records search the project site is within the Modesto Formation. The Modesto Formation has a high paleontological sensitivity and a low-to-moderate paleontological potential for significant paleontological resources. Therefore Project development could destroy unique paleontological resources which is a significant impact. With implementation of mitigation measures 4.9-5a and 4.9-5b, this impact would be **less than significant with mitigation incorporated**.

The heavily disturbed surface of the project site precludes a preconstruction paleontological survey. Therefore paleontological training of and monitoring by construction personnel of construction-related earth-disturbing activities that will impact previously undisturbed sediments is the preferred mitigation approach as discussed below.

Mitigation Measures

The following mitigation measures apply to impact 4.9-5.

4.9-5a: Worker Awareness Training

A professional paleontologist shall provide the construction crew with a pre-construction orientation and training on the significant paleontological resources that may be encountered and the appropriate procedures to follow should any be unearthed.

Timing/Implementation: *Prior to construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.9-5b: Unanticipated Discovery of Paleontological Resources.

If subsurface deposits believed to be paleontological in origin are discovered during construction, all work shall halt within a 50-foot radius of the find until a professional paleontologist has assessed it and, if deemed significant, salvaged the fossil(s) in a timely manner. A plan for monitoring and fossil recovery must be completed and implemented before ground-disturbing activities can recommence in the area of the fossil find to allow for the recovery of the find. Salvaged fossils shall be deposited in an appropriate repository, such as the UCMP, where they will be properly curated and made available for future research.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.9.4 Cumulative Impacts

The geologic area considered for the analysis of cumulative impacts related to geologic resources and hazards is within the immediate project vicinity. Temporary construction activities associated with the Proposed Project would involve construction activities such as trenching, excavation, and backfilling.

Cumulative impacts would only occur if other current or future projects in the area have the potential to cause, directly or indirectly, the impacts discussed above. The potential for any of these impacts to occur during construction activities is less than significant, with the exception of the potential loss of a paleontological resource and erosion of top soil. With implementation of mitigation measures 4.9-5a, 4.9-5b, and given State requirements for preparation of a SWPPP, these potential impacts would be mitigated

to a less then significant level. Therefore, the Proposed Project, when combined with other projects in the area, would result in a **less than cumulatively considerable impact**.

Mitigation Measures

None required.

References

Natural Resources Soil Service (NRCS). 2020. The Gridded Soil Survey Geographic (gSSURGO) Database for California. Available Online: https://gdg.sc.egov.usda.gov/.

Soil Conservation Service. 1992. Soil Survey of San Joaquin County, California. United States Department of Agriculture. Soil Conservation Service in cooperation with the University of California (Agricultural Experiment Station) and the California Department of Conservation. 480pp.

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4.10 GREENHOUSE GAS EMISSIONS

This section evaluates the effects of Project-generated greenhouse gas (GHG) emissions. This section is based on the Air Quality and Greenhouse Gas Emissions Assessment prepared by ECORP Consulting, Inc. (2021). The information provided below is an abridged version of this report. This analysis was prepared using methodologies and assumptions recommended by the San Joaquin Valley Air Pollution Control District (SJVAPCD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

4.10.1 Environmental Setting

4.10.1.1 Greenhouse Gas Emissions

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), and N_2O. Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 4.10-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2 (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential.

Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013).

Table 4.10-1. Greenhouse Gases

Greenhouse Gas	Description
CO_2	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
CH_4	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about 12 years.[2]
N_2O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1]USEPA 2016a, [2] USEPA 2016b, [3] USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

4.10.1.2 Sources of Greenhouse Gas Emissions

In 2019, CARB released the 2019 edition of the California GHG inventory covering calendar year 2017 emissions. In 2017, California emitted 424.1 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for approximately 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (24 percent) and the electric power sector including both in- and out-of-state sources (15 percent) (CARB 2019). Emissions of CO_2 are by-products of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing CO_2 from the atmosphere.

4.10.2 Regulatory Setting

4.10.2.1 State

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this EO remains relevant because a more recent California Appellate Court decision, *Cleveland National Forest Foundation v. San Diego Association of Governments* (2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. While the California Supreme Court ruled that the San Diego Association of Governments did not abuse its discretion by declining to adopt the 2050 goal as a measure of significance in light of the fact that the EO does not specify any plan or implementation measures to achieve its goal, the decision also recognized that the goal of a 40 percent reduction in 1990 GHG levels by 2030 is "widely acknowledged" as a "necessary interim target to ensure that California meets its longer-range goal of reducing GHG emissions 80 percent below 1990 levels by the year 2050.

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has

identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which was re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible state implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the State implement all of the measures in the Scoping Plan (CARB. 2017.).

The Scoping Plan is required by AB 32 to be updated at least every five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB. The 2017 Scoping Plan Update was adopted on December 14, 2017. The Scoping Plan Update addresses the 2030 target established by SB 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Executive Order B-30-15

On April 20, 2015 Governor Edmund (Jerry) Brown, Jr., signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2˚C, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

Senate Bill X1-2 of 2011 and Senate Bill 350 of 2015

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 standards are a major step toward meeting Zero Net Energy. According to the California Energy Commission, single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards and nonresidential buildings will use about 30 percent less energy (due mainly to lighting upgrades) (CEC 2018). The most significant efficiency improvement to the residential Standards include the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. These new standards apply only to certain nonresidential building types, as specified in the requirements.

4.10.2.2 Local

San Joaquin Valley Air Pollution Control District Climate Change Climate Action Plan

The SJVAPCD has adopted guidance and policy for implementation of the Climate Change Climate Action Plan. The guidance and policy rely on the use of performance-based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant

impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change.

However, the BAU portion of the tiered approach is problematic based on the 2015 California Supreme Court *Newhall Ranch* decision, which stated that an GHG-related impact determination based on the BAU approach is "not supported by a reasoned explanation based on substantial evidence." Additionally, the SJVAPCD thresholds were adopted to achieve statewide GHG-reduction goals for the year 2020, and the Proposed Project would not be built until after the year 2020.

San Joaquin County 2035 General Plan

In order to be consistent with state statutes established by AB 32 and State objectives stated in Executive Order S-3-05 and codified in SB 32, the County has established a GHG reduction target for 2020 and goals for 2035 and 2050. The 2020 target establishes a firm, near-term standard that must be met of 15 percent below 2007 (existing) levels by 2020. In order to establish a current baseline for GHG emission levels in the unincorporated areas of the county, a GHG emissions inventory was developed. The goals for 2035 and 2050 establish the County's commitment to achieving long-term, ambitious GHG reductions of 80 percent below 1990 levels by 2050, with an interpolated reduction for 2035.

Implementation of policies, programs, and reduction strategies in the San Joaquin County 2035 General Plan would assist in county-wide GHG reductions. GHG reduction policies include: incorporation of sustainable building practices (Policy LU-2.2); supporting carbon offsets (Policy ED-4.10); smart growth to reduce VMT (Policy TM-1.13); preference to contractors that use energy efficient equipment for County construction projects (Policy PFS-3.9); encouraging energy consumption reduction strategies into new development (Policy PHS-5.14); establishing municipal (Policy PHS-6.1) and community GHG reduction targets (Policy PHS-6.2); promotion of GHG reduction strategies (Policy PHS-6.3); incorporation of all feasible mitigation to reduce GHG emissions in new development (Policy PHS-6.6); development of alternative energy sources (Policy NCR-5.2); encourage green building practices in new construction (Policy NCR-5.11); and supporting of energy efficient industrial processes (Policy NCR-5.12).

San Joaquin Council of Governments 2018 Regional Transportation Plan/Sustainable Communities Strategy

The San Joaquin Council of Governments (SJCOG) region, which encompasses the Project site, must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 12 percent and a 16 percent per capita reduction by the end of 2020 and 2035, respectively (CARB 2018). The SJCOG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The 2018 RTP/SCS contains projects, policies, and strategies to achieve environmental sustainability and integrated planning. The 2018 RTP/SCS is a plan for improving the quality of life for residents of San Joaquin County by planning for wise transportation investments and informed land use choices. The Plan includes strategies to generally improve air quality, improve health, and reduce GHG emissions consistent with state requirements. The plan achieves its overall objectives by combining transportation investment and policies with integrated land use strategies that reduce per capita vehicle miles traveled (VMT) and emissions. These land use strategies include:

- Focusing new growth and development in areas well served by transit,
- Promoting a better fit between jobs and housing,
- Redirecting future housing growth toward more compact unit types, and
- Promoting a mix of uses and neighborhood design that enables more walk and bike trips.

The 2018 RTP/SCS is based on a preferred land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region emphasizing a transit-oriented development and compact infill approach to land use and housing. Population and job growth are allocated principally within existing urban areas near public transit. Allocation of future growth directly addresses jobs-housing balance issues. The preferred scenario consists of an intensified land use distribution approach that concentrates the forecasted population and employment growth in existing urban areas. This focus intends to minimize impacts on rural areas which contain the majority of agricultural land throughout the County. The transportation network includes additional highway, local street, active transportation, and transit investments to serve a more concentrated urban growth pattern. The preferred scenario also shifts investment towards bicycle and pedestrian improvements that complement public transit and other non-vehicle alternatives.

The SCS element of the RTP/SCS provides future land-use assumptions upon which the SCS is constructed. SJCOG staff met with each jurisdiction in San Joaquin County to identify changes to current planning assumptions, or potential changes to the location of future development since the previous RTP/SCS was developed (2014). The scenarios presented for consideration varied in the location and intensity of future growth. These assumptions are guided in each scenario by local general plans, including the San Joaquin County 2035 General Plan. The SCS consists of the preferred land use and transportation scenario selected by San Joaquin COG as best capable of meeting RTP goals.

The 2018 RTP/SCS simultaneously addresses the region's transportation needs and encourages infill development near transit investments to reduce VMT and overall GHG emissions. This strategy selectively invests in transportation systems that complement compact growth within transit corridors in existing urban areas. The SCS focuses on the general land use growth pattern for the region, because the geographic relationships between land uses—including density and intensity— help determine travel demand. Thus, the SCS:

- Identifies existing and future land use patterns;
- Establishes a future land use pattern to meet GHG emission reduction targets;
- Considers statutory housing goals and objectives;
- Considers resource areas and farmland.

These requirements, as outlined in California Government Code Section 65080(b)(2)(B), do not mean that the SCS creates a mandate for certain land use policies at the local level. In fact, SB 375 specifically states that the SCS cannot dictate local General Plan policies (see Government Code Section 65080(b)(2)(J)).

Rather, the SCS is intended to provide a regional policy foundation that local governments may build upon as they choose and generally includes quantitative growth projections.

4.10.3 Environmental Impacts and Mitigation Measures

4.10.3.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, climate change impacts are considered significant if implementation of the Proposed Project would:

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

The Appendix G thresholds for GHG emissions do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 CCR 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the 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." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. 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 GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)). As

a note, the CEQA Guidelines were amended in response to Senate Bill 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The local air quality agency regulating the San Joaquin Valley Air Basin (SJVAB) is the SJVAPCD, the regional air pollution control officer for the basin. As previously stated, the SJVAPCD has adopted guidance and policy for analyzing GHG emissions from land use development projects under CEQA. Specifically, demonstration of a 29 percent reduction in GHG emissions, from a BAU scenario is required to determine that a project would have a less than cumulatively significant impact. However, as previously described the BAU portion of the tiered approach is problematic based on the 2015 California Supreme Court *Newhall Ranch* decision, which stated that an GHG-related impact determination based on the BAU approach is "not supported by a reasoned explanation based on substantial evidence." Additionally, the SJVAPCD thresholds were adopted to achieve statewide GHG-reduction goals for the year 2020, and the Proposed Project would not be built until after the year 2020.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The San Joaquin County 2035 General Plan has established GHG reduction goals for 2035 and 2050. To achieve these goals the County has adopted policies, programs, and reduction strategies in the 2035 General Plan. Additionally, the projected regional development pattern in the SJCOG RTP/SCS, including location of land uses and residential densities in local general plans, when integrated with the proposed regional transportation network identified in the RTP/SCS, would reduce per capita vehicular travel–related GHG emissions and achieve state-mandated GHG reduction per capita targets for the SJCOG region. Thus, the Project is compared for consistency with both the San Joaquin County 2035 General Plan and SJCOGRTP/SCS in order to determine its GHG-related impact.

4.10.3.2 Methods of Analysis

Onsite construction (including worker commutes and vendors), operational area source, and energy source, water/wastewater pumping, and solid waste hauling and decomposition emissions were modeled

using CalEEMod (CAPCOA 2017). CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Operational mobile source GHG emissions are calculated with EMFAC 2017. EMFAC 2017 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to estimate changes in future emissions from on-road mobile sources.

As previously described, Phase 1 construction is anticipated to begin in late 2021 and take approximately 12 months to complete. The Phase 1 Medical Center Building is expected to begin operations in 2023. Phase 2 construction is scheduled to begin in 2029 and take approximately 20 months to complete. The Phase 2 Hospital and other support uses are expected to begin operation in 2031. Project construction-generated GHG emissions were calculated based on this timeline and the expected construction equipment provided by the Project applicant and identified in Section 3.0, Project Description.

Operational GHG emissions are based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from KD Anderson and Associates (2020). Helicopter-generated GHG emissions are calculated based on the emission factors identified for a UH-1N with two T400-CP-400 engines contained in the Air Force 2020 Mobile Emissions Calculations Guide (Air Force Civil Engineer Center 2020). The UH-1N was chosen to represent a "worst-case" scenario per its similarity to the Airbus H145 which is the largest aircraft anticipated for transport to the Project site. In contrast to helicopter related criteria pollutant emissions, GHG emissions are calculated for the duration of the flight. Per analysis conducted for helistop design and operations (Heliplanners 2021), one flight per week with a 3.5-hour duration were assumed to estimate GHG emissions. As with criteria pollutants, GHG emissions from each flight were calculated for a standard landing and takeoff cycle.

See Draft EIR Appendix D for GHG emissions modeling details.

4.10.3.3 Project Emissions

In view of the above considerations in Sections 4.10.3.1 and 4.10.3.2, this assessment quantifies the Project's total annual GHG emissions.

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 4.10-2 illustrates the specific construction generated GHG emissions that would result from construction of the Project.

Table 4.10-2. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO2e (Metric Tons/Year)
Phase 1 Construction (2023)	1,325
Phase 2 Construction (2029)	1,454
Phase 2 Construction (2030)	1,204
Total Emissions	**3,983**

Source: CalEEMod version 2016.3.2. Refer to Draft EIR Appendix D for Model Data Outputs.

As shown in Table 4.10-2, Project construction would result in the generation of approximately 3,983 metric tons of CO_2e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease.

Operations

Operation of the Project would result in GHG emissions predominantly associated with motor vehicle use. Long-term operational GHG emissions attributable to the Project are identified in Table 4.10-3.

Table 4.10-3. Operational-Related GHG Emissions

Emissions Source	CO2e (Metric Tons/Year)
Area Source Emissions	0
Energy Source Emissions	978
Mobile (automotive)	7,099
Mobile (helicopter operation)	152
Solid Waste Emissions	1,282
Water/Wastewater Emissions	58
Total Emissions	**9,569**

Source: CalEEMod version 2016.3.2; EMFAC2017. Refer to Draft EIR Appendix A for Model Data Outputs.
Notes: Automobile emissions projections account for an automotive trip generation rate identified in the Traffic Impact Study prepared by KD Anderson and Associates (2020).

As shown in Table 4.10-3, Project operations would generate 9,569 metric tons of CO_2e annually.

4.10.3.4 Project Impacts and Mitigation Measures

Impact 4.10-1: Proposed project GHG emissions and compliance with GHG plan, policy, or regulation.
Impact Determination: Significant and Unavoidable

Threshold:	*Contribution of Greenhouse Gas Emissions at a Level that would Conflict with an Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases*

As previously stated, the San Joaquin County 2035 General Plan has established GHG reduction goals for 2035 and 2050. To achieve the GHG reduction goals the County has adopted policies, programs, and reduction strategies in the 2035 General Plan. In order to establish a current and projected baseline for GHG emission levels in the unincorporated areas of the county, a GHG emissions inventory was developed. Both the existing and the projected County-wide GHG inventories in the San Joaquin County 2035 General Plan were derived based on the land use designations and associated designations defined in the 2035 General Plan.

Similarly, the strategy to achieve the mandated 16 percent per capita reduction in mobile-source GHG emissions by 2035 promulgated by the SJCOG RTP/SCS is based on a land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region. The assumptions surrounding the assumed pattern of future growth are guided by the land use designations contained in local general plans, including the San Joaquin County 2035 General Plan. The projected regional development pattern in the SJCOG RTP/SCS, including location of land uses and residential densities in local general plans, when integrated with the proposed regional transportation network identified in the RTP/SCS, would reduce per capita vehicular travel–related GHG emissions and achieve state-mandated GHG reduction per capita targets for the SJCOG region. The 2018 RTP/SCS is based on a land use and transportation scenario which defines a pattern of future growth for the region.

The Project site is designated General Agricultural (A/G) by the San Joaquin County 2035 General Plan. This designation provides for large-scale agricultural production and associated processing, sales, and support uses. The A/G Designation generally applies to parcels outside areas planned for urban development where soils are capable of producing a wide variety of crops and/or support grazing. Typical building types include low-intensity structures associated with farming and agricultural processing and sales. However, the Proposed Project involves construction and operation of a hospital and medical center. As discussed in the project description section of this Draft EIR, according to the San Joaquin County Development Title Section 9-115.525, the proposed use is properly classified under the Public Services-Essential use type. Because the Proposed Project is consistent with the Public Services-Essential use it may be permitted within the General Agricultural zone and no Development Title or zone change is required to implement the project.

Nonetheless, while hospital and medical centers are allowed uses on lands designated A/G, this is to allow for flexibility in accommodating such essential uses. It is not the expectation that all lands designated A/G in the county will be developed with hospitals and medical centers. Thus, the Project's proposed uses

would not be consistent with the anticipated types, intensity, and patterns of land use envisioned for the site in the San Joaquin County 2035 General Plan. Therefore, the Project could potentially conflict with the population or job growth projections used by the County to develop the GHG emissions inventory in the San Joaquin County 2035 General Plan.

Similarly, the Project could potentially conflict with the assumptions used by the SJCOG to develop the land use and transportation scenario, which defines a pattern of future growth for the region, used in the RTP/SCS. The Project potential to conflict with the types, intensity, and patterns of land use assumed to develop both the GHG emissions inventory in the San Joaquin County 2035 General Plan and mobile-source GHG-reduction strategies contained in the RTP/SCS is articulated by the projected increase in regional VMT identified for the Project. According to the Traffic Impact Study prepared for the Project (KD Anderson and Associates 2020), the current VMT per Service Population in the San Joaquin County 2035 General Plan Planning Area is 24.16 VMT per Service Population and the Proposed Project is expected to result in 102.15 VMT per Service Population. As discussed in Section 4.19 Traffic and Transportation of this Draft EIR, the Proposed Project is considered to have a significant impact on its contribution to regional VMT (KD Anderson and Associates 2020). Vehicular VMT is a substantial source of GHG emissions. As previously described, San Joaquin County 2035 General Plan Policy TM-1.13 mandates smart growth to reduce VMT. Similarly, the RTP/SCS seeks to reduce GHG emissions through land use strategies that reduce per capita VMT. The RTP/SCS preferred scenario consists of an intensified land use distribution approach that concentrates the forecasted population and employment growth in existing urban areas (infill development). This focus intends to minimize impacts on rural areas which contain the majority of agricultural land throughout the County.

Since the Project would potentially conflict with the land use assumptions used by the County and SJCOG to develop the GHG emissions inventory in the San Joaquin County 2035 General Plan and mobile-source GHG-reduction strategies contained in the RTP/SCS, respectively, a significant impact would occur. All development in the County, including the Project, is required to adhere to all County-adopted policy provisions, including those contained in the adopted 2035 General Plan. The County ensures all provisions of the 2035 General Plan are incorporated into projects and their permits through development review and applications of mitigation measures and/or conditions of approval as applicable. San Joaquin County 2035 General Plan policy provisions directly applicable to the Project include Policy PHS-5.14, which encourages energy consumption reduction strategies into new development, Policy NCR-5.11, which encourage green building practices in new construction, and Policy PHS-6.6, which requires the incorporation of all feasible mitigation to reduce GHG emissions in new development.

The majority of Project pollutant emissions would be generated by mobile sources, which is an emission source that cannot be regulated by the County of San Joaquin. A reduction in vehicle trips to and from the Proposed Project would reduce the amount of mobile emissions. Methods for reducing personal vehicle trips include carpooling, transit, cycling, and pedestrian connections. Roadway improvements eventually constructed as part of future development along the frontage of North Ham Lane and West Lane would include sidewalks and would be consistent with County road standards. As required by the California Building Code, areas to secure bicycles would be provided within the Proposed Project. However, even with the connectivity provided by the roadway improvements and the areas to secure

bicycles, there is no way to know if employees or patients would cycle to the Proposed Project. According to the Alliance for Biking and Hiking (2016), 1.1 percent of Californians commute to work via bicycling and/or walking. Furthermore, the SJCOG reports that 1,611 San Joaquin residents consistently biked to work in 2017, while 2,907 residents consistently walked to work (SJCOG undated). However, it is unlikely that a large number of patients and employees would ride bikes or walk to the medical services provided by the Project, although some may. Thus, the source of Project GHG emissions most able to be mitigated includes energy consumption. Consequently, consistent with Policies PHS-5.14, NCR-5.11, and PHS-6.6, Mitigation Measures **4.10-1a** and **4.10-1b** are required. It should be noted that as discussed in Project Description Section 3.6.3 Landscaping, Walls, and Signage, the Project also includes a landscape plan and the onsite planting of numerous trees to provide perimeter screening, parking lot shading, and enhanced habitat along the existing WID agricultural canal. This tree planting would also address climate change impacts by contributing to a reduction in atmospheric carbon dioxide (CO2) and reduced greenhouse gases.

Following implementation of Mitigation Measures **4.10-1a** and **4.10-1b**, the Project would be consistent with the San Joaquin County 2035 General Plan Policies PHS-5.14, NCR-5.11, and PHS-6.6. Nonetheless, the Project would still conflict with the land use assumptions used by the County and SJCOG to develop the GHG emissions inventory in the San Joaquin County 2035 General Plan and mobile-source GHG-reduction strategies contained in the RTP/SCS, respectively. Consequently, this impact would remain **significant and unavoidable**.

Mitigation Measures

4.10-1a: Provide Onsite Renewable Energy Production

The Project shall provide onsite renewable energy production generation comprising at least 20 percent of the Project energy demand. The County shall verify compliance with this measure within the Project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of this measure prior to the issuance of Certificate(s) of Occupancy.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.10-1b: Provide Electric Vehicle Charging Stations

The Project shall meet the charging installation/charging ready requirements of the CALGreen Code. The Project Proponent shall include EV charging accommodations as specified in the CALGreen Code in building plans for review and approval by the County, prior to commencement of Project construction.

Timing/Implementation: *Prior to and during construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.10.4 Cumulative Impacts

Climate change is a global problem. And GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have much longer atmospheric lifetimes of 1 year to several thousand years that allow them to be dispersed around the globe.

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)). Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. As previously discussed, the Proposed Project would potentially conflict with the San Joaquin County 2035 General Plan GHG inventory and SJCOGRTP/SCS. Therefore, the Project's cumulative contribution of GHG emissions would be significant. Mitigation Measures 4.10-1a and 4.10-1b would reduce Project GHG impacts, but not to less than cumulatively-considerable levels. Therefore, the Project results in a **considerable contribution to a significant and unavoidable GHG cumulative impact**.

Mitigation Measures

None available.

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4.11 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the environmental effects of Project construction and operation related to the transport and use of hazardous materials and waste. Hazardous materials and wastes are those substances that, because of their physical, chemical, or other characteristics, pose a risk of endangering human health or safety or of endangering the environment (California Health and Safety Code Section 25260). Types of hazardous materials of concern during the construction phase generally include petroleum hydrocarbons, persistent bioaccumulative toxins such as lead and mercury, industrial carcinogens, pesticides, volatile organic carbons. Because the Project includes full hospital services, the generation and disposal of medical waste is also of concern. The existing environmental and regulatory conditions specific to the handling of hazardous materials are described and the impact posed by that handling are addressed.

This section specifically addresses whether the Project would create a significant hazard to the public or environment through the routine transport, use, and/or disposal of hazardous materials. This section also considers whether the Project would 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.

4.11.1 Environmental Setting

The Project site is currently in agricultural production. Site improvements include vineyards, a dilapidated corral and cattle chute, farm roads, a recently constructed water well and a former gas well converted to a water well. A Woodbridge Irrigation District agricultural canal is located onsite along the northwestern site boundary.

4.11.2 Regulatory Setting

4.11.2.1 Federal

Federal laws require planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and if such materials are accidentally released, to prevent or mitigate injury to health or the environment. The primary federal agencies with responsibility for hazardous materials management include the U.S. Environmental Protection Agency (USEPA), U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation. Applicable federal regulations pertaining to hazardous materials are primarily contained in the Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws, among others:

- The Toxic Substances Control Act of 1976 (15 USC Sections 2601–2697) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint hazards in paint, dust, and soil. This is the federal law that mandates use of the Universal Hazardous Waste Manifest to track hazardous substances from “cradle to grave.”

- The Resource Conservation and Recovery Act of 1976 (42 USC Sections 6901–6992k) is the law under which USEPA regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave").
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC Sections 9601–9675) gives USEPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.
- The Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.

The federal Hazardous Materials Transportation Act (49 USC Sections 5101–5127) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials regulations are enforced by the Federal Highway Administration, the U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration. OSHA is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 29 USC Sections 651–678). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

4.11.2.2 State

In California, both federal and state community right-to-know laws are coordinated through the California Governor's Office of Emergency Services (Cal OES). The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. The provisions of EPCRA apply to four major categories: emergency planning, emergency release notification, reporting of hazardous chemical storage, and inventory of toxic chemical releases. Information gathered in these four categories helps federal, state, and local agencies and communities understand the chemical hazards in a particular location or area and what chemicals individual facilities are using, storing, or producing on site.

The Department of Toxic Substance Control (DTSC), a division of the California Environmental Protection Agency, has primary regulatory responsibility over hazardous materials in California, working in conjunction with USEPA to enforce and implement hazardous materials laws and regulations, including use of the Universal Hazardous Waste Manifest system.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are

contained in 26 CCR. State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the Caltrans. Together, these agencies determine container types, placarding, and signage used, and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by Cal OES, which coordinates the responses of other agencies in the project area.

Porter-Cologne Water Quality Act

Through the Porter-Cologne Water Quality Act and the NPDES program, the RWQCB has authority to require proper management of hazardous materials during project construction. For a detailed description the Porter-Cologne Water Quality Act, the NPDES program, and the role of the RWQCB, see Draft EIR Section 4.12 Hydrology and Water Quality.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

California Geologic Energy Management Division (CalGEM)

CalGEM oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas and geothermal wells. The regulatory program emphasizes the wise development of oil, natural gas, and geothermal resources in the state through sound engineering practices that protect the environment, prevent pollution, and ensure public safety. Sections 3208 and 3255(a) (3) of the Public Resources Code give CalGEM the authority to order the abandonment or re-abandonment of any well that is hazardous, or that poses a danger to life, health, or natural resources. Responsibility for abandonment and or re-abandonment costs for any well may be affected by the choices made by the local permitting agency, property owner, and/or developer.

The Project site contains the "North Stockton Unit A" 1 well (API: 0407700519) which is a former gas well converted to water well. The future disposition of this well is subject to the above Public Resources Code sections and is under the authority of CalGEM.

4.11.2.3 Local

The San Joaquin County 2035 General Plan Public Health and Safety Element contains the following applicable policies pertaining to hazards and hazardous materials:

PHS-1.7: Emergency Response Facilities Location The County shall ensure that emergency response facilities and other critical facilities (e.g., hospitals,

health care facilities, emergency shelters, Sheriff substations, fire stations) are located to avoid hazardous areas (see Seismic and Geologic and Flood Hazards), and designed to remain functional following a major disaster. (RDR/PSP)

PHS-3.2: Location of Sensitive Land Uses The County shall not approve any of the following land uses if they are located within one-eighth of a mile of any active fault or on soil that is highly susceptible to liquefaction: facilities necessary for emergency services; major utility lines and facilities; manufacturing plants using or storing hazardous materials; high occupancy structures, such as multifamily residences and large public assembly facilities; and facilities housing dependent populations, such as prisons, schools, and convalescent centers. (RDR)

PHS-3.3: Emergency Service Facilities The County shall require emergency service facilities to be capable of withstanding earthquakes per the California Building Code, Chapter 16, Volume 2, and remain operational to provide emergency response. (RDR)

PHS-7.2: Avoid Contamination of Resources The County shall strive to ensure that hazardous materials and wastes do not contaminate air, water, or soil resources. (RDR/PSP)

PHS-7.3: Control Hazardous Materials The County shall require the use, storage, and disposal of hazardous materials and wastes to comply with local, State, and Federal safety standards. (RDR)

PHS-7.6: Require Hazardous Materials Management Plans The County shall require businesses that use or store materials and wastes on-site to prepare Hazardous Materials Management Plans (Business Plans) that map and inventory all hazardous materials and contain contingency plans for accidents, designate an individual or individuals as emergency coordinator(s), and ensure that all employees understand the potential for accidents and the appropriate response. Plans must follow the requirements for Federal, State, and/or local defined special flood hazard areas. (RDR/PSP)

PHS-8.1: Land Use Compatibility The County shall prohibit land uses within unincorporated areas that interfere with the safe operation of aircraft or that would expose people to hazards from the operation of aircraft. (RDR)

4.11.3 Environmental Impacts and Mitigation Measures

4.11.3.1 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For the purposes of this EIR, implementation of the proposed project may result in a potentially significant impact associated with hazards and hazardous materials if it would do any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 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.

4.11.3.2 Methods of Analysis

This impact analysis examines the potential for the construction and/or operation of the proposed project to result in release of hazardous materials into the environment. Construction and operation of the project will comply with all applicable laws, permits, and legal requirements pertaining to hazards and hazardous materials, as discussed above.

4.11.3.3 Project Impacts and Mitigation Measures

Impact 4.11-1: The project would require the transport, storage, use and disposal of hazardous materials which could result in a significant hazard to the public or the environment.
Impact Determination: *less than significant with mitigation incorporated*

Threshold:	*Creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.*
Threshold:	*Creation of 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.*

Construction

A variety of hazardous substances and wastes would be stored and used on the Project site during construction. These would include fuels for machinery and vehicles, new and used motor oils, cleaning solvents, paints, and storage containers and applicators containing such materials. Accidental spills, leaks, fires, explosions, or pressure releases involving hazardous materials represent a potential threat to human health and the environment if not properly stored, used, managed or treated. Impacts related to the routine transport, use, disposal, or accidental release of hazardous materials during construction of the Project would be potentially significant. However, with implementation of Mitigation Measure 4.11-1a, this impact would be reduced to **less than significant with mitigation incorporated**.

Operation

The Project involves the construction of two hospitals and a medical office building with associated infrastructure improvements. It is assumed that routine landscaping and building maintenance, as well as hospital uses, would involve the transport, use, or disposal of hazardous materials on or offsite. As such, impacts related to the routine transport, use, disposal, or accidental release of hazardous materials during the Project operation would be potentially significant. However, pursuant to the State of California Medical Waste Management Act of 1990, hospitals are required to prepare a medical waste management plan (MWMP) for submittal to the California Department of Public Health. The MWMP would describe the types and amounts of medical waste generated and how the waste would be disposed. Additionally, in accordance with California Health and Safety Code, Article 1, Chapter 6.95 for the business emergency plan, hospitals must also prepare a Hazardous Materials Business Plan (HMBP) for submittal to the California Environmental Reporting System. Implementation of the MWMP and HMBP would reduce potentially significant impacts related to hospital use operational hazards and hazardous materials.

Further, hospitals are required to comply with all applicable environmental federal, State, and local laws, including the California Hazardous Waste Control Law and the Hazardous Waste Control Regulations. Consistent with these regulations, the Project would prepare an MWMP and an HMBP prior to receiving a certificate of occupancy for each newly constructed building, to ensure the safe routine transport, use, and/or disposal of hazardous materials, including hazardous medical waste. Therefore, impacts related to the routine transport, use, disposal, or accidental release of hazardous materials during Project operation would be **less than significant**.

Mitigation Measures

None required.

4.11-1a: Hazardous Substance Management, Handling, Storage, Disposal, and Emergency Response Plan.

In order to reduce the risk of accidental release of hazardous materials during construction activities at the site, which release is not foreseeable or anticipated, the applicant shall prepare and implement during all construction activities a hazardous substance management, handling, storage, disposal, and emergency response plan. A hazardous materials spill kit shall be maintained on site for small spills. Additionally, the applicant shall monitor all contractors for compliance with applicable regulations, including regulations regarding hazardous materials and hazardous wastes, including disposal. Hazardous materials shall not be disposed of or released on the ground, in the underlying groundwater, or any surface water. Totally enclosed containment shall be provided for all trash. All construction waste, including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials, will be removed to a waste facility permitted to treat, store, or dispose of such materials.

Timing/Implementation: *Prior to Construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

Impact 4.11-2: The Project could 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 due to the presence of a former onsite gas well.
Impact Determination: *less than significant with mitigation incorporated*

Threshold:	*Creation of a significant hazard to the public or the environment due to upset or accident conditions.*

CalGEM oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas and geothermal wells. In their NOP comment letter (Appendix A), CalGEM indicates that a gas well, referred to as the "North Stockton Unit A" 1 well (API: 0407700519), exists on the Project site and was converted to a water well in July of 1962. As shown in Figure 3-7, this well is located in the central portion of the site near the Phase 2 Main Hospital building footprint. CalGEM does not make any statements in their comment letter relative to the adequacy of abandonment procedures for this well with respect to current standards. However, according to CalGEM, significant and dangerous issues may be associated with development near oil and gas wells. For example, nothing guarantees that a well abandoned to former or current standards will not start leaking oil, gas, and/or water in the future. It always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned.

In their NOP comment letter, CalGEM provides the following comments/guidance solely to facilitate decisions made by the local permitting agency, in conjunction with the property owner and/or developer, for development near a gas well.

1. *It is recommended that access to a well located on the property be maintained in the event abandonment of the well becomes necessary in the future. Impeding access to a well could result in the need to remove any structure or obstacle that prevents or impedes access. This includes, but is not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, and decking.*
2. *Nothing guarantees that a well abandoned to current standards will not start leaking oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned. CalGEM acknowledges that wells abandoned to current standards have a lower probability of leaking oil, gas, and/or water in the future, but makes no guarantees as to the adequacy of this well's abandonment or the potential need for future re-abandonment.*
3. *Based on comment 1 and 2 above, CalGEM makes the following general recommendations:*
    a. *Maintain physical access to any gas well encountered.*
    b. *Ensure that the abandonment of gas well(s) is to current standards.*

If the local permitting agency, property owner, and/or developer chooses not to follow recommendation "b" for a well located on the development site property, CalGEM believes that the importance of following recommendation "a" for the well located on the subject property increases. If recommendation "a" cannot be followed for the well located on the subject property, then CalGEM advises the local permitting agency, property owner, and/or developer to consider any and all alternatives to proposed construction or development on the site (see comment 4 below).

4. *Sections 3208 and 3255(a)(3) of the Public Resources Code give CalGEM the authority to order the abandonment or re-abandonment of any well that is hazardous, or that poses a danger to life, health, or natural resources. Responsibility for abandonment and or re-abandonment costs for any well may be affected by the choices made by the local permitting agency, property owner, and/or developer in considering the general recommendations set forth in this letter. (Cal. Public Res. Code, 3208.1.)*
5. *Maintaining sufficient access to a gas well may be generally described as maintaining "rig access" to the well. Rig access allows a well servicing rig and associated necessary equipment to reach the well from a public street or access way, solely over the parcel on which the well is located. A well servicing rig, and any necessary equipment, should be able to pass unimpeded along and over the route, and should be able to access the well without disturbing the integrity of surrounding infrastructure.*
6. *If, during development of this proposed project, any unknown well(s) is/are discovered, CalGEM should be notified immediately so that the newly-discovered well(s) can be incorporated into the records and investigated. CalGEM recommends that any well(s) found in the course of this project, and any pertinent information obtained after the issuance of this letter, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property. This is to ensure that present and future property owners are aware of (1) the well(s) located on the property, and (2) potentially significant issues associated with any improvements near oil or gas wells.*

The NOP comment letter also notes that no well work shall be performed on any oil or gas well without written approval from CalGEM in the form of an appropriate permit. This includes, but is not limited to, mitigating leaking fluids or gas from abandoned wells, modifications to well casings, and/or any other re-abandonment work.

Based on review of the State of California Department of Conservation, Division of Oil and Gas Report of Well Abandonment prepared for the subject well (DOC 1962), the former gas well was abandoned according to then current standards in December 1962. Work included plugging the drill hole with 50 sacks of cement at approximately elevation 480 feet below ground level and welding a steel plate on top of the casing 3' below ground level. According to the CalGEM well file, following well abandonment the well was converted to a water well. There is no documentation of any further well abandonment activities contained in CalGEM's well file and the former gas well continues to be operated as an agricultural irrigation well today. Although the gas well was properly abandoned in 1962, the work performed is not consistent with current gas well abandonment standards and could be leaking, or may leak in the future.

Given the above, the presence of this former gas well on the Project site is considered a significant hazard to the public and/or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials. This is a potentially significant impact. With implementation of Mitigation Measure 4.11-2a, this impact would be reduced to **less than significant with mitigation incorporated**.

Mitigation Measures

4.11-2a. Maintain Appropriate Setbacks from the "North Stockton Unit A" 1 Well, Confirm the Integrity of Existing Abandonment, and Monitor the Well in Perpetuity

Prior to issuance of building permits, the following actions shall be taken to mitigate potential impacts related to the former onsite gas well:

The final site plan shall ensure proposed onsite buildings and associated infrastructure are appropriately set back from, and access from the nearest public street is provided to, the existing onsite "North Stockton Unit A" 1 well (API: 0407700519). Setbacks shall be sufficient to allow "rig access" to the well site for any future well abandonment, re-abandonment and/or mitigation of hazards as identified by CalGEM as authorized by Public Resources Code Sections 3208 and 3255(a) (3). A "clear area" of approximately 50' x 20' immediately adjacent the well shall be available for this purpose.

Using appropriate specialized equipment as approved by CalGEM, the former gas well shall be surveyed for leaks to confirm the integrity of existing gas well abandonment. Should this work confirm the well is not leaking, and rig access can be maintained to the well site, the project can proceed. If it is determined that the well is leaking, the well shall be re-abandoned to current standards as approved by CalGEM prior to issuance of building permits.

The existing "North Stockton Unit A" 1 well (API: 0407700519) shall be monitored for leaks once per year in perpetuity. Should a leak be detected, CalGEM shall be contacted to determine and implement appropriate corrective actions under permits authorized by CalGEM.

If, during Project development, any unknown well(s) is/are discovered, CalGEM should be notified immediately so that the newly-discovered well(s) can be incorporated into the records and investigated. CalGEM recommends that any well(s) found in the course of this project, and any pertinent information obtained during the course of the Project, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property. This is to ensure that present and future property owners are aware of (1) the well(s) located on the property, and (2) potentially significant issues associated with any improvements near oil or gas wells.

Timing/Implementation: *Prior to the issuance of building permits*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

Impact 4.11-3: The Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
Impact Determination: *No Impact*

Threshold:	*Creation emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.*

There are no existing schools located within a quarter mile of the Project site. The nearest proposed school is located over 1,650 feet south within the City of Stockton approved but not yet constructed 341-acre Tra Vigne development project. There would be **no impact**.

Mitigation Measures

None Required.

Impact 4.11-4: The Project could be located on a site which is included on a list of hazardous materials sites.
Impact Determination: *No impact*

Threshold:	*Development of a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 resulting in a significant hazard to the public or the environment.*

No hazardous materials sites compiled pursuant to Government Code Section 65962.5 exist on the Project site (DTSC Web Site. September 2021.). There would be **no impact**.

Mitigation Measures

None required.

Impact 4.11-5: The Project could be 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 resulting in a safety hazard for people residing or working in the project area.
Impact Determination: *Less than significant*

Threshold:	*Development within an airport land use plan or within two miles of a public airport or public use airport resulting in a safety hazard.*

The nearest public use airport to the Project site is the Kingdon Airpark, located approximately 3.6 miles northwest of the Project site and approximately four miles southwest of the City of Lodi in unincorporated San Joaquin County. The Kingdon Airpark is privately owned and was originally constructed in the 1940s to support military training activity during World War II. Located east of Interstate 5 between the cities of

Lodi and Stockton, the airport presently hosts a variety of aviation activities including pilot training and aerial application of agricultural chemicals. The airport has several types of hangars for lease and also provides aviation fuel services.

The Kingdon Airpark is located over 2 miles from the Project site and the Project site is not located within the airport's defined land use compatibility zones as shown in San Joaquin County's Aviation System Airport Land Use Compatibility Plan for San Joaquin County (San Joaquin County 2018.). Therefore, no special use or building height restrictions apply to the Project site and there are no related safety hazard concerns for people residing or working at the Project site. Impacts are **less than significant**.

Mitigation Measures

None required.

Impact 4.11-6: The Project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
Impact Determination: *No impact*

Threshold:	*Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.*

The Project site is located in an agriculture setting north of Eight Mile Road between West Lane and Ham Lane. Site development does not have the potential to interfere with any adopted emergency response plan or emergency evacuation plan. There would be **no impact**.

Mitigation Measures

None required.

Impact 4.11-7: The Project could expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
Impact Determination: *less than significant*

Threshold:	*Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.*

The Project site is currently in agricultural production and is developed with vineyards. The site is not located within a heavily wooded area nor is it surrounded by wildlands or forests. The site is almost entirely surrounded by agricultural land, with some industrial and residential uses adjacent the southern site boundary. The site is designated "Local Responsibility Area Unzoned" (LRA) by the Office of the State Fire Marshal. Furthermore, the California Department of Forestry and Fire Protection (CAL FIRE) has determined San Joaquin County has no Very High Fire Hazard Severity Zones in the designated LRA (CAL FIRE website. 2021.). The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss due to wildfire and this impact is **less than significant**. See Draft EIR Section 4.22 Wildfire for further analysis of wildfire issues.

Mitigation Measures

None required.

4.11.4 Cumulative Impacts

Cumulative hazardous materials effects could occur if past, present, and reasonably foreseeable probable future projects in the county, combined with the proposed Project, together could significantly increase risks from hazards and hazardous materials. However, most routine hazardous materials activities associated with cumulative development would likely involve relatively small quantities of hazardous materials both in interior and exterior settings. Any health or safety effects of routine hazardous materials use would likely be limited to the specific individuals using the materials and anyone in the immediate vicinity of the use. Interaction would not be likely to occur between these routine activities and similar activities at different sites.

Cumulative health and safety impacts could occur if cumulative Project related outdoor or offsite hazards were to interact or combine with those of other existing and proposed development. This could occur through the following mechanisms: air emissions; transport of hazardous materials and waste to or from the county; inadvertent release of hazardous materials to the sanitary sewer, storm drain, or non-hazardous waste landfill; and potential accidents that require hazardous materials emergency response capabilities. Air emissions are addressed in Draft EIR Section 4.5 Air Quality. Cumulative development would be required to adhere to existing regulatory requirements for the appropriate handling, storage, and disposal of hazardous materials that are designed to minimize exposure and protect human health and the environment. Cumulative increases in the transportation of hazardous materials and wastes would cause a less than significant impact because the probability of accidents is relatively low, and the use of legally required packaging minimizes the consequences of potential accidents. In addition, all projects in the area would be required to comply with the same laws and regulations as the proposed Project. This includes Airport Land Use Compatibility Plan consistency, and federal and state regulatory requirements for transporting (Cal EPA and Caltrans) hazardous materials or cargo (including fuel and other materials used in all motor vehicles) on public roads or disposing of hazardous materials (Cal EPA, DTSC, San Joaquin County Environmental Health Department). Therefore, the proposed Project would have a **less than cumulatively considerable contribution** to this cumulative impact.

Mitigation Measures

None required.

References

California Department of Conservation (DOC). 1962. Report of Well Abandonment. December 21

California Department of Forestry and Fire Protection (CAL FIRE). 2021. Available online at: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps

Department of Toxic Substances Control (DTSC). 2021. DTSC Web Site. September. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=95210

San Joaquin County. 2018. Airport Land Use Compatibility Plan, San Joaquin County Aviation System, San Joaquin County, California. July 2009 Amended January.

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4.12 HYDROLOGY AND WATER QUALITY

This section of the EIR describes existing surface water and groundwater conditions at the Project site and evaluates the potential impacts on these resources in accordance with impact significance criteria provided in Appendix G of the CEQA Guidelines. Information presented in this section is based on the following technical studies:

- *Test Boring, Well Installation and Sampling, and Aquifer Testing Summary Report*, August 11, 2021 (Terracon 2021a)
- *Percolation Test Results Letter* dated August 11, 2021 (Terracon 2021b)
- Water Supply Assessment for the Gill Medical Center dated September 9, 2021 (ECORP 2021)

These studies are included with this draft EIR as Appendix G – Hydrology and Water Quality. Publicly-available data from the Federal Emergency Management Agency (FEMA), the California Department of Water Resources (DWR), and the California Central Valley Regional Water Quality Control Board (RWQCB) were also reviewed and incorporated into this analysis.

4.12.1 Environmental Setting

The environmental setting consists of the existing hydrologic conditions in the region and at the Project site. Existing conditions are described below for both surface water and groundwater, and for water quality. The existing conditions define the baseline for the evaluation of potential environmental impacts.

4.12.1.1 Climate

The Project site is in the northern part of the San Joaquin Valley. The San Joaquin Valley has a Mediterranean climate with cool, wet winters and hot, dry summers. Regionally, temperature and precipitation vary with elevation, with the lower temperatures and higher precipitation typically occurring at higher elevations.

The nearest meteorological station to the Project site from which long-term precipitation data are available is the Stockton Fire Station 4 station, located 4.5 miles to the southwest. This location is also designated as Station 048560 as part of the National Weather Service Cooperative Network (WRCC 2021). The average annual high temperature is 74.5 degrees Fahrenheit (deg F) but monthly average high temperatures can range from 54 deg F in January to 93 deg F in July. The average annual low temperature is 46 deg F, with monthly average low temperatures ranging from 36 degrees in January and December to 57 degrees in July.

Rainfall data are available from March 1906 through December 2017 from the Stockton Fire Station 4 station, but consistent data exist for the period from January 1926 through December 2017. In the discussions in this report, the rainfall data are presented for a water year. A water year in this region of California begins on October 1 and extends through September 30 of the subsequent calendar year. A water year better represents rainfall and hydrologic patterns than a calendar year does. In the discussions

below, water years are designated by the year in which they end. For example, the 2015 water year began on October 1, 2014 and ended on September 30, 2015.

The average annual rainfall from 1926 to 2017 is 15.00 inches. The wettest year on record was 1983, with 30.34 inches of rain. The driest year on record was 1977, with 6.46 inches of rain.

4.12.1.2 Surface Water

The Project site is located at the northern end of the San Joaquin Valley and east of the Sacramento-San Joaquin Delta. The closest waterways and sloughs associated with the Delta are approximately five miles to the west. Bear Creek is approximately three-quarters of a mile to the south while the Mokelumne River is approximately six miles north, running along the north side of the City of Lodi. The Woodbridge Irrigation District canal is located along the north side of the Project site.

There are no municipal storm sewers in the Project vicinity. Due to the very flat surface topography, stormwater runoff moves by sheet flow toward surrounding roadways, where it is typically conveyed in shallow ditches to the nearest canal or creek.

Figure 4.12-1 shows the FEMA floodplain map for the Project vicinity. The site is located within an area with a 0.2 percent annual chance flood hazard (i.e., a 500-year flood hazard zone) that also has the potential of inundation with an average depth of less than one foot during a 1-percent annual chance flood event (i.e., a 100-year flood). The site is not within a regulatory floodway.

4.12.1.3 Groundwater

The Project site is located within the Eastern San Joaquin Subbasin within the larger San Joaquin Valley Groundwater Basin. The Eastern San Joaquin Subbasin is designated as basin number 5-022.01 by the DWR (2006). The subbasin area is shown on Figure 4.12-2. The basin encompasses most of San Joaquin County east of the San Joaquin River and Sacramento-San Joaquin Delta, with an area of approximately 1,195 square miles (ESJGA 2019), or approximately 765,000 acres.

The Eastern San Joaquin Subbasin consists of one principal aquifer that provides water for domestic, irrigation, and municipal water supply. The principal aquifer is composed of three water production zones:

- Shallow Zone that consists of the alluvial sands and gravels of the Modesto, Riverbank, and Upper Turlock Lake formations;
- Intermediate Zone that consists of the Lower Turlock Lake and Laguna formations; and
- Deep Zone that consists of the consolidated sands and gravels of the Mehrten Formation.

In the Project area, the base of the Shallow Zone is approximately 300 feet below ground surface (ft bgs) while the base of the Deep Zone is at least 1,000 ft bgs (ESJGA 2019). Aquifer transmissivities range from 90,000 gallons per day per foot (gpd/ft) in the Shallow Zone to 59,500 gpd/ft in the Intermediate Zone, to 250,000 gpd/ft in the Deep Zone.

PIN
- Approximate location based on user input and does not represent an authoritative property location

MAP PANELS
- Selected FloodMap Boundary
- Digital Data Available
- No Digital Data Available
- Unmapped

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*
- Otherwise Protected Area
- Coastal Barrier Resource System Area

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth
- Regulatory Floodway *Zone AE, AO, AH, VE, AR*

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

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Figure 4.12-1. FEMA Flood Map
2020-053 Gill Medical Center

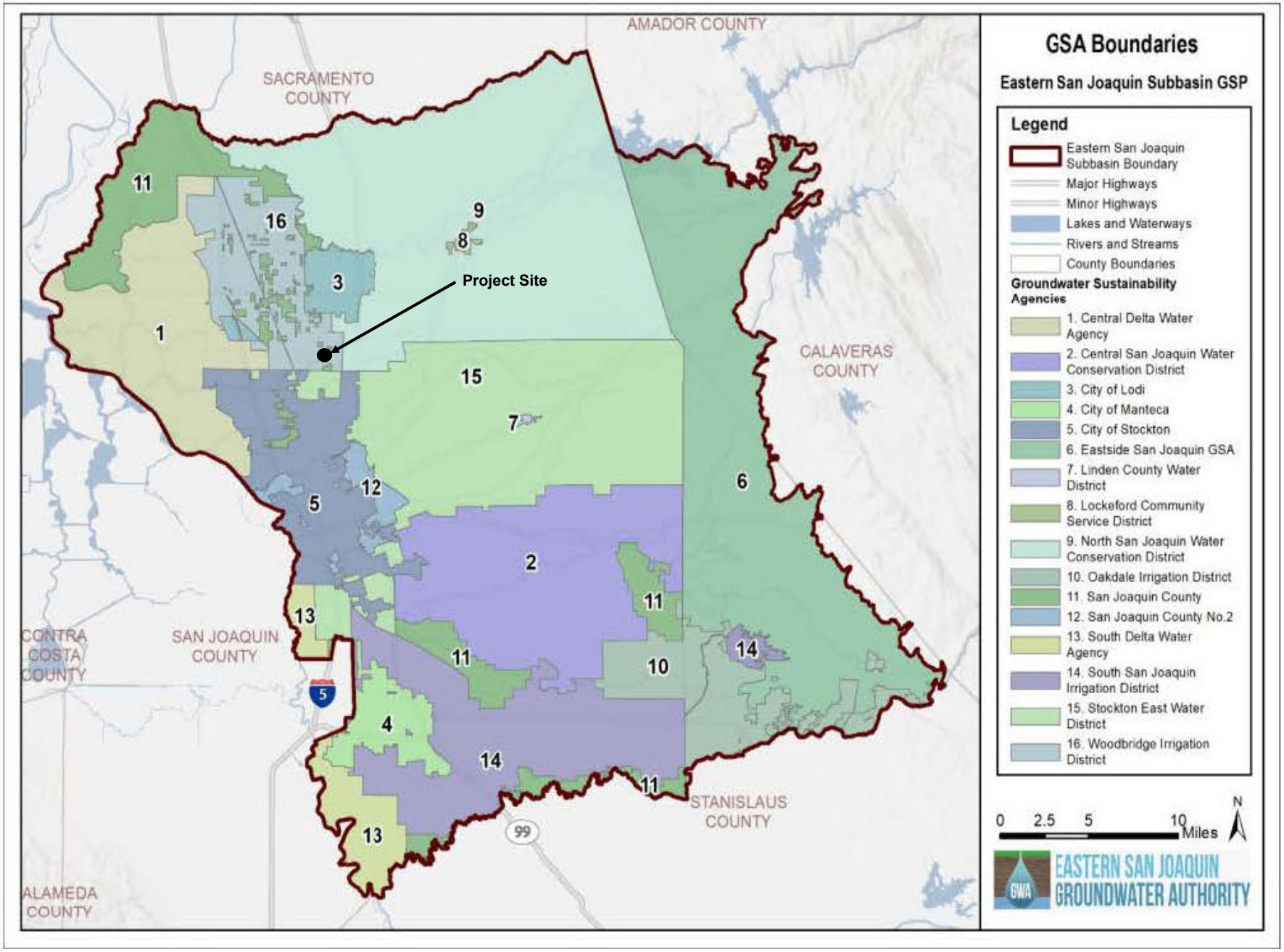

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Figure 4.12-2. Eastern San Joaquin Basin
2020-053 Gill Medical Center

While there are clay and silt zones that form aquitards throughout the geologic formations listed above, the extent of the aquitards is limited and the entire thickness of the principal aquifer is hydraulically connected, meaning that groundwater can move relatively easily from one depth or one zone to another.

Based on groundwater contour maps provided in the GSP (Figures 2-37 and 2-38 in ESJGA 2019), groundwater generally flows radially inward from the perimeter of the Subbasin toward a large pumping depression in the center of the Subbasin (see Figure 4.12-3). The pumping depression is located to the east of the City of Stockton. In the Project vicinity, the groundwater surface elevation is approximately 30 feet below sea level. The hydraulic gradient, or slope of the groundwater surface, averages approximately five to 10 feet per mile, which is equivalent to a gradient of about 0.001 to 0.002 ft/ft.

In general, groundwater levels within the East San Joaquin Valley Subbasin exhibit minor seasonal fluctuations of a few feet due to increased pumping demand in the summer and increased recharge during the winter and spring. The more significant trend has been a persistent decline in groundwater levels ranging from 20 feet to more than 60 feet in most areas of the Subbasin since the 1960s, especially in the area of the pumping depression shown on Figure 4.12-3. However, groundwater levels have remained relatively stable within the City of Stockton, potentially because municipal water demands tend to be appreciably lower than agricultural water use on a per-acre basis. Figure 4.12-4 shows hydrographs of groundwater levels throughout the Subbasin from 1960 to 2017.

The current volume of fresh (i.e., non-saline) groundwater in storage within the principal aquifer in the Eastern San Joaquin Subbasin is estimated to be 53 million acre-feet (ESJGA 2019). The amount of groundwater in storage has decreased by approximately 0.01 percent per year, or about 5,300 acre-feet per year, between 1995 and 2015. According to the GSP, a reduction in beneficial uses, which is an undesirable result under the Sustainable Groundwater Management Act of 2014 (SGMA), would not occur until the volume of water in storage is reduced by 23 million acre-feet, to a total of 30 million acre-feet (ESJGA 2019). Under the current rate of decrease in water storage, it would take several thousand years to reduce the volume in storage to the level of concern identified in the GSP.

The GSP established measurable objectives in wells related to chronic lowering of groundwater levels in representative monitoring wells throughout the Subbasin. The two closest representative wells to the Project site are referred to as the Swenson-3 well, located in the western part of the City of Stockton, approximately four miles southwest of the Project site, and State Well Number 02N07E29B001 (referred to as well 29B herein), located approximately five miles southeast of the Project site, near the westernmost edge of the pumping depression identified in Figure 4.12-3, above. The current groundwater level at the Swenson-3 well is -19.3 ft msl and the groundwater elevation is expected to remain at that level through at least 2035. At well 29B, the current groundwater elevation is at an elevation of -49.8 ft msl and the groundwater level is anticipated to decline to -65 ft msl by 2035. The measurable objective for chronic lowering of groundwater in the GSP (ESJGA 2019) is -19.3 ft msl for the Swenson-3 well and -80.4 ft msl for well 29B.

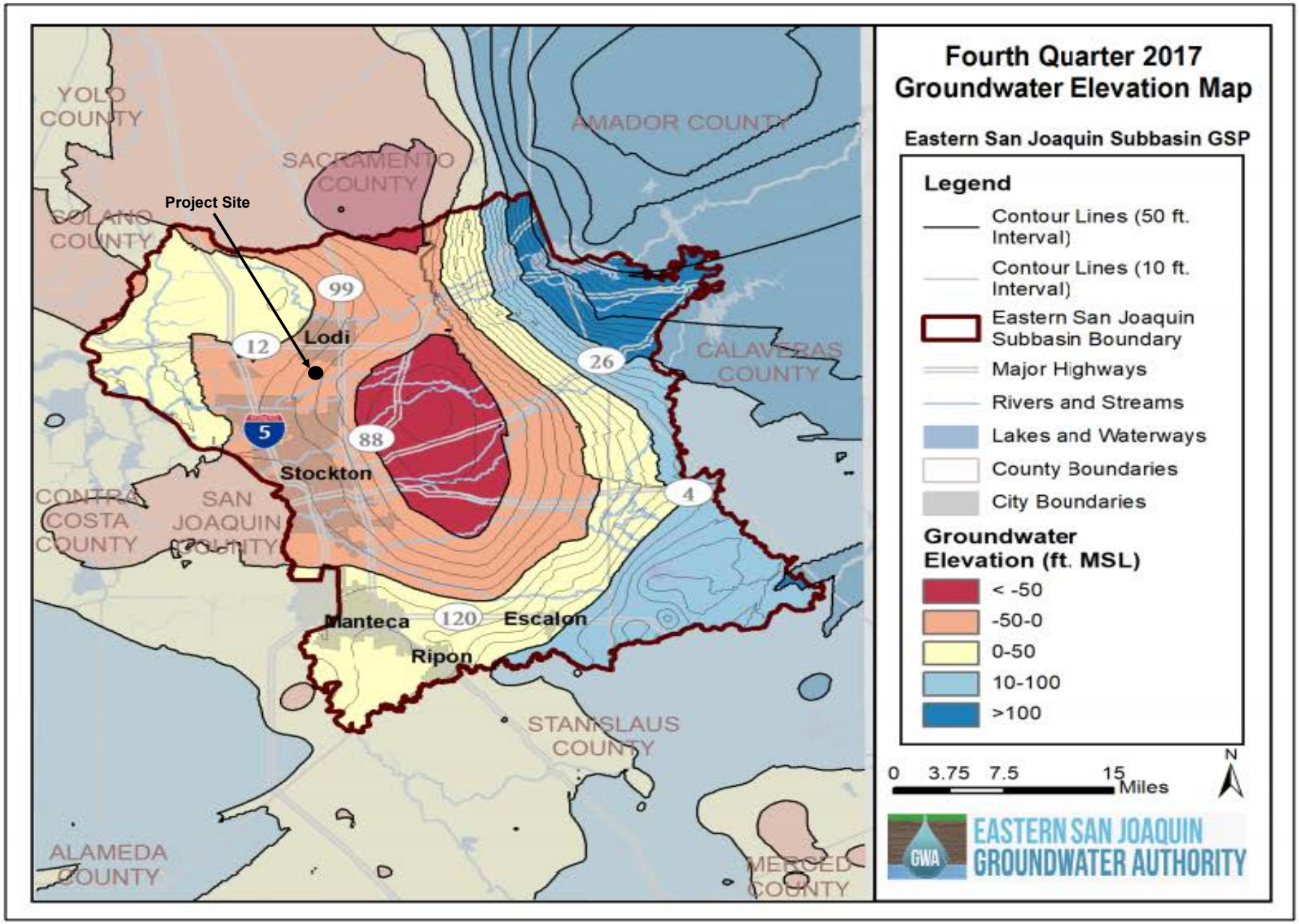

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Figure 4.12-3. Fourth Quarter 2017 Groundwater Contours
2020-053 Gill Medical Center

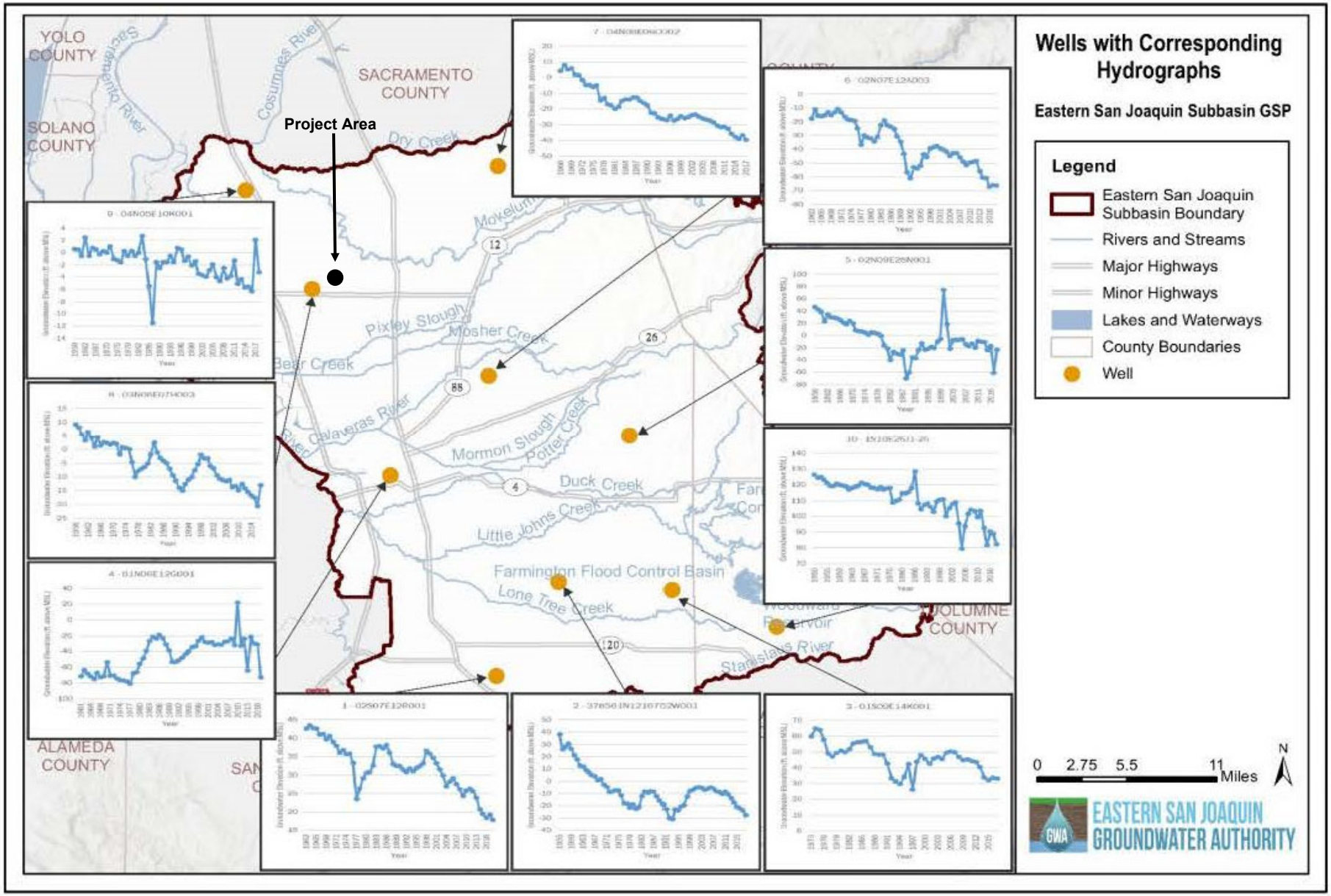

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Figure 4.12-4. Groundwater Hydrographs in the Eastern San Joaquin Subbasin

2020-053 Gill Medical Center

Table 4.12-1 shows the water demand and available water supplies and change in groundwater storage over the past 50 years, for different hydrologic water year types (DWR 2021b). During wet and normal years, which have occurred for 24 of the past 50 years, there is a net increase in groundwater in storage in the Subbasin, ranging from an average of 20,000 acre-feet per year under normal hydrologic conditions to an average of 185,000 acre-feet per year during wet hydrologic conditions. During below normal, dry, and critically dry hydrologic conditions, which have occurred for 26 of the past 50 years, there is a net decrease in groundwater storage of 113,000 acre-feet per year, 164,000 acre-feet per year, and 223,000 acre-feet per year, respectively. Over the last 50 years, the amount of groundwater in storage has decreased by an average of 34,000 acre-feet per year, or a total of 1,700,000 acre-feet. The largest annual change in groundwater storage of 223,000 acre-feet per year shown in Table 4.12-1 represents 0.4 percent of the total groundwater in storage in the Subbasin. The cumulative reduction of groundwater in storage over the last 50 years is 3.2 percent of the total groundwater in storage in the Subbasin.

Table 4.12-1. Historical Water Demand and Supplies Based on Hydrological Water Year Type

Component	Water Year Type (San Joaquin River Index)					
	Wet	Above Normal	Below Normal	Dry	Critical	50-Year
Number of Years[1]	**17**	**7**	**4**	**8**	**14**	**50**
Precipitation, AF/Year (Precipitation, inches)	**1,376,000 (21.6)**	**987,000 (15.5)**	**866,000 (13.6)**	**790,000 (12.4)**	**652,000 (10.2)**	**984,000 (15.4)**
Water Demand (AF/year)						
Ag Demand	1,088,000	1,107,000	1,108,000	1,112,000	1,117,000	1,104,000
Urban Demand	230,000	228,000	225,000	225,000	222,000	226,000
Total Demand[2]	***1,318,000***	***1,335,000***	***1,333,000***	***1,337,000***	***1,339,000***	***1,330,000***
Water Supply (AF/year)						
Total Surface Water Supply	565,000	559,000	518,000	507,000	488,000	529,000
Agricultural	450,000	446,000	416,000	408,000	395,000	426,000
Urban and Industrial	114,000	113,000	102,000	98,000	93,000	103,000
Total Groundwater Supply	753,000	776,000	815,000	830,000	851,000	801,000
Agricultural	639,000	662,000	693,000	705,000	725,000	681,000
Urban and Industrial	115,000	116,000	124,000	126,000	128,000	121,000
Total Supply (AF/year)2	***1,318,000***	***1,335,000***	***1,333,000***	***1,337,000***	***1,339,000***	***1,330,000***
Chane in Groundwater Storage (AF/year)[2]	***185,000***	***20,000***	***-113,000***	***-164,000***	***-223,000***	***-34,000***

Table 4.12-1. Historical Water Demand and Supplies Based on Hydrological Water Year Type

Component	Water Year Type (San Joaquin River Index)					
	Wet	Above Normal	Below Normal	Dry	Critical	50-Year
Number of Years[1]	17	7	4	8	14	50
Precipitation, AF/Year (Precipitation, inches)	1,376,000 (21.6)	987,000 (15.5)	866,000 (13.6)	790,000 (12.4)	652,000 (10.2)	984,000 (15.4)

Notes:
1 List of projected water budget water years by water year type:
Wet: 1969, 1974, 1975, 1978, 1980, 1982, 1983, 1986, 1993, 1995, 1996, 1997, 1998, 2005, 2006, 2011, 2017
Above Normal: 1970, 1973, 1979, 1984, 1999, 2000, 2010
Below Normal: 1971, 2003, 2009, 2018
Dry: 1972, 1981, 1985, 2001, 2002, 2004, 2012, 2016
Critical: 1976, 1977, 1987, 1988, 1989, 1990, 1991, 1992, 1994, 2007, 2008, 2013, 2014, 2015
2 Summations in table may not match the numbers in the table. This is due to rounding of model results.

Prior to 1995, the site was primarily used for cattle grazing. In 1995, the land was converted to a vineyard. The vineyard currently occupies approximately 32 acres of the 42-acre Project site. Vineyard water demand in the Central Valley is reported to be in the range of 2.5 acre-feet per acre (Sumner 2016). Thus, the average current water demand for the vineyard area on the Project site is in the range of 80 acre-feet per year.

The existing irrigation well was installed in 1961 (State Water Well Drillers Report No. 67139 – see Appendix A of the Water Supply Assessment (ECORP 2021) contained in draft EIR Appendix G). The well encountered alternating layers of sand and clay to a total depth of 208 ft bgs. Water production occurs from perforated intervals extending from 116 ft bgs to 165 ft bgs. At the time the well was installed, the depth to groundwater was reported to be 42 ft bgs.

In March 2021, Terracon Consultants, Inc. installed a test well at the Project site (Terracon 2021A). The test well was drilled to a total depth of 450 ft bgs, encountering alternating layers of sand and clay within the Principal Aquifer. The well was completed with 8.625-inch diameter polyvinyl chloride (PVC) casing and screened from 270 ft bgs to 450 ft bgs. The depth to groundwater was 58 ft bgs. The ground surface elevation at the location of the two wells on the Project site is approximately 25 feet above mean sea level (ft msl, NAVD 88). Thus, the groundwater surface elevation beneath the site has decreased from about -17 ft msl (i.e., 17 feet below sea level) in 1961, when the existing onsite irrigation well was installed, to -33 ft msl in 2021.

After well development, a series of pumping tests were conducted in the new test boring. An initial test was conducted for approximately five hours at a rate of 467 gpm. The drawdown in the pumping well was 28 feet at the end of the test, resulting in a specific capacity of 17 gpm per foot of drawdown.

A 24-hour hour aquifer pumping test was subsequently conducted at an average rate of approximately 430 gpm. Drawdown and recovery were measured in the test well and at several other locations ranging from 186 feet to 2,000 feet from the test well. The test well and other monitored locations are shown on Figure 4.12-5. The maximum drawdown observed in the test well during the 24-hour aquifer pumping test was 28 feet, consistent with that observed during the initial five-hour test. The data from the test well indicate that the aquifer transmissivity is between 88,000 gpd/ft and 158,000 gpd/ft.

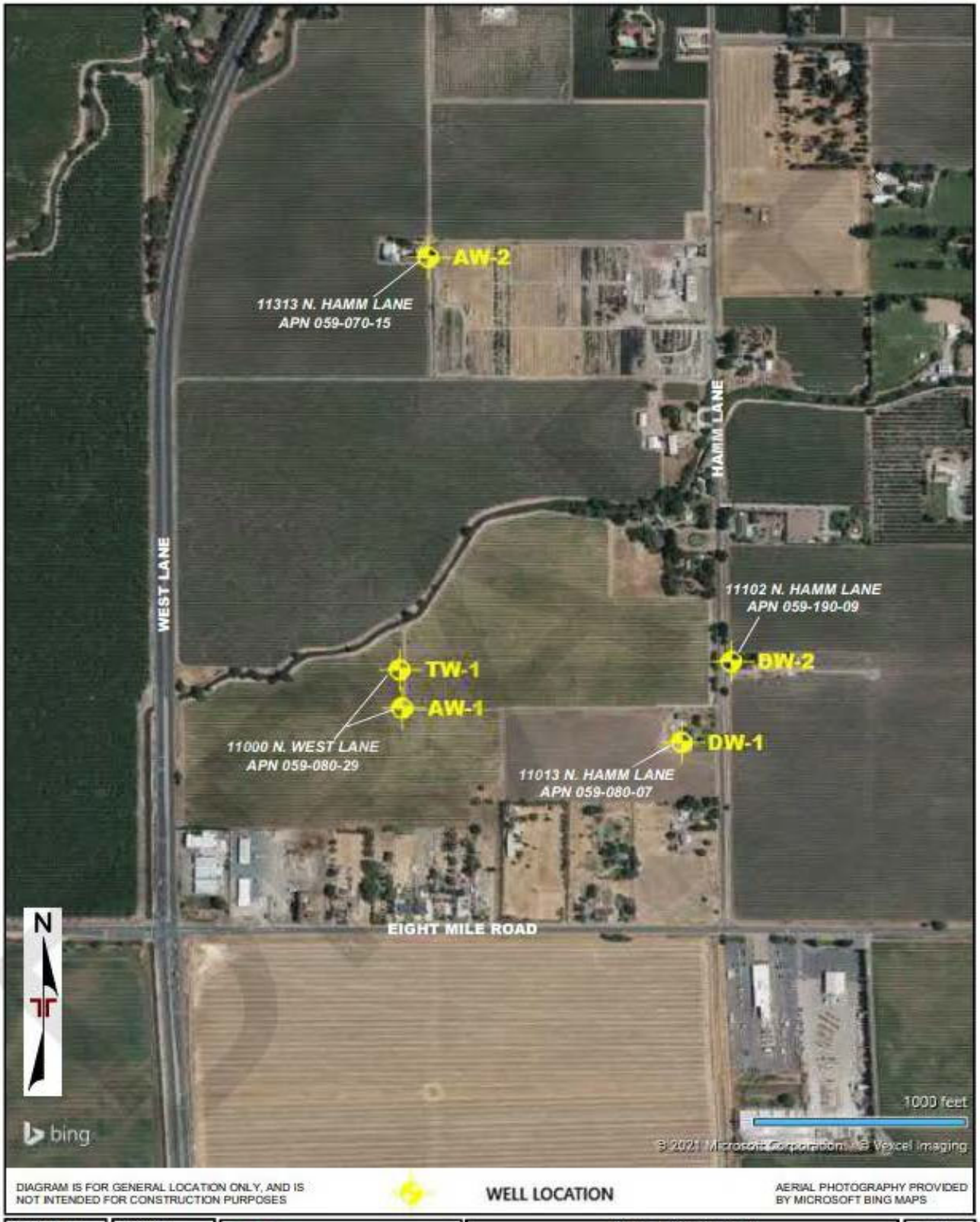

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

WELL LOCATION

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager: TPM	Project No. NA207065	Terracon 902 Industrial Way Lodi, CA 95240-3106	SITE DIAGRAM	Exhibit
Drawn by: TKW	Scale: AS SHOWN		Gill Women's Medical Center – Well Locations 11000 NORTH WEST LANE Stockton, San Joaquin County, California	2
Checked by: TPM	File Name: N/A			
Approved by: SEG	Date: JULY 2021			

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Figure 4.12-5. Location of 2021 Test Well and Locations Monitored During Aquifer Pumping Test

These values are consistent with the range of transmissivity values described in the GSP (ESJGA 2019), as discussed above.

The data from the nearest monitoring point (AW-1 on Figure 4.12-5, 186 feet from the test well) indicates that the maximum effect of pumping at this distance was 0.35 foot, or approximately 4.2 inches. At the more distal wells (AW-2, DW-1, and DW-2 on Figure 4.12-5, 1,400 feet to 2,000 feet from the test well), regional groundwater levels varied by at least two to three feet during the 10 days that water levels were monitored prior, during, and after the aquifer pumping test. Those regional fluctuations, caused by groundwater pumping from other properties, was several orders of magnitude greater than the effect from pumping the test well at 430 gpm for 24 hours.

4.12.1.4 Water Quality

There are no permanent surface water bodies on the Project site. Since the property is used for agriculture, there are no stormwater controls or Best Management Practices (BMPs) currently installed at the Project and no surface water monitoring is conducted for water quality conditions. The existing vineyard is irrigated with groundwater, so the quality of the irrigation water will be consistent with the quality of the groundwater underlying the Project site.

Terracon (2021A) collected a groundwater sample from the new onsite test well during the aquifer pumping test described above. The groundwater sample was sent to a California-certified laboratory and analyzed for parameters consistent with the Federal Safe Drinking Water Act and California Code of Regulations Title 22, Chapter 15, including coliform bacteria, general minerals and ions, metals, volatile and semi-volatile organic contaminants, radionuclides, and a range of herbicides and pesticides. The analytical results are presented in Table 4.12-2.

Table 4.12-2. Summary of Groundwater Analytical Results

Sample ID	Units	TW-1-W
Sample Date		4/28/2021
Bacteria Indicators by EPA Standard Method (SM) 9221		
Fecal Coliform	MPN/100ml	ND<1.8
Total Coliform	MPN/100ml	ND<1.8
E. Coli	MPN/100ml	ND<1.8
Specific Conductivity at 25 C by Method SM2510B		
Specific Conductivity	µmhos/cm	228
General Minerals and Ions by EPA Method 300.1		
Bromate	µg/L	ND<0.20
Chlorate	µg/L	28

Table 4.12-2. Summary of Groundwater Analytical Results		
Sample ID	Units	TW-1-W
Sample Date		4/28/2021
Chloride	mg/L	6.0
Chlorite	µg/L	ND<0.14
Fluoride	mg/L	0.12
Nitrate as N	mg/L	0.71
Nitrate as NO3-	mg/L	3.1
Nitrite as N	mg/L	ND<0.026
Nitrite as NO2-	mg/L	ND<0.085
Nitrate & Nitrite as N	mg/L	0.71
Sulfate	mg/L	6.9
Perchlorate by EPA Method 314.0		
Perchlorate	µg/L	ND<0.27
Metals by EPA Methods 200.8		
Aluminum	µg/L	11
Antimony	µg/L	ND<0.060
Arsenic	µg/L	4.5
Barium	µg/L	69
Beryllium	µg/L	ND<0.060
Cadmium	µg/L	ND<0.030
Chromium	µg/L	11
Copper	µg/L	11
Nickel	µg/L	ND<0.15
Selenium	µg/L	ND<0.42
Thallium	µg/L	ND<0.010
Mercury	µg/L	0.021
Uranium	µg/L	0.79

Table 4.12-2. Summary of Groundwater Analytical Results		
Sample ID	**Units**	**TW-1-W**
Sample Date		**4/28/2021**
Vanadium	µg/L	33
Organics		
Volatile Organic Compounds (VOCs) by EPA Method 524.3		
All VOCs	µg/L	ND
EDB and DBCP by EPA Method E524.3		
1,2-Dibromoethane (EDB)	µg/L	ND<0.015
1,2-Dibromochloropropane (DBCP)	µg/L	ND<0.0063
Radionuclides		
Strontium 90	pCi/L	**0.610**
Gross Alpha	pCi/L	**3.13 ± 1.15**
Gross Beta	pCi/L	**1.42 ± 1.01**
Total Alpha Radium (226)	pCi/L	**0.228 ± 0.175**
Tritium	pCi/L	**349 ± 275**
Radium 228	pCi/L	**0.630 ± 0.696**
Other		
Asbestos by EPA Method 600 R-94/134		
Asbestos	MFL	ND<0.2
Dioxin 2,3,7,8-TCDD by EPA Method E1613B		
2,3,7,8-TCDD	pg/L	ND<1.70
Organochlorine Pesticides (OCPs) & Polychlorinated Biphenyls (PCBs) by EPA Method E505		
OCPs & PCBs	µg/L	ND
Chlorinated Herbicides (CHs) by EPA Method E515.3		
CHs	µg/L	ND
Nitrogen (N) and Phosphorous (P) containing Pesticides by EPA Method E525.2		
N and P containing Pesticides	µg/L	ND

Table 4.12-2. Summary of Groundwater Analytical Results		
Sample ID	**Units**	**TW-1-W**
Sample Date		**4/28/2021**
Semi-Volatile Organic Compounds (SVOCs) by EPA Method E525.2		
SVOCs	µg/L	ND
Carbamates by HPLC with Derivatization by EPA Method E531.1		
Carbamates HPLC w/ Derivatization	µg/L	ND
Glyphosate by HPLC with Derivatization by EPA Method E547		
Glyphosate	µg/L	ND<2.2
Endothall by GC-MS by EPA Method E548.1		
Endothall	µg/L	ND<4.1
Diquat and Paraquat by EPA Method E549.2		
Diquat	µg/L	ND<1.6
Paraquat	µg/L	ND<3.5
Haloacetic Acids by EPA Method E552.2		
Haloacetic Acids	µg/L	ND
Acrylamide by HPLC Method SW8316		
Acrylamide	µg/L	ND<2.0
Cyanide, Total by Method Kelada-01		
Total Cyanide	µg/L	ND<0.77
Epichlorohydrin by HPLC Method MAI		
Epichlorohydrin	µg/L	ND<1.0

Notes:
ND = Not detected above laboratory reported detection limit (RL)
Bold value indicates a detection.
<Value = Analyte not detected above the laboratory RL
MFL = Millions of Fibers per Liter over 10 µm in length
mg/L = Milligrams per Liter
MPN/100 ml = Most Probable Number per 100 Milliliter
pCi/L = Picocuries per Liter
pg/L = Picograms per Liter
µg/L = Micrograms per Liter
µmhos/cm = Micromhos per centimeter

Coliform bacteria, volatile and semi-volatile organic contaminants, herbicides, and pesticides were not detected in the groundwater sample. Nitrate, a common groundwater constituent in agricultural areas in

California, was present at 0.71 milligrams per liter (mg/L, equivalent to parts per million, or ppm) as Nitrogen, well below the drinking water maximum contaminant level (MCL) of 10 mg/L. Several metals were detected in the groundwater sample, including aluminum, arsenic, barium, chromium, copper, mercury, uranium, and vanadium. However, all of the detected metals were present at concentrations well below their respective MCLs. Naturally-occurring radionuclide activity levels were also well below their respective MCLs. The reported levels for specific conductivity and general minerals detected in the groundwater sample were relatively low for groundwater within many parts of the San Joaquin Valley.

4.12.2 Regulatory Setting

4.12.3 Federal

4.12.3.1 Clean Water Act

The federal CWA was enacted with the primary purpose of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters. The CWA also directs states to establish water quality standards for all "Waters of the United States" and to review and update such standards on a triennial basis. Section 319 mandates specific actions for the control of pollution from nonpoint sources.

The USEPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs, such as the NPDES Program, to the State Water Resources Control Board (SWRCB) and the RWQCB.

Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for all surface waters of the United States based on the water body's designated beneficial use. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numeric standards. Water quality standards applicable to the proposed project are listed in the Basin Plan (RWQCB 2016).

4.12.3.2 National Pollutant Discharge Elimination System

The goal of the NPDES diffuse source regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of best management practices (BMPs). The NPDES permit system was established in the CWA to regulate point source discharges (a municipal or industrial discharge at a specific location or pipe) and certain types of diffuse source dischargers. As defined in the federal regulations, nonpoint sources are generally exempt from federal NPDES permit program requirements. Nonpoint pollution sources are diffuse and originate over a wide area rather than from a definable point. Nonpoint pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Urban stormwater runoff and construction site runoff, however, are diffuse-sources regulated under the NPDES permit program because they discharge to receiving waters at discrete locations in a confined conveyance system. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits.

Section 307 of the CWA describes the factors that the USEPA must consider in setting effluent limits for priority pollutants. For diffuse-source discharges (e.g., municipal stormwater and construction runoff), the NPDES program establishes a comprehensive stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. The NPDES program consists of (1) characterizing receiving water quality, (2) identifying harmful constituents, (3) targeting potential sources of pollutants, and (4) implementing a Comprehensive Stormwater Management Program. State implementation of the NPDES program as it relates to the proposed project is discussed below under State and Regional regulations.

4.12.3.3 Executive Order 11988 (Flood Plain Management)

EO 11988 (Flood Plain Management) links the need to protect lives and property with the need to restore and preserve natural and beneficial flood plain values. Specifically, federal agencies are directed to avoid conducting, allowing, or supporting actions on the base flood plain unless the agency finds that the base flood plain is the only practicable alternative location.

4.12.3.4 Floodplain Development

The Federal Emergency Management Agency (FEMA) is responsible for determining flood elevations and floodplain boundaries based on USACE studies and approved agency studies. FEMA is also responsible for distributing the Flood Insurance Rate Maps, which are used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas (SFHAs), including the 100-year flood zone. FEMA allows nonresidential development in SFHAs; however, construction activities are restricted depending upon the potential for flooding within each area. Federal regulations governing development in a SFHA are set forth in Title 44, Part 60 of the CFR, which enables FEMA to require municipalities that participate in the NFIP to adopt certain flood hazard education standards for construction and development in 100-year flood plains.

4.12.3.5 National Toxics Rule and California Toxics Rule

In 1992, pursuant to the CWA, USEPA promulgated the National Toxics Rule (NTR) criteria to establish numeric criteria for priority toxic pollutants for California. The NTR established water quality standards for 42 priority pollutants not covered at that time under California's statewide water quality regulations. In May 2000, USEPA issued the California Toxics Rule (CTR), which promulgated numeric criteria for additional priority pollutants. The CTR documentation (Volume 65, pages 31682–31719 of the Federal Register [65 FR 31682–31719], May 18, 2000, along with amendments in February 2001 "carried forward" the previously promulgated criteria of the NTR, thereby providing a single document listing of water quality criteria for 126 priority pollutants for California surface waters.

4.12.3.6 Federal Antidegradation Policy

The federal antidegradation policy is designed to protect existing uses and the level of water quality necessary to protect existing uses and provide protection for higher quality and national water resources.

The federal policy directs states to adopt a statewide policy that includes the following primary provisions (40 Code of Federal Regulations [CFR] 131.12):

1. Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

2. Where the quality of waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the state finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the state's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

3. Where high quality waters constitute an outstanding National resource, such as waters of national and state parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

4.12.3.7 Rivers and Harbors Appropriation Act of 1899

Section 10 of the Rivers and Harbors Appropriation Act of 1899 prohibits obstructions, alternations, and modifications to any navigable waters of the United States.

4.12.4 State

4.12.4.1 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the act, California must adopt water quality policies, plans, and objectives (synonymous with the term "criteria" used by USEPA) that ensure beneficial uses of state waters are reasonably protected. The Porter-Cologne Water Quality Control Act requires the nine RWQCBs to adopt water quality control plans that define the beneficial uses of the water bodies throughout the region to be protected, the water quality objectives necessary for reasonable protection of the beneficial uses, and a program of implementation for achieving the water quality objectives. In addition, the act authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements for discharges of waste to surface waters and land. The San Joaquin River is within the jurisdiction of the Central Valley RWQCB.

4.12.4.2 Water Quality Control Plan for the Sacramento River and San Joaquin River Basins

The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan) (RWQCB 2016) defines the beneficial uses, water quality objectives, implementation programs, and surveillance and monitoring programs for waters of the Sacramento River and San Joaquin River basins. The Basin Plan contains specific numeric water quality objectives for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, temperature, turbidity, and trace elements, as well as numerous

narrative water quality objectives, which are applicable to certain water bodies or portions of water bodies.

4.12.4.3 State Water Resources Control Board Resolution No. 68-16: Statement of Policy with Respect to Maintaining High Quality Waters in California

The goal of SWRCB Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality Waters in California") is to maintain high quality waters where they exist in the state. Resolution No. 68-16 states, in part:

1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

2. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The SWRCB has interpreted Resolution No. 68-16 to incorporate and be consistent with the federal antidegradation policy (RWQCB 2016).

4.12.4.4 Statewide National Pollutant Discharge Elimination System Storm Water Permit for General Construction Activity

The SWRCB has issued a general NPDES permit for stormwater discharges associated with construction activity of greater than one acre in size—Order 2009-0009-DWQ, as amended by Orders 2010-0014-DWQ and 2012-0006-DWQ (General Construction Permit). The General Construction Permit requires the preparation of a SWPPP that identifies and describes the best management practices (BMPs) to be implemented at construction sites to control pollution from stormwater runoff. Coverage is obtained by submitting a Notice of Intent (NOI), risk assessment, post-construction calculations, a site map, the SWPPP, and a signed certification statement by the legally responsible person to the SWRCB prior to construction.

4.12.4.5 Central Valley Flood Protection Board

Any project encroaching into rivers, waterways, and floodways within and adjacent to federal- and state-authorized flood control projects or within designated floodways must receive approval from the CVFPB. Under Water Code §§ 8534, 8608, and 8710–8723, the CVFPB is required to enforce, within its jurisdiction, on behalf of the State of California, appropriate standards for the construction, maintenance, and

protection of adopted flood control plans that will best protect the public from floods. The area of CVFPB jurisdiction includes the entire Central Valley, including all tributaries and distributaries of the Sacramento and San Joaquin rivers and Tulare and Buena Vista basins.

4.12.5 Environmental Impacts and Mitigation Measures

4.12.5.1 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this draft EIR, implementation of the proposed project would have a significant adverse impact on hydrology and water quality if it would result in any of the following:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage patterns 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 off-site;
    - 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;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.12.5.2 Methods of Analysis

The assessment of potential impacts presented below is based on comparison of the existing site setting, as defined above in Section 4.12.1, with defined or anticipated conditions that would occur as a result of the proposed Project. Where available, Project specific studies provided by the applicant are used to identify Project-related conditions. In the absence of such documentation, available information from the relevant regulatory agency (for example, the RWQCB) are used to assess the potential difference between existing, or baseline, conditions and Project-related conditions.

4.12.5.3 Project Impacts and Mitigation Measures

Impact 4.12-1: Construction of the Project could result in runoff that contains pollutants that would degrade water quality.
Impact Determination: *less than significant*

Threshold:	*Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.*

Project construction would involve removing the existing vineyard and other related agricultural improvements on the site, along with grading and excavation. If uncontrolled, these ground disturbing activities would leave bare soil exposed, which could be mobilized during storm events and result in polluted runoff. However, since the area of disturbance would be greater than one acre, the Project would be required to comply with the Federal NPDES and Statewide National Pollutant Discharge Elimination System Storm Water Permit for General Construction Activity, as described in Sections 4.12.1 and 4.12.2, respectively. The applicant would be required to file a Notice of Intent to comply with the Statewide General Construction Activity NPDES permit with the State Water Resources Control Board and the RWQCB. A construction stormwater pollution prevention plan (C-SWPPP) would need to be prepared by a Qualified SWPPP Practitioner or Qualified SWPPP Developer (QSP/QSD). The C-SWPPP would identify appropriate BMPs to prevent pollutants, including sediment, from entering stormwater and leaving the site during construction activities. The C-SWPPP would also include monitoring and reporting requirements to verify that water quality is not degraded.

Due to the requirements to comply with the federal and state NPDES and stormwater programs as part of the Project, this would be a **less than significant impact**.

Mitigation Measures

None required.

Impact 4.12-2: Discharge of wastewater from the medical facilities could degrade surface water and/or groundwater quality and violate the Basin Plan.
Impact Determination: *less than significant with mitigation incorporated*

Thresholds:	*Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality;*
and	
	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

As described in Section 4.21 (Utilities and Service Systems), below, because the Project site is located outside the City of Stockton wastewater service area, it is not eligible for City sanitary sewer service. Therefore, the sanitary waste stream generated by the Project will be treated by an onsite wastewater treatment plant. The waste stream is anticipated to contain not only standard sanitary waste but also medical-related liquid wastes that may include bodily fluids, drug and other chemical residues, infectious materials, and related components. If not properly treated and monitored, discharge of this waste stream

could degrade surface water and/or groundwater and violate water quality standards within the Basin Plan.

However, the Project would include an onsite sanitary sewer and wastewater treatment system. Wastewater generated by the Project would be conveyed to an advanced "package plant" wastewater treatment system that would be specially designed to treat and remove hospital generated liquid medical waste. The resultant water quality would be treated to a level suitable for National Pollutant Discharge Elimination System (NPDES) permitting by the Regional Water Quality Control Board with Waste Discharge Requirements (WDRs). RWQCB Basin Plan limits and drinking water maximum contaminant levels (MCLs) for a range of parameters is provided in Table 4.12-3. The values in this table provide an indication of the level to which the wastewater would need to be treated for many substances to obtain and comply with an NPDES permit and WDRs. Treatment to these levels would also produce "recycled water" suitable for use in outdoor reflecting ponds, as landscape irrigation, or for agricultural production.

Table 4.12-3. RWQCB Basin Plan Limits for NPDES WDR Discharges

Tier 3 Constituent	Units	Standards	
		Basin Plan Limit	Title 22 MCLs
Aluminum	µg/L	NA	1,000
Ammonia, as N	µg/L	NA	25
Fecal Coliform	mpn/mL	100/100	
Iron	µg/L	300	300
Manganese	µg/L	50	50
Nitrate as NO3	mg/L	NA	45
Nitrite as N	mg/L	NA	1
Nitrate + Nitrite, as N	mg/L	10	10
pH	std units	6.5-8.5	6.5-8.5
Specific Conductance (EC)	µmhos/cm	340	900
Chloride	mg/L	NA	250
Sulfate	mg/L	NA	250
Fluoride	Mg/L	NA	2

Table 4.12-3. RWQCB Basin Plan Limits for NPDES WDR Discharges

Tier 3 Constituent	Units	Standards	
		Basin Plan Limit	Title 22 MCLs
Total Dissolved Solids	mg/L	125	500
Turbidity	NTU	<20% increase	<5
Dissolved Oxygen	mg/L	5-7	NA
Antimony	µg/L	NA	6
Arsenic	µg/L	10	10
Barium	µg/L	100	1,000
Beryllium	µg/L	NA	4
Boron	mg/L	0.8 – 2.6	NA
Cadmium	µg/L	NA	5
Chromium	µg/L	NA	50
Hexavalent Chromium	µg/L	NA	10
Copper	µg/L	NA	1,300
Lead	µg/L	NA	15
Mercury	µg/L	NA	2
Methyl Mercury	mg/kg fish tissue	0.08-0.24	NA
Molybdenum	µg/L	10-50	
Nickel	µg/L	NA	100
Selenium	µg/L	5-20	50
Silver	µg/L	10	100
Thallium	µg/L	NA	2

Table 4.12-3. RWQCB Basin Plan Limits for NPDES WDR Discharges

Tier 3 Constituent	Units	Standards	
		Basin Plan Limit	Title 22 MCLs
Zinc	µg/L	100	5,000
Cyanide	µg/L	10	150
Perchlorate	µg/L	NA	6

Notes:
Basin Plan Limits are for Receiving Waters with Municipal and Domestic Supply Beneficial Use (MUN) tributary to the San Joaquin River and the Sacramento/San Joaquin Delta.
Additional MCLs in CCR Title 22 also apply to volatile organic compounds, non-volatile synthetic organic compounds, disinfection by-products, and radionuclides.

The treatment plant design and discharge specifications have not yet been developed and issuance of the NPDES and WDR permits would be subject to the design and performance standards, which are unknown at this time. Thus, it is uncertain at this time that whether the treatment system would meet all applicable water quality standards, resulting in a potentially significant impact. With implementation of Mitigation Measure **4.12-1a**, this impact would be reduced to **less than significant with mitigation incorporated**.

Mitigation Measures

4.12-1a: Obtain NPDES and WDR permits from the RWQCB

Prior to issuing building permits for Phase I of the Project, including for the wastewater treatment system, the Applicant shall complete the design of the treatment system and obtain the necessary NPDES and WDR permits from RWQCB. The Applicant shall provide copies of the NPDES and WDR permits to the County as part of its building permit application submittals. In addition, the Applicant shall provide copies of all monitoring reports required under the NPDES and WDR permits to the County on the same schedule due to the RWQCB, verifying compliance with the permit standards or identifying corrective actions if any exceedances are identified.

Timing/Implementation: *Prior to the issuance of building permits*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

Implementation of Mitigation Measure 4.12-1a. would result in a less than significant impact related to surface water and groundwater quality and would ensure compliance with the Basin Plan.

Impact 4.12-3: The proposed project would modify drainage patterns on the project site and add impervious surfaces that would increase the amount of stormwater runoff, which could increase erosion, siltation, or flooding that may exceed existing stormwater capacity.
Impact Determination: *less than significant*

Threshold:	*Substantially alter the existing drainage patterns 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 off-site;* *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.*

The Project would include conversion of existing agricultural land to an institutional use, which would change the existing drainage pattern and add impervious surfaces at the building footprints and the parking areas. As discussed in Section 3.5.6.3, connection to the nearest stormwater sewer system is not feasible due to the distance from such facilities and the site. Therefore, onsite stormwater retention is proposed as part of the Project. Storm water runoff volumes were calculated based on state water quality requirements and related San Joaquin County improvement standards (Siegfried Engineering, Inc. 2020). These calculations indicate that full project buildout (Phases 1 and 2) would generate the need for approximately 15-acre feet (AF) of onsite storm water storage.

Storm water runoff from impervious surfaces would be collected via drop inlets and underground piping and conveyed to onsite retention basins where it would undergo pre-treatment and be allowed to infiltrate and evaporate. Terracon (2021B) conducted percolation tests to verify that the soils at the retention pond locations met applicable standards for infiltration of stormwater. Figure 3-7 shows a full buildout conceptual retention basin plan that employs multiple sized basins with 3:1 side slopes (min) occupying 9.5 acres of the Project site. All basins in the concept plan are located down gradient from development areas allowing for a gravity flow system. Like water and wastewater, stormwater improvements would be constructed and sized consistent with development phasing.

The onsite underground piping and retention basins would prevent erosion and siltation onsite, while eliminating any offsite stormwater discharges. The retention basins have been sized to retain the runoff from design storm events and will, therefore, prevent flooding due to increased runoff from the impervious surfaces that would be added as part of the Project. The capacity of the onsite stormwater system has been designed to convey and retain the required stormwater volumes onsite and would not contribute any runoff to existing or planned offsite stormwater drainage systems. The Project site is not

within a floodway or a floodplain that conveys flood flows, so the Project improvements would not impede or redirect any flood flows.

With the stormwater system improvements incorporated as part of the Project, the alteration of existing onsite drainage patterns and the addition of impervious surfaces would result in a **less than significant impact** to erosion, siltation, and flooding.

Mitigation Measures

None required.

Impact 4.12-4: The proposed project would use groundwater for its water supply, which could decrease groundwater supplies, impeded sustainable management of the groundwater basin, and conflict with the local groundwater sustainability plan. Impact Determination: *no impact*

Threshold:	*Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.*
and	
	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The potable water supply for the Project will be provided by onsite groundwater wells. In accordance with the requirements of Senate Bill 610 and California Water Code Sections 10910-10915, a Water Supply Assessment (WSA) (ECORP 2021) was prepared to evaluate the adequacy of the groundwater supplies for the Project. Water for the existing vineyards on the Project site are provided by an old natural gas well that has been converted to a water well. The Project will replace approximately 32 acres of vineyards. For the proposed Project, water would be supplied by a new recently installed well near the center of the Project site. The information presented below is summarized from the WSA.

The proposed Gill Medical Center is located within the Eastern San Joaquin Subbasin within the larger San Joaquin Valley Groundwater Basin. In general, groundwater levels within the East San Joaquin Valley Subbasin exhibit minor seasonal fluctuations of a few feet due to increased pumping demand in the summer and increased recharge during the winter and spring. The more significant trend has been a persistent decline in groundwater levels ranging from 20 feet to more than 60 feet in most areas of the Subbasin since the 1960s. However, groundwater levels have remained relatively stable within the City of Stockton, potentially because municipal water demands tend to be appreciably lower than agricultural water use on a per-acre basis.

The current volume of fresh (i.e., non-saline) groundwater in storage in the Eastern San Joaquin Subbasin is estimated to be 53 million acre-feet. The amount of groundwater in storage has decreased by approximately 0.01 percent per year, or about 5,300 acre-feet per year, between 1995 and 2015. However, a reduction in beneficial uses, which is an undesirable result under the Sustainable Groundwater Management Act, would not occur until the volume of water in storage is reduced by 23 million acre-feet, to a total of 30 million acre-feet. Under the current rate of decrease in water storage, it would take

several thousand years to reduce the volume in storage to that level. As such, it is highly unlikely the Subbasin will experience conditions under which the volume of stored groundwater poses a concern, although the depth to access that groundwater will increase over time, potentially requiring the deepening of many wells resulting in increasing drilling and pumping costs, and higher energy demand.

As discussed in Section 4.12.1.3, above, and shown in Table 4.12-1, during wet and normal years, which have occurred for 24 of the past 50 years, there is a net increase in groundwater in storage in the Subbasin, ranging from an average of 20,000 acre-feet per year under normal hydrologic conditions to an average of 185,000 acre-feet per year during wet hydrologic conditions. During below normal, dry, and critically dry hydrologic conditions, which have occurred for 26 of the past 50 years, there is a net decrease in groundwater storage of 113,000 acre-feet per year, 164,000 acre-feet per year, and 223,000 acre-feet per year, respectively. Over the last 50 years, the amount of groundwater in storage has decreased by an average of 34,000 acre-feet per year, or a total of 1,700,000 acre-feet. The largest annual change in groundwater storage of 223,000 acre-feet per year shown in Table 4.12-1 represents 0.4 percent of the total groundwater in storage in the Subbasin. The cumulative reduction of groundwater in storage over the last 50 years is 3.2 percent of the total groundwater in storage in the Subbasin.

Vineyard water demand in the Central Valley is approximately 2.5 acre-feet per acre so the current water demand for the 32 acres of vineyard area on the Project site is about 80 acre-feet per year. Table 4.12-4 shows the available groundwater supply (i.e., the amount of water currently used to irrigate the 32 acres vineyard) compared with the projected water demands for the Project at full build out. Potable water demand and irrigation water demand are anticipated to be 42 acre-feet per year and 30 acre-feet per year, respectively. However, the irrigation demand is anticipated to be fully offset with recycled water from the onsite wastewater treatment plant. In addition, approximately 12 acre-feet of the applied irrigation water is expected to infiltrate into the subsurface below the root zone and percolate back to the water table. Thus, the net Project demand for groundwater from the aquifer is projected to be 30 acre-feet per year, which is substantially less than the 80 acre-feet per year that are currently used to irrigate the vineyard area on the Project site. The Project water demand is diminished compared to the overall water demands and changes in groundwater storage presented in Table 4.12-1 and, as such, would have a miniscule and imperceptible effect on the groundwater basin.

Table 4.12-4. Available Water Supply Compared with Demand for Various Hydrologic Conditions (acre- feet per year)

	Normal Year	Dry Year	Multiple Dry Year
Available Groundwater Supply	80	80	80
Potable Demand	42	42	42
Irrigation Demand	30	30	30
Recycled Water	30	30	30
Return to Aquifer	12	12	12
Net Demand	30	30	30

The WSA determined that the water demand and available supply do not change during normal years, dry years, or multiple dry-year periods. The WSA concludes that there will be sufficient water available for the Project during single dry year and multiple dry year periods over at least the next 20 years, in accordance with requirements of the Water Code, and that water levels in the groundwater basin will not drop to depths that would affect beneficial uses of the aquifer.

The net Project groundwater use of 30 acre-feet per year is less than the existing baseline groundwater volume of 80 acre-feet per year used for irrigation of the vineyard. Thus, the Project would not decrease groundwater supplies, would not impede sustainable management of the groundwater basin, and would not conflict with the local Groundwater Sustainability Plan (GSP). Thus, use of groundwater for the Project would have **no impact**.

Mitigation Measures

None required.

4.12.6 Cumulative Impacts

Compliance with SWPPP requirements and with the NPDES and WDR requirements for wastewater treatment would prevent any water quality impacts from the Project. The onsite stormwater system would preclude the discharge of runoff from the Project site. The potable water demand for the Project is lower than the current agricultural water demand, so there would be no reduction in available groundwater supplies or interference with sustainable management of the groundwater basin.

The San Joaquin County 2035 General Plan Update EIR identifies potentially significant cumulative impacts related water quality, water supply, wastewater, and stormwater. However, the proposed Project would not contribute to these potentially significant cumulative impacts because any water quality impacts would be prevented or mitigated, wastewater and stormwater would be treated and retained onsite, and the groundwater demand would be less than the current groundwater use on the site. Thus, the Project would result in a **less than cumulatively considerable** contribution to cumulative hydrology and water quality impacts.

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4.13 LAND USE AND PLANNING

This section describes existing land uses on and near the project site. This section also describes plans and regulations pertaining to land use management in the project area and evaluates project consistency with relevant land use plans, policies and regulations and addresses project compatibility with adjacent land uses.

4.13.1 Environmental Setting

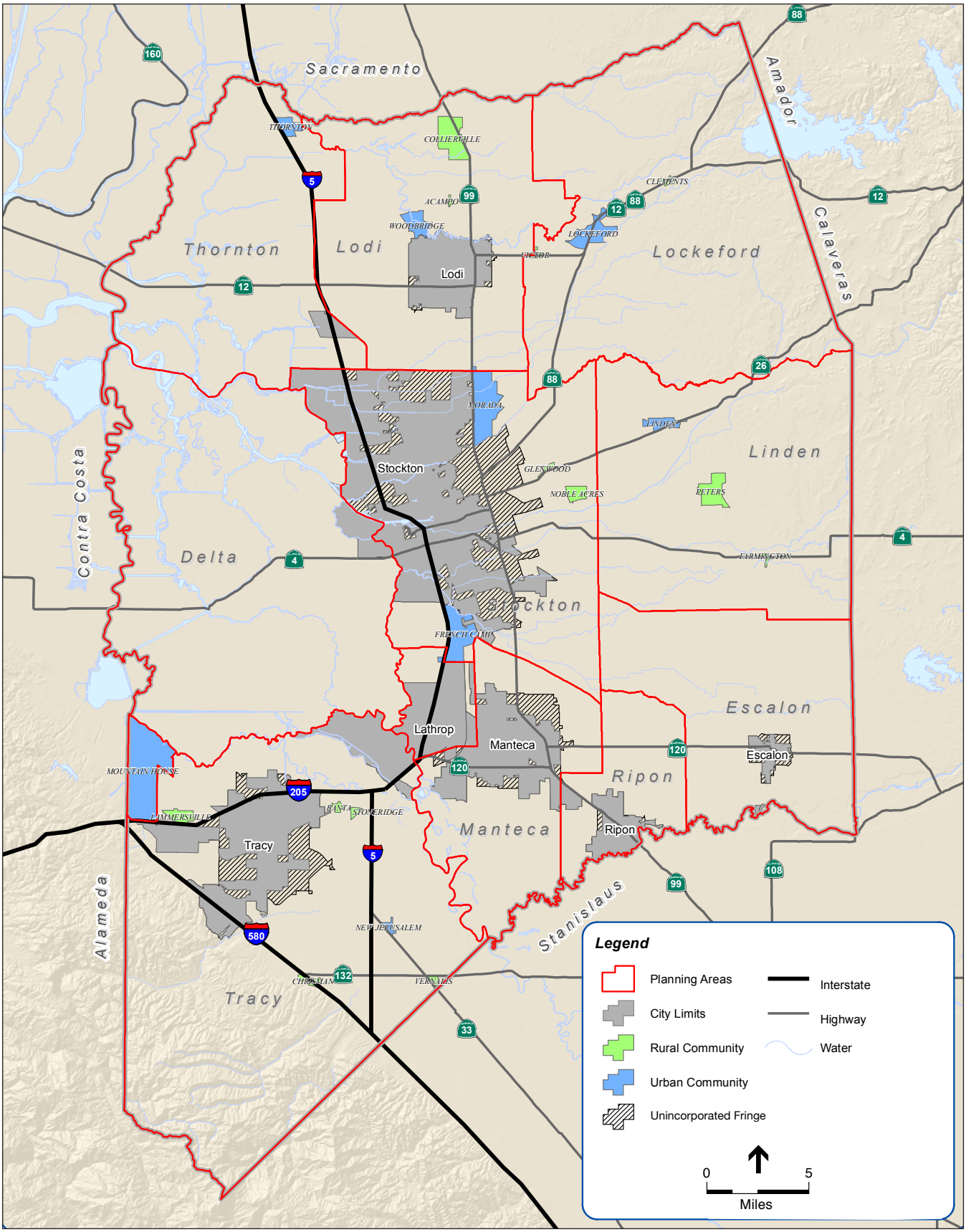
4.13.1.1 Regional Setting

San Joaquin County is in a geographically diverse region with the foothills of the Sierra Nevada Mountains framing its eastern region, while its western portion includes the San Joaquin Valley floor, which is extensively cultivated, and portions of the Coastal Range. Unincorporated land accounts for about 90 percent (822,000 acres) of land in the county, and agriculture is the predominant use in the unincorporated area, totaling about 686,109 acres (83.2 percent of the unincorporated county). The second largest land use, in total acreage of the unincorporated area, is residential land, with about 40,410 acres in this use. Much of this unincorporated residential acreage is concentrated at the edges of existing cities and in urban and rural communities within the County. Figure 4.13-1. *San Joaquin County Communities* illustrates the areas of incorporated cities and the land uses within the unincorporated areas.

In addition to being a center of agricultural production, the County also is the population and employment center of the northern San Joaquin Valley, serving as a warehousing and distribution center. Cities and urbanized areas are generally located in the center of the county, along Interstate 5 and State Route 99, and in the southwest portion of the county in Tracy between I-580 and I-205 (Figure 4.13-1). The multiple highway corridors make the county a "transportation hub," especially in conjunction with the rail corridors and the Port of Stockton where large cargo ships can dock. West of the urbanized development, in the Delta, is agricultural use, with a variety of irrigated row crops. To the east of the development corridors, orchards, vineyards, and grazing lands are the predominant agricultural uses. Grazing land encompasses large portions of the northeast and southwest corners of the county.

In addition to the agricultural and residential land uses mentioned above, public and quasi-public land uses make up about 1.1 percent of the total County acreage. These lands include airports, cemeteries, hospitals, landfills, schools, public utilities, military facilities and other government-owned land. For example, about 6,000 acres of federally owned land are in the Tracy Planning Area and 3,000 acres of land owned by the East Bay Municipal Utility District are in the eastern portion of the County. Commercial and industrial lands also make up about 1.0 percent of the total County acreage.

After agriculture (75 percent of the county's overall acreage), the seven incorporated cities make up the next largest portion of the county's acreage, capturing about 10 percent of the entire county. Most urban development in the county over the past 20 years has occurred as a result of cities annexing land for development (San Joaquin County 2016).



SOURCE: Minter-Harnish, 2013
San Joaquin County 2035 General Plan . 209529

Figure 4.13-1
San Joaquin County Communities
2020-053 Gill Medical Center

4.13.1.2 Local Setting

The Project site is located approximately 500 feet north of the current boundary of the City of Stockton in unincorporated San Joaquin County, California (see *Figure 3-1)*. As shown in *Figure 3-2*, the proposed 42.4-acre Project site is located at 11000 North West Lane and encompasses all or portions of three existing legal parcels totaling 60.8 acres; Assessor's Parcel Numbers (APNs): 059-080-07, 059-080-29, & 059-080-30. The Project proposes a lot line adjustment that would exclude 18.4 acres from the Project site including the eastern portion of APN 059-080-30 (11013 Ham Lane) and active farmland to the northwest. Existing Land Use

Existing Project site land use and improvements are shown in *Figure 3-3*. As shown, with the exception a ±10-acre rectangular-shaped field on the east side, most of the Project site is currently in agricultural production. Site improvements include vineyards, a dilapidated corral and cattle chute located near the mid-point of the southern site boundary, and a former gas well converted to a water well in the approximate center of the property. This well is referred to as the "North Stockton Unit A" 1 well (API: 0407700519). Well operation is by electric pump. An overhead electric line extends approximately 1,430 feet along the south side of an existing farm road from North Ham Lane to the well site. A farm road also extends north from the well site to the northern property boundary, where it connects with a perimeter farm road that runs along the northern, eastern and western site boundaries. Finally, the existing Woodbridge Irrigation District (WID) canal is located onsite along the northern site boundary, between West Lane and the northern midpoint.

Surrounding Land Use

As shown in *Figure 3-2*, surrounding land uses include a mixture of agriculture, light industrial, and residential as described below.

North. The western half of the site's northern boundary is defined by the centerline of the existing WID agricultural canal. Active agriculture and scattered residences exist north of the Project site and canal. Pixley Slough is located approximately 0.5 mile north, and the City of Lodi is located approximately 2.5 miles north of the site.

East. The site's eastern boundary is defined by North Ham Lane, followed by active agriculture and scattered residences. The Union Pacific Railroad and Stockton City limits are located approximately 0.5 mile east followed by State Route (SR) 99 located approximately 1.5 miles east of the site.

South. The site's southern abuts the rear of existing non-conforming industrial and residential uses that front Eight Mile Road between West Lane and Ham Lane within the AG zone. Eight Mile Road is located approximately 500 feet south of the southern site boundary and provides driveway access to these existing non-conforming uses. Lands south of Eight Mile Road are within the City of Stockton, are currently in active agriculture, and include the recently approved but undeveloped 341-acre Tra Vigne development project. The Tra Vigne project, located south of Eight Mile Road, between West Lane on the west and the Union Pacific Railroad on the east, was annexed to the City of Stockton in February 2021. This City of Stockton master planned community includes development of a mix of land uses including

single-family (1,728 units) and high-density residential (680 units), industrial, commercial, school, and traditional and non-traditional parks sites.

West. West Lane defines the site's western boundary. The WID agricultural canal lies immediately west of West Lane, followed by active agriculture. The City of Stockton lies approximately 0.75 miles west, followed by the Union Pacific Railroad (Sacramento) at approximately 1.5 miles, and Interstate 5 at approximately 4 miles west.

4.13.2 Regulatory Setting

4.13.2.1 Federal

No federal regulations related to land use are relevant to the proposed Project.

4.13.2.2 State

Senate Bill (SB) 375

Senate Bill (SB) 375 is one of the most important recent pieces of legislation affecting land use within the State of California. It is formally referred to as "The Sustainable Communities and Climate Protection Act of 2008." SB 375 relates to regional land use and transportation policies, with an emphasis on policies to reduce statewide greenhouse gas emissions. The law requires the state's 18 metropolitan planning organizations adopt sustainable communities strategies that, if implemented, would help each region achieve their respective targets for reducing greenhouse gas emissions from automobiles and light trucks. The targets are established by the California Air Resources Board. The San Joaquin Council of Governments (SJCOG), San Joaquin County's metropolitan planning organization, adopted an updated Regional Transportation Plan and Sustainable Communities Strategy in June of 2014 to address the requirements of SB 375.

4.13.2.3 Local

Applicable land use plans, major policies and regulations that pertain to the proposed Project are presented below.

San Joaquin County 2035 General Plan Policy

Relevant policies of the San Joaquin County 2035 General Plan (referred to as the General Plan in this EIR section) that address land use and are applicable to the proposed Project are listed below under Impact 4.13-2.

San Joaquin County 2035 General Plan Land Use and Development Title Designations

The General Plan presents a vision for the County's future and a strategy to make that vision a reality. The General Plan addresses the issues that must be resolved as San Joaquin County grows. It is comprehensive, providing a framework for the County's physical, economic, and social development and environmental resources preservation and includes the polices, diagrams, text, and implementation measures that guide County land use decisions.

The Development Title of San Joaquin County (Development Title or Title) is a General Plan implementation measure intended to serve as the basis for all land use regulations adopted by San Joaquin County. The purposes of the Development Title are to serve the public health, safety, and general welfare; to implement the San Joaquin County General Plan; and to achieve the following objectives:

- To encourage the most appropriate use of land and the harmonious relationship among land uses;
- To promote a safe and efficient traffic circulation system;
- To provide open spaces for light and air;
- To prevent overcrowding of land and the undue concentration of population;
- To secure safety from fire and other dangers;
- To facilitate the provision of needed community facilities;
- To conserve and stabilize the value of property; and
- To conserve the County's natural beauty, to improve its appearance, and to enhance its physical character.

The Project site is designated General Agricultural (AG) by the General Plan (San Joaquin County, 2016), and AG-40 by Title 9 of County Development Title (San Joaquin County 2019). According to the San Joaquin County Development Title, the AG Zone is established to preserve agricultural lands for the continuation of commercial agriculture enterprises. Minimum parcel sizes within the AG Zone are 20, 40, 80 or 160 acres, as specified by the precise zoning. The precise Development Title zone for the Project site parcels is AG-40.

4.13.3 Environmental Impacts and Mitigation Measures

4.13.3.1 Thresholds of Significance

The following threshold of significance is based on Appendix G of the CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on land use and planning if it would:

- Physically divide an established community; and/or,
- 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, or development title) adopted for the purpose of avoiding or mitigating an environmental effect.

4.13.3.2 Methods of Analysis

Existing and approved but not yet constructed land use in the Project vicinity was evaluated to determine if Project implementation would physically divide an established community. In addition, all applicable

land use plans, policies and/or regulations adopted by agencies with jurisdiction over the Project for the purpose of avoiding or mitigating an environmental effect were reviewed to determine if Project consistency would ensure impact avoidance. If a significant environmental effect could occur due to Project inconsistency, mitigation is recommended to reduce the impact to less than significant.

It should be noted that Project consistency with the San Joaquin County Agriculture Mitigation Ordinance and Right to Farm Ordinance is presented in draft EIR Section 4.4 Agriculture and Forestry Resources.

4.13.3.3 Project Impacts and Mitigation Measures

Impact 4.13-1: The proposed project could physically divide an established community.
Impact Determination: *No Impact*

Threshold:	*Result in a development pattern that physically divides or otherwise eliminates existing or potential transportation connection between communities.*

The 42.4-acre Project site is located approximately 500 feet north of the current City of Stockton boundary in a primarily agricultural portion of unincorporated San Joaquin County. The Project is situated between West Lane on the west and Ham Lane on the east and would be accessed from these adjacent roads. While not adjacent to Eight Mile Road, an existing Eight Mile Road southern access driveway would be retained as part of the Project.

The site is currently in agricultural production and while it does support unimproved roads that facilitate onsite agricultural activities, the Project site does not serve as an access corridor and proposed development would not physically divide an established community. There would be **no impact.**

Impact 4.13-2: The proposed project could conflict with applicable land use plans, policies or regulations adopted to avoid or mitigate an environmental effect.
Impact Determination: *less than significant*

Threshold:	*Conflict with an applicable land use plan, policy, or regulation prepared by an agency with jurisdiction over the project and adopted to avoid or mitigate an environmental effect.*

Several General Plan land use policies and other adopted regulations apply to the Project. Consistent with CEQA, not every plan, policy or regulation that could apply to the project is included here. Rather, the analysis focuses on identifying land use plans, policies, and regulations that were adopted for the purpose of avoiding or mitigating an environmental effect. These policies and regulations are presented below followed by a Project consistency analysis. If the Project is found inconsistent with a policy adopted for the purpose of mitigating an environmental effect, appropriate mitigation is recommended.

General Plan Policy

In the discussion below, applicable General Plan land use policy is presented followed by a Project consistency analysis.

LU-1.1: Compact Growth and Development. The County shall discourage urban sprawl and promote compact development patterns, mixed-use development, and higher-development intensities that conserve agricultural land resources, protect habitat, support transit, reduce vehicle trips, improve air quality, make efficient use of existing infrastructure, encourage healthful, active living, conserve energy and water, and diversify San Joaquin County's housing stock. (RDR)

The Project is proposed along the northern (back side) edge of existing non-conforming County approved residential and commercial development fronting Eight Mile Road. Additionally, immediately south of Eight Mile Road lies the 341-acre recently approved and annexed Tra Vigne development project in the City of Stockton. The Tra Vigne project, includes a mix of land uses including single-family (1,728 units) and high-density residential (680 units), industrial, commercial, school, and traditional and non-traditional parks sites. It is expected the proposed Project will provide hospital services and job opportunities for future residents of the Tra Vigne project and other Stockton residents as well as rural County residents east, west and north of the Project site and residents of Lodi. Therefore, the Project is not considered urban sprawl in the context of existing and approved development and is consistent with this policy.

LU-1.4: Encourage Infill Development. The County shall encourage infill development to occur in Urban and Rural Communities and City Fringe Areas within or adjacent to existing development in order to maximize the efficient use of land and use existing infrastructure with the capacity to serve new development. The County shall balance infill development within outward expansion of communities and new development in other unincorporated areas. (RDR)

As discussed above, the Project is located at the future north Fringe Area of the City of Stockton and adjacent to existing County and City approved but not yet constructed development on the south. Therefore, the Project is consistent with County policy that encourages development at City Fringe Areas.

LU-1.5: Clear Boundaries. The County shall strive to preserve agricultural and open space areas that contribute to maintaining clear boundaries among cities and unincorporated communities. (RDR)

The existing Woodbridge Irrigation District (WID) agricultural canal runs along the Project site's northwest boundary. The Project includes a 100-foot setback buffer adjacent the canal on the Project site. This creates a natural opportunity for the canal to serve as a logical and clear boundary between the Project site and unincorporated agricultural areas to the north. Therefore, the Project as proposed is consistent with this clear boundaries policy.

LU-1.6: New Employment-Generating Uses. The County shall direct new employment- generating uses to locate within Urban and Rural Communities and City Fringe Areas, at freeway interchanges, and in other areas designated for commercial or industrial development. The County

may allow employment-generating uses in other unincorporated areas when development proposals demonstrate that the project will not conflict with adjacent uses and will provide: jobs to County residents; adequate infrastructure and services (i.e., water, sewer, drainage, and transportation); and positive tax benefits to the County. (RDR)

As discussed above, the Project site is located along the City of Stockton northern Fringe Area and incorporates onsite buffers to ensure compatibility with adjacent agricultural uses. Furthermore, the Project is an employment-generating use, has demonstrated the ability to provide onsite utilities, provides positive tax benefits to the County, is consistent with the Public Services - Essential use type, and is an allowed use within the General Agricultural zone. Therefore, the project is consistent with this policy.

LU-2.1: Compatible and Complimentary Development. The County shall ensure that new development is compatible with adjacent uses and complements the surrounding natural or agricultural setting. (RDR)

The Project proposes hospital and medical office uses with associated supporting infrastructure such as parking lots, landscaping, and onsite water, sewer and storm drain facilities. To maximize set back from existing development, onsite buildings are located mostly central to the site surrounded by less intensive uses such as parking lots, the WID canal and associated 100-foot buffer and outlying treated effluent land application and stormwater retention areas. Thus, the most intensive uses are located to maximize setback from adjacent areas. The Project also includes a landscape plan that concentrates screening vegetation along the site perimeter where adjacent uses exist and within the WID canal 100-foot buffer. Consistent with County development standards, a 7-foot masonry wall would be constructed along the southern site boundary and an 8-foot high masonry wall would be constructed around water treatment infrastructure to ensure compatibility with existing residential and commercial development located to the south between the project site and Eight Mile Road. Therefore, the site design is consistent with this compatibility and complimentary development policy.

LU-2.2: Sustainable Building Practices. The County shall promote and, where appropriate, require sustainable building practices that incorporate a "whole system" approach to designing and constructing buildings that consume less energy, water and other resources, facilitate natural ventilation, use daylight effectively, and are healthy, safe, comfortable, and durable. (RDR)

The Project would be constructed consistent with the County's building code which includes requirements to ensure energy and water conservation. In addition, Mitigation Measure **4.10-1a**, requires 20 percent onsite renewable energy generation and **4.10-1b** requires onsite electric vehicle charging stations. Finally, the hospital buildings will incorporate and promote health and wellbeing design characteristics. The Project will be developed consistent with County sustainable building practices policy.

LU-2.8: Environmental Assessments and Mitigation. The County shall evaluate proposed new development projects for their potential environmental

impacts and shall require all feasible mitigation of identified significant impacts. The County shall require, as appropriate, that projects for which an EIR is prepared the consideration of infill locations for new development in the alternative's evaluation. (RDR)

This Draft EIR has been prepared in part to comply with this County policy. With the exception of significant and unavoidable Noise (due to helistop operations), Greenhouse Gas and Transportation Vehicle Miles Traveled (VMT) impacts, this EIR identifies feasible mitigation to reduce all other identified significant effects to less than significant levels and includes evaluation of an offsite infill alternative location in Chapter 6.0 Alternative. Therefore, the Project's CEQA documentation is consistent with this policy.

The following policies address open space and resource conservation lands:

LU-8.3: Waterway Conservation and Restoration. The County shall encourage the conservation and restoration of rivers, creeks, and sloughs as multi-functional open space corridors that complement adjoining development and connect city and county recreation facilities (e.g., parks). (RDR/PSP)

The Project includes preservation of the WID agricultural canal located along the site's northwest boundary. The preservation plan includes establishing a 100-foot setback buffer and with associated tree planting to promote wildlife use and land use compatibility screening. The Project is consistent with this policy.

LU-9.2: Buffers. The County shall ensure that residential and other non-compatible uses are separated and buffered from major public facilities, such as landfills, airports, and wastewater treatment facilities, using location appropriate measures (e.g., distance, screens, berms). (RDR)

The Project includes an onsite "package plant" wastewater treatment facility on the north portion of the Project site and an associated land application area on the northeast section of the site. The wastewater package plant would be a completely enclosed system capable of containing odors and effectively treating medical waste. The treatment facility is located to provide an approximately 750-foot setback from the nearest offsite residence, 900 feet from the Phase 1 Hospital, 400 feet from the Medical Office Building and 200 feet from the Phase 2 Hospital. The treatment facility would be enclosed behind a 9-foot tall masonry wall and planted with screening vegetation and trees. Therefore, site design is consistent with this buffer policy.

Based on the above analysis, the Project is found consistent with General Plan land use policy and related impacts are **less than significant**.

General Plan Land Use and Development Title Designations

The San Joaquin County Community Development Department has determined that the Project's principal use is that of hospital and medical center campus and that this use is properly classified under the use type "Public Services - Essential." Pursuant to Development Title Section 9-115.525, the Public Services

use type refers to services provided by a public agency, public utility, quasi-public agency, or charitable organization, and to major health services provided by a public or private entity. The following Public Services use type category applies to the Project:

b) Essential. Public services which have a substantial impact on the surrounding community but which may be conditionally permitted in a variety of zones for reasons of necessary location and/or community-wide interest. Typical uses include police and fire stations, *hospitals*, post offices, libraries, and museums.

The Project site has a Development Title designation of AG-40 and will result in the establishment of a hospital campus and health facility that will offer major health services provided by a private entity. Pursuant to Development Title Table 9-605.2, Public Services - Essential uses are permitted in AG zones subject to a Site Approval[1]. Therefore, the proposed Project is consistent with Development Title and no rezoning is required for Project implementation. This is **a less than significant impact**.

Mitigation Measures

None required

4.13.4 Cumulative Impacts

The geographic context considered for cumulative analysis includes San Joaquin County and the surrounding area that, when combined with the proposed project, could result in cumulative impacts to applicable land use plans and General Plan policy. This includes past projects listed in the General Plan EIR, present projects such as the proposed Project, plus any projects recently approved or currently under construction. Recently approved projects include the Tra Vigne project located just south of the proposed Project, an approximately 200-acre mixed use planned community approved by the City of Stockton and currently proposed for annexation. Reasonably foreseeable future probable projects are those that could be developed within the County or neighboring jurisdictions by 2035 as discussed in the General Plan EIR.

According to the 2035 County General Plan EIR (San Joaquin County. September 2016.), cumulative land use impacts could occur in conjunction with development allowed by the incorporated cities. However, the County only has jurisdiction over unincorporated areas, and the proposed land use policies of the 2035 General Plan would ensure that no significant cumulative land use impacts would occur. The County also abuts Calaveras, Amador, Alameda, Contra Costa, and Sacramento Counties where cumulative land use impacts could occur. However, the 2035 General Plan Land Use Element does not include significant development immediately adjacent to the County's borders. The Mountain House community is the nearest unincorporated developed community, adjacent to Alameda County, and the impacts of this development have been thoroughly evaluated in a Master EIR and subsequent project-level CEQA documentation.

[1] A "Site Approval" in San Joaquin County is the title for a use permit that may be approved at the staff level with rights of appeal to the Planning Commission and Board of Supervisors.

As discussed above and in the 2035 General Plan EIR, existing policy ensures less than significant land use impacts. Further, the Project is consistent with applicable land use plans and policies and was found to be compatible with existing adjacent land uses. Therefore, the Project would have a **less than cumulatively considerable impact** on land use.

Mitigation Measures

None required.

References

San Joaquin County. 2019. Title 9 - San Joaquin County Development Title. November 5.

_____. 2016. San Joaquin County 2035 General Plan Final EIR. September.

4.14 MINERAL RESOURCES

This section includes a mineral resources environmental setting and addresses potential project effects on mineral resources in the project vicinity.

4.14.1 Environmental Setting

Mineral resources within San Joaquin County consist primarily of sand and gravel aggregate, with limited mining of peat, gold, silver, and gas. In the past, placer gold deposits have been found in many San Joaquin County rivers and creeks. These deposits were dredged for gold by independent operators in the years following the 1849 gold rush. Peat soil removal occurred during the 1970s and 1980s. Current mining operations within the County are primarily related to sand and gravel aggregate operations. A former gas well (referred to as the "North Stockton Unit A" 1 well, API:0407700519) which was converted to a water well in July 1962 (California Department of Conservation Geologic Energy Management Division [CalGEM] 2020) is located on the Project site and has been used as an agricultural irrigation well since the conversion. According to the California Geologic Energy Management Division (CalGEM), which oversees oil, natural gas and geothermal wells, it is not known if the conversion to a water well included implementation of appropriate CalGEM gas well abandonment procedures consistent with current standards.

4.14.2 Regulatory Setting

4.14.2.1 State

Surface Mining and Reclamation Act (SMARA) of 1975

As mandated by the Surface Mining and Reclamation Act, the California Geological Survey has classified mineral resource development potential of lands in counties into an appropriate Mineral Resource Zone (MRZ), in accordance with the California Mineral Land Classification System. Local agencies are required to use this information when developing land use plans and when making land use decisions. The MRZ classifications include:

MRZ-1 – Areas of No Mineral Resource Significance

MRZ-2 – Areas of Identified Mineral Resource Significance

MRZ-3 – Areas of Undetermined Mineral Resource Significance

MRZ-4 – Areas of Unknown Mineral Resource Significance

The Mineral Land Classification Map, prepared by the California Division of Mines and Geology, designates the project site and surrounding lands as MRZ-1. An MRZ-1 designation in the Stockton-Lodi region indicates that the soils contain excessive amounts of clay, silt, or other deleterious material for use as Portland cement concrete-grade aggregate (DOC 2017). Neither the City of Stockton nor San Joaquin County 2035 General Plan has identified any mineral resources on or near the project site.

California Geologic Energy Management Division (CalGEM)

CalGEM oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas and geothermal wells. The regulatory program emphasizes the wise development of oil, natural gas, and geothermal resources in the state through sound engineering practices that protect the environment, prevent pollution, and ensure public safety. Sections 3208 and 3255(a) (3) of the Public Resources Code give CalGEM the authority to order the abandonment or re-abandonment of any well that is hazardous, or that poses a danger to life, health, or natural resources. Responsibility for abandonment and or re-abandonment costs for any well may be affected by the choices made by the local permitting agency, property owner, and/or developer.

4.14.2.2 Local

San Joaquin County 2035 General Plan

According to the San Joaquin County 2035 General Plan, recognizing and documenting mineral resources is imperative to guarantee further economic development of County assets (San Joaquin County 2016). The following policy is intended to protect the County's important mineral deposits.

> NCR-4.1: The County shall require mineral deposits of significant quantity, value, or quality, as identified and updated by the State Division of Mines and Geology reports as MRZ-2 Mineral Resource Zones, to remain in agricultural or open space uses until the extraction of the resources, unless the immediate area has been committed to other uses.

4.14.3 Environmental Impacts and Mitigation Measures

4.14.3.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, mineral resources impacts are considered significant if implementation of the proposed project would:

- 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; or,
- 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.

4.14.3.2 Methods of Analysis

Review of officially designated mineral resource zones is the primary method used to evaluate the Project's potential impacts on mineral resources.

4.14.3.3 Project Impacts and Mitigation Measures

Impact 4.14-1: Contribution to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
Impact Determination: *No Impact*

Thresholds:	*Substantial adverse effect on availability of a known mineral resources that would be of value to the region and residents of the state*

According to Mineral Land Classification maps located on the DOC website, the Project Site is not located in a mineral resources zone. Therefore, the Proposed Project would not 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.

The Project site formerly supported a gas well converted to a water well in July 1962. However, no gas production activities currently occur or are planned on the Project site. Furthermore, any subsurface natural gas deposits that may exist are expected to be minimal considering the gas well was converted to a water well and the site is not located within a mapped mineral resource zone. Finally, site development would not substantially effect the availability of subsurface gas reserves because any economically viable reserves could still be accessed from offsite locations via directional drilling and therefore would remain available to the region and residents of the state. There would be **no impact**.

Refer to Sections 4.10 *Hydrology and Water Quality* and 4.11 *Land Use and Planning* for analysis of potential water quality and land use impacts associated with the former gas well.

Mitigation Measures

None required.

Impact 4.12-2: Contribution to 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.
Impact Determination: *no impact*

Threshold:	*Substantial adverse effect on availability of a locally important mineral resources recovery site*

As discussed above, the Project site is designated MRZ-1 – Areas of No Mineral Resource Significance by the California Mineral Land Classification System. MRZ-1 zones are not addressed or otherwise protected by County policy. Therefore, the Proposed Project would not 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, because no mining operations currently exist on or adjacent to the Project site and it is not otherwise designated for resource recovery by County land use plans (San Joaquin County 2016). Therefore, **no impact** would occur.

Mitigation Measures

None required.

4.14.4 Cumulative Impacts

The geographic area considered for the analysis of cumulative impacts related to mineral resources is San Joaquin County. Urbanization and growth in San Joaquin County would have the potential to result in land uses that are incompatible with mining and resource recovery and would result in a cumulative loss of available resources (San Joaquin County. September 2016.). Adjacent jurisdictions have included protections in their general plans or other planning documents to protect these and other mineral resources. However, planned and projected growth in the region would result in a reasonably foreseeable loss of mineral resources due to the encroachment of incompatible uses that would limit future areas from being permitted for mining operations. The proposed Project is not located within or immediately adjacent to a designated MRZ-2. Therefore, the Proposed project would result in a **less than cumulatively considerable contribution to this cumulative impact.**

Mitigation Measures

None required.

4.14.5 References

California Department of Conservation (DOC). 2017. *Updated Designation of Regionally Significant Aggregate Resources in the Stockton-Lodi Consumption Region, San Joaquin and Stanislaus Counties, California*. Natural Resources Agency. September.

California Geologic Energy Management Division (CalGEM). 2020. State Clearinghouse # 2020010176. San Joaquin County, PA-2900240 & PA-2000014 (ER) Gill Women's Medical Center. January 28.

San Joaquin County. 2016. *San Joaquin County 2035 General Plan EIR*. September.

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4.15 NOISE

This section describes the environmental setting for noise, including the regulatory setting and existing site conditions, the noise impacts that would result from the proposed project, and the mitigation measures that would reduce these impacts.

4.15.1 Fundamentals of Noise and Environmental Sound

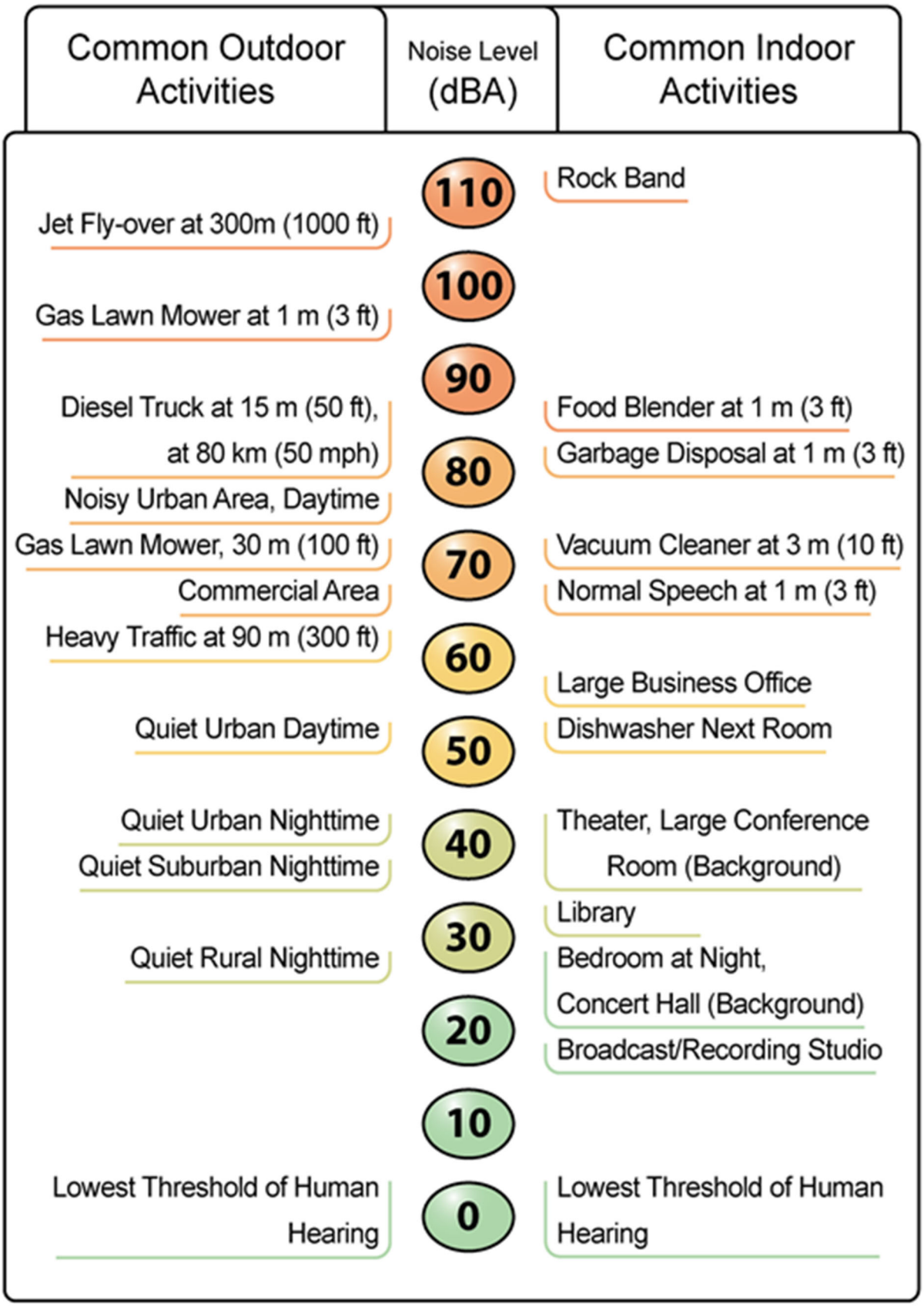
4.15.1.1 Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be three dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by three dB). Under the decibel scale, three sources of equal loudness together would produce an increase of five dB.

Typical noise levels associated with common noise sources are depicted in Figure 4.15-1. *Common Noise Levels*.

4.15.1.2 Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately six dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately three dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of three dB per doubling of distance is assumed (FHWA 2011).



Source: California Department of Transportation (Caltrans) 2012

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Figure 4.15-1. Common Noise Levels

2020-053 Gill Medical Center

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about five dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. [WEAL] 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver.

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 2006). Generally, in exterior noise environments ranging from 60 dBA Community Noise Equivalent Level (CNEL) to 65 dBA CNEL, interior noise levels can typically be maintained below 45 dBA, a typical residential interior noise standard, with the incorporation of an adequate forced air mechanical ventilation system in each residential building, and standard thermal-pane residential windows/doors with a minimum rating of Sound Transmission Class (STC) 28. (STC is an integer rating of how well a building partition attenuates airborne sound. In the U.S., it is widely used to rate interior partitions, ceilings, floors, doors, windows, and exterior wall configurations.) In exterior noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments less than 75 dBA CNEL with proper wall construction techniques following California Building Code methods, the selection of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

4.15.1.3 Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The Leq is a measure of ambient noise, while the Ldn and CNEL (Community Noise Equivalent Level) are measures of community noise. Each is applicable to this analysis and defined in Table 4.15-1.

Table 4.15-1. Common Acoustical Descriptors

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average Leq with a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.4 dBA Ldn.
Community Noise Equivalent Level, CNEL	A 24-hour average Leq with a 5 dBA “weighting” during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.

The A weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about ±1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about ±1 to 2 dBA.

4.15.1.4 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

4.15.1.5 Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The Ldn as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. For ground vehicles, a noise level of about 55 dBA Ldn is the threshold at which a substantial percentage of people begin to report annoyance.

4.15.2 Fundamentals of Environmental Groundborne Vibration

4.15.2.1 Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or manmade causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage. For human response, however, an average vibration amplitude is more appropriate because it takes time for the human body to respond to the excitation (the human body responds to an average vibration amplitude, not a peak amplitude). Because the average particle velocity over time is zero, the RMS amplitude is typically used to assess human response. The RMS value is the average of the amplitude squared over time, typically a 1- sec. period (FTA 2018).

Table 4.15-2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high-noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Table 4.15-2. Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Caltrans 2020

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in Table 4.15-2 is considered very unlikely to cause damage to buildings of any type. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. Environmental Setting

4.15.2.2 Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their

intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The Project is proposing two hospital buildings and a medical office building and associated features to be constructed in two phases. The nearest existing noise-sensitive land uses to the Project site are residences located directly adjacent to the proposed solid seven-foot-tall concrete masonry unit (CMU) wall along the southern site boundary and proposed driveway access from Eight Mile Road as well as residences located adjacent to the proposed driveway on North Ham Lane.

4.15.2.3 Existing Ambient Noise Environment

The most common and significant source of noise in San Joaquin County is mobile noise generated by transportation-related sources. Other sources of noise are the various land uses (i.e., residential, commercial, agricultural and institutional) that generate stationary-source noise. In addition, local agricultural operations include use of small planes and helicopters for aerial application of fertilizers and pesticides. The Project site is bound by the WID agricultural canal and agricultural land to the north, agricultural land and residents to the east, residents and East Eight Mile Road to the south, and West Lane with agricultural land beyond to the west.

The Project site is currently used for agricultural production of grapes. It is surrounded mainly by a mix of undeveloped/agricultural land with rural residents scattered about, including immediately adjacent the southern and eastern site boundaries. In order to quantify existing ambient noise levels on the Project site, ECORP Consulting, Inc. conducted a 24-hour noise measurement starting on September 9, 2020 and extending into September 10. Additionally, ECORP conducted five short-term noise measurements on the afternoon of September 9, 2020. The noise measurements are representative of the typical existing noise experienced within and immediately adjacent to the Project site and are depicted in Table 4.15-3. See Draft EIR Appendix H, Attachment A for Noise Measurement Locations.

As shown in Table 4.15-3, the short-term ambient recorded noise levels range from 44.5 to 75.2 dBA L_{eq} near the Project site. The long-term ambient recorded noise level was measured at 67.7 dBA CNEL. As previously described, environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Therefore, the 24-hour noise measurement of 67.7 dBA CNEL suggests that the Project vicinity currently experiences moderate levels of noise. The most common noise in the Project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles). Traffic moving along streets produces a sound level that remains relatively constant and is part of the minimum ambient noise level in the Project vicinity. Vehicular noise varies with the volume, speed and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, trains, garbage and construction vehicle activity and honking of horns. These noises add to urban noise and are regulated by a variety of agencies.

Table 4.15-3. Existing (Baseline) Noise Measurements

Location Number	Location	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
Short-Term Noise Measurements (September 9, 2020)					
1	Adjacent to West Lane between homes (located on Mettler Road) and The Home Church	**65.1**	38.5	77.9	10:20 a.m-10:35 a.m.
2	On West Eight Mile Road adjacent to mailbox 2001	**75.2**	40.4	100.9	9:20 a.m.-9:35 a.m.
3	On North Ham Road adjacent to house 11013	**62.0**	36.5	82.6	9:39 a.m-9:54 a.m.
4	On North Ham road adjacent to house 11243	**64.3**	36.9	82.8	9:57 a.m.-10:12 a.m.
5	In the residential community off Olive Grove Drive adjacent to house 199	**44.5**	34.9	61.8	10:44 a.m-10:59 a.m.

Long-Term Noise Measurements (September 9, 2020- September 10, 2020)						
Location Number	**Location**	**CNEL dBA**	**L_{eq} dBA**	**L_{min} dBA**	**L_{max} dBA**	**Time**
6	Adjacent to the agricultural canal and West Lane adjacent to the northern end of the Project site.	**67.7**	63.8	37.0	90.7	11:32 a.m. – 11:32 a.m.

Source: Measurements were taken by ECORP with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. See Draft EIR Appendix H for noise measurement outputs.

4.15.2.4 Existing Roadway Noise Levels

Existing roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) (see Draft EIR Appendix H) and traffic volumes from the Project's Traffic Impact Study (KD Anderson & Associates 2020). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along these roadway segments are presented in Table 4.15-4. Vicinity roadways span two jurisdictions, which are noted in Table 4.15-4. Where no jurisdiction is noted, the roadway segment lies within unincorporated San Joaquin County.

Table 4.15-4. Existing (Baseline) Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway
Eight Mile Road		
West of Interstate 5	Residential and Agricultural	64.6
Between Interstate 5 and Davis Road	Residential and Agricultural	63.3
Between Davis Road and Lower Sacramento Road	Residential and Agricultural	61.9
Between West Lane and Ham Lane	Residential and Agricultural	59.3
Between Ham Lane and Leach Road	Residential and Agricultural	60.7
Between Leach Road and Micke Grove Drive	Residential and Agricultural	60.3
Between Micke Grove Drive and State Route 99	Residential and Agricultural	60.6
East of State Route 99	Residential and Agricultural	58.1
State Route 99		
South of Eight Mile Road (City of Stockton)	Residential and Agricultural	57.3
North of Eight Mile Road	Residential and Agricultural	61.0
State Route 99 East Frontage Road		
North of Eight Mile Road	Residential and Agricultural	47.9
South of Eight Mile Road	Residential and Agricultural	57.4
State Route 99 West Frontage Road		
North of Eight Mile Road	Residential and Agricultural	47.9
South of Eight Mile Road (City of Stockton)	Residential and Agricultural	57.6
Micke Grove Drive		
North of Eight Mile Road	Residential and Agricultural	43.8
Interstate 5		
Interstate 5 Southbound	Residential, Commercial and Agricultural	66.6

Table 4.15-4. Existing (Baseline) Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway
Leach Road		
North of Eight Mile Road	Residential and Agricultural	38.2
Morada Lane		
East of West Lane (City of Stockton)	Residential and Agricultural	57.7
West of West Lane (City of Stockton)	Residential and Agricultural	50.3
Ham Lane		
Between Eight Mile Road and West Lane	Residential and Agricultural	41.2
Between West Lane and Armstrong Road	Residential and Agricultural	55.5
North of Armstrong Road	Residential and Agricultural	56.7
North of West Lane	Residential and Agricultural	44.9
West Lane		
Between Eight Mile Road and Ham Lane	Residential and Agricultural	59.9
Lower Sacramento Road		
North of Eight Mile Road	Residential and Agricultural	60.6
South of Eight Mile Road	Residential and Agricultural	59.1
Davis Road		
North of Eight Mile Road	Residential and Agricultural	50.0
South of Eight Mile Road	Residential and Agricultural	56.3
Armstrong Road		
East of West Lane	Residential and Agricultural	55.7
West of West Lane	Residential and Agricultural	54.5

Source: Traffic noise levels were calculated by ECORP using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by KD Anderson & Associates (2020). Refer to Draft EIR Appendix H for traffic noise modeling assumptions and results.

Note: A total of 23 intersections were analyzed in the Traffic Impact Study; however, only roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown, the existing traffic-generated noise level on Project-vicinity roadways currently ranges from 38.2 to 66.6 dBA CNEL at a distance of 100 feet from the centerline. As previously described, CNEL is 24-hour average noise level with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. It should be noted that the modeled noise levels depicted in Table 4.15-4 may differ from measured levels in Table 4.15-3 because the measurements represent noise levels at different locations around the Project site and are also reported in different noise metrics (e.g., noise measurements are the L_{eq} values and traffic noise levels are reported in CNEL).

4.15.3 Regulatory Setting

4.15.3.1 Federal

Occupational Safety and Health Act of 1970

OSHA regulates work site noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 decibels dBA over an eight-hour work shift (29 CFR 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

4.15.3.2 State

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines (State of California 2003), published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State Office of Planning and Research Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

4.15.3.3 Local

San Joaquin County 2035 General Plan Public Health and Safety Element

The Project site is located in unincorporated San Joaquin County and therefore would potentially affect receptors within the County from onsite and offsite sources. The County Public Health and Safety Element of the San Joaquin County 2035 General Plan, specifically the *Noise Policy*, is a comprehensive program for including noise management in the planning process, providing a tool for planners to use in achieving and maintaining land uses that are compatible with existing and future environmental noise levels. The Noise Policy identifies noise-sensitive land uses and noise sources and defines areas of noise impact for the purpose of developing programs to ensure that residents in San Joaquin County, and other noise-sensitive land uses, will be protected from excessive noise intrusion.

As development proposals are submitted to the County, each is evaluated with respect to the provisions in the Noise Policy to ensure that noise impacts are reduced through planning and project design. Through implementation of the policies of the Public Health and Safety Element, San Joaquin County seeks to reduce or avoid adverse noise impacts for the purposes of protecting the general health, safety, and welfare of the community.

The most basic planning strategy to minimize adverse impacts on new land uses due to noise is to avoid designating certain land uses at locations within the County that would negatively affect noise-sensitive land uses. Uses such as schools, hospitals, childcare, senior care, congregate care, churches, and all types of residential use should be located outside of any area anticipated to exceed acceptable noise levels as defined by noise and land use compatibility guidelines, or should be protected from noise through sound attenuation measures such as site and architectural design and sound walls. These guidelines, shown in Table 4.15-5 and Table 4.15-6, identify transportation and non-transportation related noise standards within the County.

Table 4.15-5. San Joaquin County Non-Transportation Noise Level Performance Standards for Noise Sensitive Uses at Outdoor Activity Areas[1,2]

Noise Level Descriptor	Daytime[3] (7:00 a.m. – 10:00 p.m.)	Nighttime[3] (10:00 p.m. – 7:00 a.m.)
Hourly L_{eq} dB	50	45
Maximum Level, dB	70	65

Source: County of San Joaquin 2016
Notes: These standards apply to new or existing residential areas affected by new or existing non-transportation sources.
[1]Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.
[2]Each of the noise level standards specified shall be reduced by 5 dB for impulsive noise, single tone noise, or noise consisting primarily of speech or music.

Table 4.15-6. San Joaquin County Maximum Allowable Noise Exposure from Transportation Noise Source[1]

Noise-Sensitive Land Use Types	Outdoor Activity Areas2 (dB L_{dn})	Interior Spaces (dB L_{dn})
Residential	65	45
Administrative Office	-	45
Child Care Services- Child Care Centers	-	45
Community Assembly	65	45
Cultural & Library Services	-	45
Educational Services: General	-	45
Funeral, Interment Services – Undertaking	65	45
Lodging Services	65	45
Medical Services	65	45
Professional Services	-	45
Public Services (excluding hospitals)	-	45
Public Services (hospitals only)	65	45
Recreation – Indoor Spectator	-	45
Religious Assembly	65	45

Source: County of San Joaquin 2016
Notes: These standards apply to new or existing residential areas affected by new or existing non-transportation sources.
[1]Refer to Mountain House Master Plan, Chapter 11, Noise, for Mountain House Noise Standards.[2] Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.

The Public Health and Safety Element also contains goals that must be used to guide decisions concerning land uses that are common sources of excessive noise levels. The following relevant and applicable goals from the County's Noise Policy have been identified for the Project:

Goal PHS-9: *To protect County residents from the harmful and nuisance effects of exposure to excessive noise.*

PHS-9.1: Noise Standards for New Land Uses: The County shall require new development to comply with the noise standards shown in [Table 4.15-5 and Table 4.15-6] through proper site and building design, such as building orientation, setbacks, barriers, and building construction practices.

PHS- 9.4: Acceptable Vibration Levels: The County shall require construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby vibration-sensitive uses based on FTA criteria.

PHS- 9.5: Enforcement of State and Federal Noise Regulations: The County shall continue to enforce State and Federal noise laws regarding vehicle operation, equipment, and building insulation.

PHS- 9.9: Noise Exemptions: The County shall support the exemption of the following noise sources from the standards in this section:

- Emergency warning devices and equipment operated in conjunction with emergency situations, such as sirens and generators which are activated during power outages. The routine testing of such warning devices and equipment shall also be exempt provided such testing occurs during the hours of 7:00 am to 10:00 pm.
- Activities at schools, parks, or playgrounds, provided such activities occur during daytime hours.
- Activities associated with County-permitted temporary events and festivals.

San Joaquin County Development Title

The County's regulations with respect to noise are included in Chapter 9-1025 of the County Development Title, specifically Section 9-1025.9, *Noise*, of the County's Development Title. This section provides noise limits for sensitive land uses due to transportation and stationary noise sources. These standards are presented in Table 4.15-7 and 4.15-8.

Table 4.15-7. San Joaquin Noise Limits - Transportation Noise Sources

Noise-Sensitive Land Use (Use Types)	Outdoor Activity Area[1] dB L_{dn}	Interior Spaces dB L_{dn}
Residential	65	45
Administrative office	-	45
Child Care Services-Child Care Centers	-	45
Community Assembly	65	45
Cultural & Library Services	-	45
Educational Services: General	-	45
Funeral & Interment Services—Undertaking	65	45
Lodging Services	65	45
Medical Services	65	45

Table 4.15-7. San Joaquin Noise Limits - Transportation Noise Sources

Noise-Sensitive Land Use (Use Types)	Outdoor Activity Area[1] dB L_{dn}	Interior Spaces dB L_{dn}
Professional Services	-	45
Public Services (excluding Hospitals)	-	45
Public Services (hospitals only)	65	45
Recreation—Indoor Spectator	-	45
Religious Assembly	65	45

Source: County of San Joaquin 2020
Notes: [1]Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.

Table 4.15-8. San Joaquin County Noise Limits - Stationary Noise Sources

	Outdoor Activity Areas[1] Daytime[2] (7:00 a.m. to 10:00 p.m.)	Outdoor Activity Areas[1] Nighttime[2] (10:00 p.m. to 7:00 a.m.)
Hourly Equivalent Sound level (L_{eq} dB)	50	45
Maximum Sound Level (L_{max} dB)	70	65

Source: County of San Joaquin 2020
Notes:
[1]Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.
[2]Each of the noise level standards specified shall be reduced by 5 dB for impulsive noise, single tone noise, or noise consisting primarily of speech or music.

Section 9-1025.9, *Noise*, exempts noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day. Additionally, any mechanical device, apparatus or equipment used, related to, or connected with, emergency activities or emergency work shall be exempt from County noise standards. As discussed below, while this exemption applies to emergency helicopter operations at the proposed Phase 2 helistop, the County as CEQA Lead Agency has determined helicopter noise resulting from use of the proposed Phase 2 helistop shall be evaluated as non-exempt noise and subject to the County's adopted non-transportation/stationary noise standards.

City of Stockton Development Title

As previously mentioned, with the recent annexation of the Tra Vigne development project, the City of Stockton (City) boundary is now located at Eight-Mile Road approximately 500 feet south of the Project site. Due to this distance, sensitive receptors will not be impacted by construction noise or stationary noise sources on the Project site but have the potential to be impacted by transportation noise sources, such as cars, and trucks, and helicopters traveling to and from the Project site.

The City of Stockton regulations with respect to noise are included in Chapter 16.60, *Noise Standards*, of the City's Development Title. Section 16.60.040, *Standards*, establishes noise standards for transportation related noise sources. These standards are presented in Table 4.15-9.

Table 4.15-9. City of Stockton Maximum Allowable Noise Exposure for Noise-Sensitive Land Uses (Transportation Related Noise Standards)

Noise-Sensitive Land Use Type	Maximum Allowable Noise Exposure (L_{dn} dB)	
	Outdoor Activity Areas	Indoor Spaces
Residential (all types)	65	45
Child Care	-	45
Education Facilities	-	45
Libraries and Museums	-	45
Live-Work Facilities	65	45
Lodging	65	45
Medical Services	-	45
Multi-Use (with residential)	65	45

Source: City of Stockton 2020
Notes:
[1]The noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or other property line noise mitigation measures.
[2]Each of the noise level standards specified shall be decreased by five (5) for impulse noise, simple tone noise, or noise consisting primarily of speech or music.

Additionally, Section 16.60.020, exempts the emission of sound for the purpose of alerting persons to the existence of an emergency, or the emission of sound in the performance of emergency work. Therefore, noise generated by helistop operations is exempt from City of Stockton transportation noise standards.

Federal Interagency Committee on Noise (FICON)

The FICON thresholds of significance assist in the evaluation of increased groundborne traffic noise. The 2000 FICON findings provide guidance as to the significance of changes in ambient noise levels due to transportation noise sources. FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing and future noise-sensitive land uses (e.g., residential, etc.) are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or

- If the existing noise levels range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL.

4.15.4 Environmental Impacts and Mitigation Measures

4.15.4.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, noise impacts are considered significant if implementation of the proposed project would result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Generation of excessive groundborne vibration or groundborne noise levels.
- 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.

For purposes of this analysis, Project construction noise is compared to the NIOSH standard of 85 dBA for more than 8 hours per day, since construction work is anticipated to span a typical workday of 8 hours daily. The increase in transportation-related noise is compared against the County or City noise standard, where appropriate, as directed by the Lead Agency. While exempt by ordinance, for purposes of CEQA analysis the Lead Agency has directed that helicopter noise associated with use of the helistop be analyzed as non-exempt and subject to the adopted San Joaquin County noise standards. In the case that the existing transportation-related noise already exceeds the appropriate standard under current conditions, Project noise contribution is compared to the FICON recommendation for evaluating the impact of increased traffic noise. Noise generated onsite, including noise generated by use of the helistop, is compared against the County's non-transportation/stationary noise standards identified in Table 4.15-5 and 4.15-8 above.

4.15.4.2 Methods of Analysis

This analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. Predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Model (2006). Transportation-source noise levels in the Project vicinity were calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108). Onsite stationary source noise levels have been calculated with the SoundPLAN 3D noise model, which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. In the analysis below the size, location and noise producing level of each source is discussed in detail.

Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby structures and typically applied criteria for structural damage and human annoyance.

4.15.4.3 Project Impacts and Mitigation Measures

Impact 4.15-1: The proposed project could generate a substantial increase in ambient noise levels in excess of applicable standards identified by the Lead Agency.
Impact Determination: *Significant and Unavoidable*

Thresholds:	*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 (except that helicopter noise is subject to County noise standards as directed by the Lead Agency).*

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise. The existing nearest noise-sensitive land use to the Project site are residences located directly adjacent to the proposed solid seven-foot-tall CMU along the southern site boundary and proposed driveway access from Eight Mile Road, and a single Ham Lane residence located adjacent the site's eastern boundary.

Project Construction Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site

Nearby noise-sensitive land uses consist of rural residences located adjacent to the southern and eastern Project site boundary. As previously described, Section 9-1025.9 of the County's Development Title exempts noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day. The County does not promulgate a numeric threshold pertaining to the noise associated with construction. This is due to the fact that construction noise is temporary, short term,

intermittent in nature, and would cease on completion of the Project. Additionally, construction would occur throughout the Project site and would not be concentrated at one point.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, the construction equipment noise levels were calculated using the Roadway Noise Construction Model for the various construction phases for each roadway segment and compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by the National Institute for Occupational Safety & Health (NIOSH). A division of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby existing and future planned sensitive receptors.

The anticipated short-term construction noise levels generated for the necessary equipment for Phase 1 and Phase 2 of construction are presented in Table 4.15-10. Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the Project site (FTA 2018). As shown in Table 4.15-10, no individual or cumulative pieces of construction equipment would exceed the 85 dBA NIOSH construction noise standard during any phase of construction at the nearby noise-sensitive receptors. The Project would result in a **less than significant impact** from construction noise.

Table 4.15-10. Unmitigated Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level at Nearest Existing Residences (each)	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Phase 1			
Grading & Undergrounding			
Excavators (2)	60.3	*85*	**No**
Rubber Tired Dozers (6)	61.3	*85*	**No**
Graders (2)	64.6	*85*	**No**
Tractors/Loaders/Backhoes (8)	63.6	*85*	**No**
Combined Grading & Undergrounding Equipment	**75.4**	*85*	**No**

Table 4.15-10. Unmitigated Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level at Nearest Existing Residences (each)	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Building Construction			
Cranes (2)	56.2	*85*	**No**
Forklifts (6)	63.0	*85*	**No**
Generator Sets (6)	63.0	*85*	**No**
Tractors/Loaders/Backhoes (6)	63.6	*85*	**No**
Welders (2)	53.6	*85*	**No**
Combined Building Construction Equipment	**74.3**	*85*	**No**
Paving & Architectural Coating			
Pavers (4)	57.8	*85*	**No**
Rollers (4)	56.6	*85*	**No**
Paving Equipment (4)	66.1	*85*	**No**
Air Compressors (2)	57.3	*85*	**No**
Combined Paving & Architectural Coating Equipment	**73.4**	*85*	**No**
Phase 2			
Grading			
Excavators (2)	60.3	*85*	**No**
Rubber Tired Dozers (6)	61.3	*85*	**No**
Graders (2)	64.6	*85*	**No**
Tractors/Loaders/Backhoes (8)	63.6	*85*	**No**
Combined Grading Equipment	**75.4**	*85*	**No**
Paving			
Pavers (4)	57.8	*85*	**No**
Rollers (4)	56.6	*85*	**No**
Paving Equipment (4)	66.1	*85*	**No**
Combined Paving Equipment	**73.1**	*85*	**No**

Table 4.15-10. Unmitigated Construction Average (dBA) Noise Levels at Nearest Receptor			
Equipment	**Estimated Exterior Construction Noise Level at Nearest Existing Residences (each)**	**Construction Noise Standards (dBA L_{eq})**	**Exceeds Standards?**
Building Construction & Architectural Coating			
Air Compressor (2)	57.3	*85*	**No**
Cranes (2)	56.2	*85*	**No**
Forklift (6)	63.0	*85*	**No**
Generator Set (2)	61.2(each)	*85*	**No**
Tractors/Loaders/Backhoes (6)	63.6	*85*	**No**
Welders (2)	53.6	*85*	**No**
Combined Building Construction & Architectural Coating Equipment	**74.9**	*85*	**No**

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Draft EIR Appendix H for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2. The nearest residence is located approximately 330 feet from the center of the construction site.

L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

Project Operational Noise

The operational noise sources associated with the various land use plans are discussed below. Operational noise sources associated with the Proposed Project include mobile and stationary (i.e., parking lot activity, helicopter takeoff and landing, sirens) sources.

Offsite Operational Traffic and Siren Noise

Future traffic noise levels throughout the Project vicinity (i.e., vicinity roadway segments that traverse noise-sensitive land uses) for the Proposed Project were modeled based on the traffic volumes identified by KD Anderson & Associates (2020) to determine the noise levels along Project vicinity roadways. Table 4.15-11 shows the calculated offsite roadway noise levels under existing traffic levels compared to future buildout of the Project. The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the noise standards promulgated in the San Joaquin County 2035 General Plan and Development Title as well as the City of Stockton Development Title, where appropriate. Where no jurisdiction is noted, the roadway segment lies within unincorporated San Joaquin County. In the case that the existing ambient noise levels already exceed the applicable numeric noise thresholds without the Project, the FICON thresholds of significance, described previously, are applied.

Table 4.15-11. Proposed Project Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		Noise Standard (dBA CNEL)	Exceed Standard AND result in Noise Levels Exceeding Acceptable Exterior Noise Standards
		Existing Conditions	Existing + Project Conditions		
Eight Mile Road					
West of Interstate 5	Residential and Agricultural	64.6	64.6	*65*	**No**
Between Interstate 5 and Davis Road	Residential and Agricultural	63.3	63.4	*65*	**No**
Between Davis Road and Lower Sacramento Road	Residential and Agricultural	61.9	62.4	*65*	**No**
Between West Lane and Ham Lane	Residential and Agricultural	59.3	59.4	*65*	**No**
Between Ham Lane and Leach Road	Residential and Agricultural	60.7	61.0	*65*	**No**
Between Leach Road and Micke Grove Drive	Residential and Agricultural	60.3	60.7	*65*	**No**
Between Micke Grove Drive and State Route 99	Residential and Agricultural	60.6	61.0	*65*	**No**
East of State Route 99	Residential and Agricultural	58.1	58.2	*65*	**No**
State Route 99					
South of Eight Mile Road (City of Stockton)	Residential and Agricultural	57.3	57.3	*65*	**No**
North of Eight Mile Road	Residential and Agricultural	61.0	61.3	*65*	**No**
State Route 99 East Frontage Road					
North of Eight Mile Road	Residential and Agricultural	47.9	51.4	*65*	**No**
South of Eight Mile Road	Residential and Agricultural	57.4	57.5	*65*	**No**

Table 4.15-11. Proposed Project Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		Noise Standard (dBA CNEL)	Exceed Standard AND result in Noise Levels Exceeding Acceptable Exterior Noise Standards
		Existing Conditions	Existing + Project Conditions		
State Route 99 West Frontage Road					
North of Eight Mile Road	Residential and Agricultural	47.9	47.9	*65*	**No**
South of Eight Mile Road (City of Stockton)	Residential and Agricultural	57.6	58.2	*65*	**No**
Micke Grove Drive					
North of Eight Mile Road	Residential and Agricultural	43.8	44.3	*65*	**No**
Interstate 5					
Interstate 5 Southbound	Residential, Commercial and Agricultural	66.6	66.6	*>1.5*	**No**
Leach Road					
North of Eight Mile Road	Residential and Agricultural	38.2	38.2	*65*	**No**
Morada Lane					
East of West Lane (City of Stockton)	Residential and Agricultural	57.7	57.8	*65*	**No**
West of West Lane (City of Stockton)	Residential and Agricultural	50.3	50.3	*65*	**No**
Ham Lane					
Between Eight Mile Road and West Lane	Residential and Agricultural	41.2	43.1	*65*	**No**
Between West Lane and Armstrong Road	Residential and Agricultural	55.5	55.6	*65*	**No**
North of Armstrong Road	Residential and Agricultural	56.7	56.9	*65*	**No**

Table 4.15-11. Proposed Project Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		Noise Standard (dBA CNEL)	Exceed Standard AND result in Noise Levels Exceeding Acceptable Exterior Noise Standards
		Existing Conditions	Existing + Project Conditions		
North of West Lane	Residential and Agricultural	44.9	45.1	*65*	**No**
West Lane					
Between Eight Mile Road and Ham Lane	Residential and Agricultural	59.9	59.9	*65*	**No**
Lower Sacramento Road					
North of Eight Mile Road	Residential and Agricultural	60.6	60.7	*65*	**No**
South of Eight Mile Road	Residential and Agricultural	59.1	59.3	*65*	**No**
Davis Road					
North of Eight Mile Road	Residential and Agricultural	50.0	50.3	*65*	**No**
South of Eight Mile Road	Residential and Agricultural	56.3	56.7	*65*	**No**
Armstrong Road					
East of West Lane	Residential and Agricultural	55.7	55.8	*65*	**No**
West of West Lane	Residential and Agricultural	54.5	54.5	*65*	**No**

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by KD Anderson & Associates 2020. Refer to Draft EIR Appendix H for traffic noise modeling assumptions and results.

Notes:
A total of 23 intersections were analyzed in the Traffic Impact Analysis; however, only roadway segments that impact sensitive receptors were included for the purposes of this analysis.
Roadway segments that do not specify a specific city are located in unincorporated San Joaquin County.

As shown in Table 4.15-11, no roadway segment would exceed the applicable County or City noise standard and generate an increase of noise beyond the FICON significance standards.

In addition to traffic noise, due to the nature of this Project, it would also be a source of noise due to emergency activities such as sirens from emergency vehicles. However, as discussed in the Operational

Onsite Noise section below, per Section 9- 1025.9 of the San Joaquin County Development Title, this noise is exempt from noise standards as it is associated with medical emergencies. Thus, the Project would result in a **less than significant impact** for offsite operational noise.

Onsite Operational Noise

Upon full buildout, the main onsite operational noise associated with the Proposed Project would be parking lot activity (i.e., internal vehicle circulation, car doors opening and closing, people talking, stereo music), sirens from emergency vehicles, and the helistop where helicopter landing and takeoff would occur. As previously stated, Section 9-1025.9 of the San Joaquin County Development Title exempts from noise standards any mechanical device, apparatus or equipment used, related to, or connected with, emergency activities or emergency work. As such, the noise produced from emergency vehicles (sirens) are exempt from County noise standards. Therefore, the vast majority of noise produced by Project emergency vehicles (sirens) would be noise that is exempt from County noise standards and thus would be considered less than significant per the CEQA Guidelines Appendix G standards of significance (i.e., the generation of a 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). However, for helicopter noise generated during use of the helistop, while exempt by ordinance, the Lead Agency has directed this noise be analyzed as non-exempt and subject to adopted San Joaquin County noise standards for purposes of CEQA analysis.

The following discussion of Project onsite operational noise differentiates between non-exempt and exempt noise. A full discussion of the predicted sound levels generated during emergency response situations that are exempt from County noise standards is included for full disclosure purposes.

Exempt Onsite Operational Noise

The Project is proposing the construction of two hospital buildings, a medical office building and associated features. Due to the nature of this Project, it would be a source of noise due to emergency activities such as sirens from emergency vehicles along with helistop helicopter landing and takeoff operations. As previously mentioned, per Section 9- 1025.9 of the San Joaquin County Development Title, this noise is exempt from noise standards as it is associated with medical emergencies. Thus, all noise generated during emergency response is considered less than significant per the CEQA Guidelines Appendix G standards of significance: i.e., the generation of a 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. Nonetheless, a full discussion of medical emergency-related noise sources has been included for full disclosure purposes. It is noted that noise generated by helistop operations, while exempt by ordinance due to its role in emergency response situations, is analyzed as non-exempt and subject to adopted San Joaquin County noise standards for purposes of CEQA analysis (as directed by the Lead Agency). The emergency noise sources are discussed individually below.

Emergency Sirens

Residential receptors in the immediate vicinity of the Project would experience periodic exposure to siren noise. The potential adverse effects of noise associated with the use of emergency vehicle sirens on the

quality of life of nearby residents is often a concern in development of new hospitals and emergency facilities.

Federal regulation limits emergency siren noise at 123 dBA at 10 feet. Factoring an attenuation rate of approximately 6 dBA per doubling of distance from the source equates to a noise level of approximately103.5 dBA at 100 feet. Since emergency vehicle response is by nature rapid, the duration of exposure to this peak noise level is estimated to last for a maximum of 10 to 20 seconds as emergency vehicles enter and exit the Project site. Thus, receptors would be exposed to very short-duration high noise levels for approximately 10 to 20 seconds for each emergency response event. Further, it is typical practice for ambulances to only use sirens to break traffic at intersections or warn drivers of the emergency vehicle approach when traffic is congested. It is not unlikely in minor emergency scenarios that a siren is not used. Responses to nighttime emergency calls, when nuisance noise is most noticeable, routinely occur without the use of sirens. It is also noted that the manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (HMMH 2006).

A key focus of analysis with regard to noise is the potential for long-term exposure to higher noise levels (i.e., continuous, involuntary exposure for many hours per day over a long period of time) that may adversely affect human health. As a result of this emphasis, noise standards focus on increases in long-term exposure to ongoing average noise levels rather than infrequent short-duration peak effects. Siren noise from intermittent emergency vehicle trips sourced from the Project site would not substantially change the Ldn or CNEL for the Project vicinity as the intermittent siren use would not constitute a significant change in the existing noise environment. Additionally, per Section 9-1025.9, Noise, of the County's Development Title any mechanical device, apparatus or equipment used, related to, or connected with, emergency activities or emergency work shall be exempt from noise standards.

Because Project generated sirens would be associated with medical emergencies, they are exempt from noise standards. Thus, all noise generated during emergency response is considered less than significant per the CEQA Guidelines Appendix G standards of significance: i.e., the generation of a 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. Therefore, the Project would result in a **less than significant impact** associated with onsite exempt operational noise sources.

Non-Exempt Onsite Operational Noise

The following analysis of non-exempt onsite operational noise excludes noise from Helistop operations which are addressed separately below.

A primary non-exempt onsite operational noise associated with the Proposed Project would be parking lot activity such as internal vehicle circulation, car doors opening and closing, people talking, and stereo music. Onsite Project operations have been calculated using the SoundPLAN 3D noise model. The results of this model can be found in Draft EIR Appendix H. Previous noise measurements taken by ECORP Consulting, Inc., using a Larson Davis SoundExpert LxT precision sound level meter, within a visitors parking lot adjacent to a 298 bed medical center, emergency care, and Level II trauma center equipped

with FlightCare air ambulance service recorded a noise level of 53.8 dBA when no emergency activity was occurring. This sound power level was used as a reference measurement in the SoundPLAN noise model to predict the propagation of onsite noise produced by the Project. The solid seven-foot-tall CMU wall proposed to be constructed along the southern site boundary adjacent to the existing residential property lines is accounted for in the noise prediction modeling.

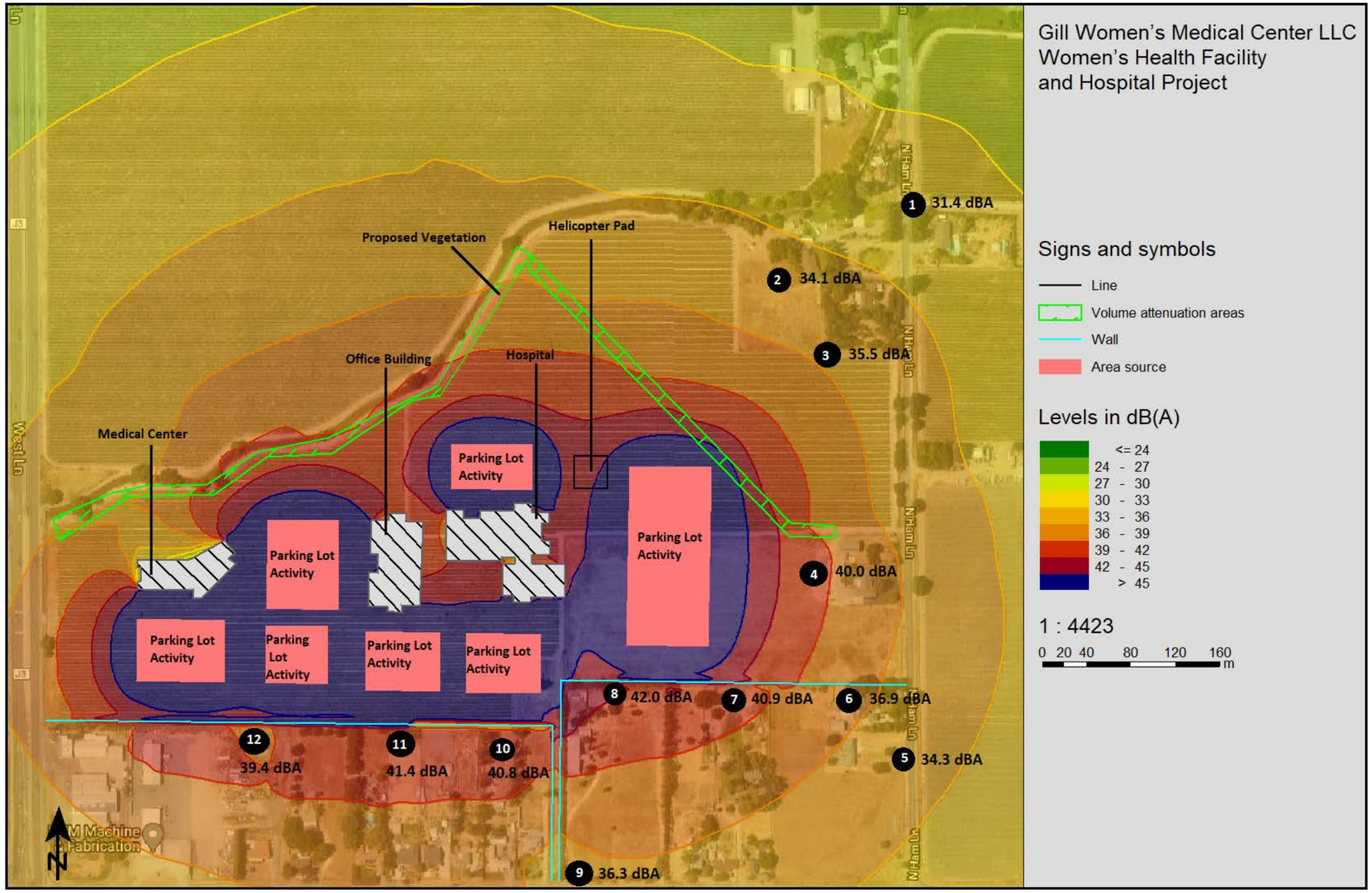
Table 4.15-12 shows the predicted Project noise levels at nearby sensitive receptors in the Project area and Figure 4.15-2. *Project Onsite Non-Exempt Source Noise Generation* depicts the predicted noise levels from Project operations at the site locations listed in Table 4.15-12.

Table 4.15-12. Modeled Operational Noise Levels - Non-Exempt Noise

Site Location	Location	Existing Baseline Noise Measurements (L_{eq} dBA)	Modeled Operational Noise Attributable to Project (L_{eq} dBA)	County Exterior Standards (dBA) (Day/Night)	Exceed Standard? (Day /Night)
1	Northeast of Project site on Ham Lane	N/A	**31.4**	50 / 45	**No / No**
2	Residential property northeast of Project site	N/A	**34.1**	50 / 45	**No / No**
3	Residential property northeast of Project site	N/A	**35.5**	50 / 45	**No / No**
4	Residential property east of Project site	N/A	**40.0**	50 / 45	**No / No**
5	In front of residence on Ham Lane north of Project site	N/A	**34.3**	50 / 45	**No / No**
6	Residential property south of Project site	N/A	**36.9**	50 / 45	**No / No**
7	Residential property south of Project site	N/A	**40.9**	50 / 45	**No / No**
8	Residential property south of Project site	N/A	**42.0**	50 / 45	**No / No**
9	Adjacent to Eight Mile Road and proposed driveway	75.2	**36.3**	50 / 45	**No / No**
10	Residential property south of Project site	N/A	**40.8**	50 / 45	**No / No**
11	Residential property south of Project site	N/A	**41.4**	50 / 45	**No / No**
12	Residential property south of Project site	N/A	**39.4**	50 / 45	**No / No**

Source: Stationary source noise levels were modeled by ECORP using SoundPLAN 3D noise model. Refer to Draft EIR Appendix H for noise modeling assumptions and results.

Notes: Previous noise measurements taken by ECORP Consulting, Inc., using a Larson Davis SoundExpert LxT precision sound level meter, within a visitors parking lot adjacent to a 298 bed medical center, emergency care, and Level II trauma center equip with FlightCare air ambulance service recorded a noise level of 53.8 dBA.



Map Date: *10/2/2020*
Photo (or Base) Source: *SoundPLAN*

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Figure 4.15-2. Project Onsite Non-Exempt Source Noise Generation

2020-053 Gill Medical Center

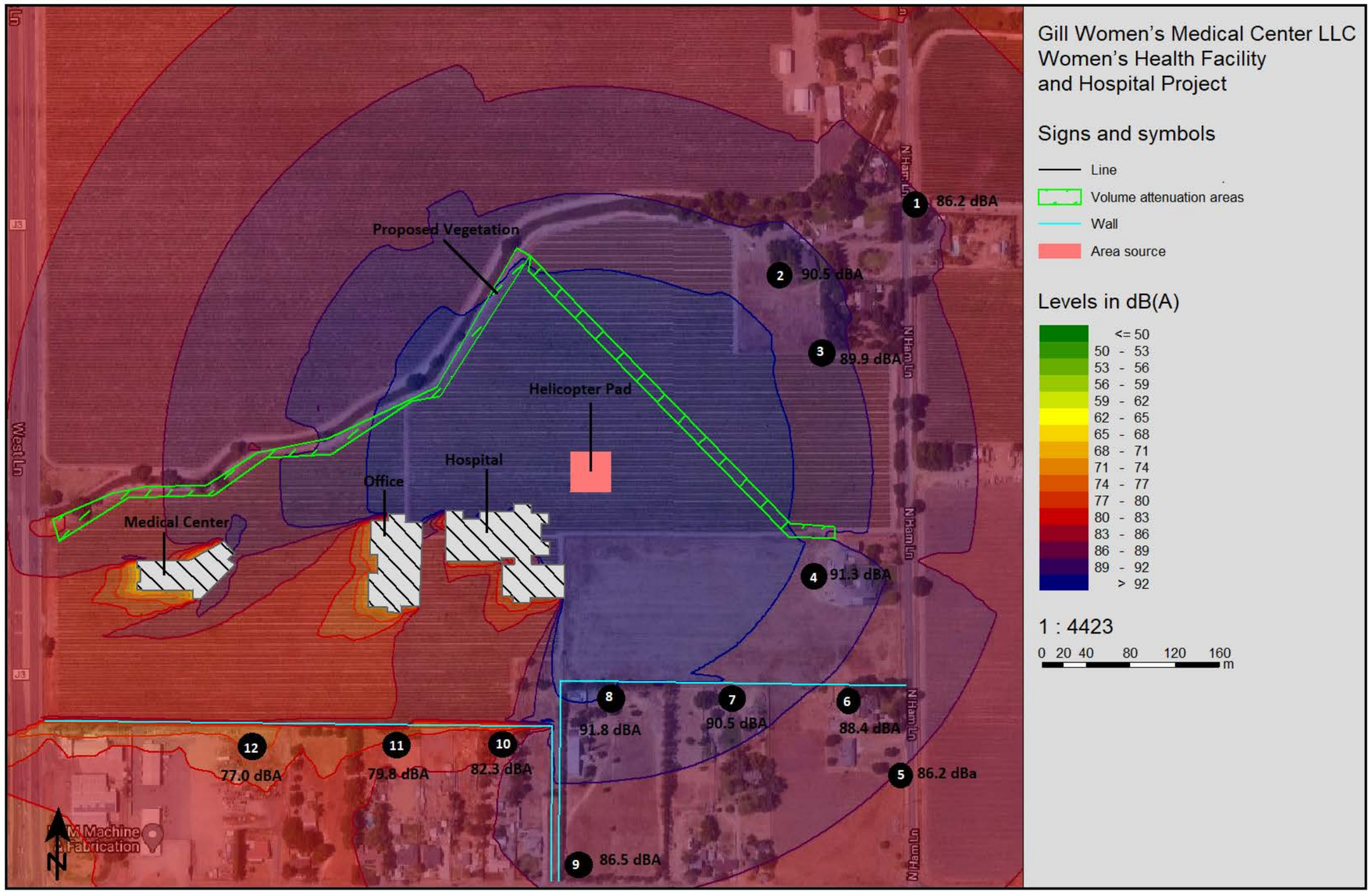
As shown in Table 4.15-12 and Figure 4.15-2, Project onsite noise levels would reach between 31.4 and 42.0 dBA at the nearby noise-sensitive residences during typical (i.e., without helicopter) Project operations. These numbers fall below the County's daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise standards for residential land uses. Additionally, as previously stated the manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). This exterior-to-interior noise reduction would further reduce the modeled noise levels identified in Table 4.15-12 at nearby sensitive receptors. Furthermore, it is noted that Location 9 currently experiences noise levels of 75.2 dBA and the modeled operational noise level attributed to Project onsite non-exempt activities is 36.3 dBA which is well below the existing baseline noise levels in the project vicinity.

It is noted that SoundPLAN was used to calculate non-exempt operational noise from a worst-case scenario. All the non-exempt noise producing sources on the Project site (with exception of helicopter noise) were calculated as if operating at the same time and at the highest activity level to produce noise levels as high as those predicted. Further, the soft surfaces and vegetative screening innate to the strip of proposed landscaping that would surround the site, which can absorb sound, was not accounted for in the SoundPLAN model. Thus, the modeling output was based on conservative input assumptions. The Project would result in a **less than significant impact** associated with onsite non-exempt noise sources.

Non-Exempt Helistop/Helicopter Noise

The most prominent noise source on the Project site would be that of helicopter activities. Most of the noise from a helicopter is generated by the main rotor located on the roof of the helicopter. The main rotor is comprised of rotary wings (rotor blades) and a control system that generates the aerodynamic lift force that supports the weight of the helicopter, and the thrust that counteracts aerodynamic drag in forward flight. There is also a significant amount of noise that is generated from the tail rotor located on the tail of the helicopter. The tail rotor provides a counteracting force to the helicopter's main rotor and allows the pilot to steer the helicopter around its vertical axis by adjusting the pitch of the rotor blades. According to the Helicopter Association International (1983), smaller helicopters are generally quieter than larger ones and sound levels tend to increase approximately three decibels per doubling of helicopter weight. Per information from the International Civil Aviation Organization (2015), the approach case (landing) is normally the loudest flight condition for a helicopter due to the sound produced by the relatively slow-turning main rotor. This noise is more pronounced when the helicopter is on the ground and decreases as the aircraft ascends.

As such, helicopter operations when the helicopter is on the ground (landing and takeoff events), has been calculated using the SoundPLAN 3D noise model. The results of this model can be found in Draft EIR Appendix H. Previous noise measurements taken by ECORP Consulting, Inc., using a Larson Davis SoundExpert LxT precision sound level meter, of a single helicopter taking off generated a noise level of 87.0 dBA Lmax at 330 feet distant, and 87.9 dBA Lmax at the same distance while landing, with each event lasting less than five minutes in duration. (Lmax is the maximum A-weighted noise level during the measurement period.) Thus, based on an attenuation rate of 6 dBA per doubling of distance, a noise level of 124.3 dBA Lmax at a distance of 5 feet can be expected and was used in the modeling. Table 4.15-13 shows the predicted helicopter activity Project noise levels at nearby sensitive receptors and Figure 4.15-3.



Map Date: *10/2/2020*
Photo (or Base) Source: *SoundPLAN*

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Figure 4.15-3. Project Onsite Helistop Noise Generation

Project Onsite Helistop Noise Generation depicts the predicted noise levels and site locations listed in Table 4.15-13. As shown in Table 4.15-13, noise levels could reach up to 91.8 dBA at the nearby noise-sensitive receptors during helicopter landing and takeoff events.

These events, similar to an emergency siren, would be intermittent and temporary, occurring approximately once per week with a duration of approximately five minutes, and therefore would not constitute a substantial change in the existing ambient community noise environment, which is the cumulative average daytime noise level during a 24-hour day. Furthermore, as previously mentioned, the noise generated from a helicopter is more pronounced when the helicopter is on the ground and decreases as the aircraft ascends. Recent measurements taken by ECORP Consulting, Inc. approximately 300 feet from where the helistop was located during a helicopter takeoff event, found a noise level of approximately 70.2 dBA when the helicopter was approximately 85 feet above the ground. Thus, once in flight the helicopter would have a rapidly reducing noise effect on the surrounding noise environment. Additionally, per Section 9-1025.9, Noise, of the County's Development Title any mechanical device, apparatus or equipment used, related to, or connected with, emergency activities or emergency work shall be exempt from noise standards. However, while exempt by ordinance due to its role in emergency response situations, the Lead Agency has directed that helicopter noise be analyzed as non-exempt and subject to adopted San Joaquin County noise standards for purposes of CEQA analysis.

Table 4.15-13. Modeled Operational Noise Levels - Helistop Noise

Site Location	Location	Existing Baseline Noise Measurements (L_{eq} dBA)	Modeled Operational Noise Attributable to Helicopter Landing (L_{eq} dBA)
1	Northeast of Project site on Ham Lane	N/A	**86.2**
2	Residential property northeast of Project site	N/A	**90.5**
3	Residential property northeast of Project site	N/A	**89.9**
4	Residential property east of Project site	N/A	**91.3**
5	Infront of residence on Ham Lane north of Project site	N/A	**86.2**
6	Residential property south of Project site	N/A	**88.4**
7	Residential property south of Project site	N/A	**90.5**
8	Residential property south of Project site	N/A	**91.8**
9	Adjacent to Eight Mile Road and proposed driveway	75.2	**86.5**

Table 4.15-13. Modeled Operational Noise Levels - Helistop Noise

Site Location	Location	Existing Baseline Noise Measurements (L_{eq} dBA)	Modeled Operational Noise Attributable to Helicopter Landing (L_{eq} dBA)
10	Residential property south of Project site	N/A	**82.3**
11	Residential property south of Project site	N/A	**79.8**
12	Residential property south of Project site	N/A	**77.0**

Source: Stationary source noise levels were modeled by ECORP using SoundPLAN 3D noise model. Refer to Draft EIR Appendix H for noise modeling assumptions and results.

Notes: Previous noise measurements taken by ECORP Consulting, Inc., using a Larson Davis SoundExpert LxT precision sound level meter, of a single helicopter taking off generates a noise level of 87.0 dBA Lmax at 330 feet distant and 87.9 dBA Lmax while landing, with each event lasting less than five minutes in duration.

As shown in Table 4.15-3 above, noise levels could reach up to 91.8 dBA at the exterior of nearby noise-sensitive receptors during helicopter landing and takeoff events. These potential noise levels exceed the County daytime and nighttime noise level standards.

As previously stated, the manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). This exterior-to-interior noise reduction would reduce helicopter noise levels, as they are experienced within the vicinity residences, to 71.8 – 66.8 dBA.

It is noted that engine noise is mostly directed upward, and therefore away from the vicinity residences, because almost all helicopter engines are located above the aircraft and thus partly screened by the aircraft body. In addition, with the advent of the turbine engine, noise from helicopter engines are substantially diminished compared with helicopters without turbine engines. Noise from the main rotor is mostly directed downward, because it radiates off the underside of the blades. Main rotor noise is caused by two mechanisms: wind flowing over the blades and shock formation (both transonic shock formation and percussive interaction with the vortex coming off the blade in front of it). The tail rotor creates noise through the same mechanisms but on a smaller scale and directed toward the sides. Tail rotor noise is typically a lesser source of noise compared with the main rotor.

It is noted that the Project helistop is proposed as a component of Phase 2, which would not be completed until 10 years after Project approval. In addition, the Project does not propose a trauma designation in association with the Phase 2 Hospital. However, the helistop is evaluated in this Draft EIR to maintain the option to seek a trauma designation in the future.

Modern helicopter design continues to advance state-of-the-art noise reduction technologies. Therefore, it can be assumed that noise associated with helicopters will decrease in the future. These technologies include unequal blade spacing on ducted fans and open tail rotors, new rotor designs and blade planforms, and reduced or even automatically-controlled rotor speeds. One possible technique for

reducing helicopter rotor noise is "modulated blade spacing". Modulated blade spacing equates to standard rotor blades being evenly spaced, resulting in the production of greater noise at a particular frequency that attenuates more rapidly in the atmosphere. Using varying degrees of spacing between the blades spreads the noise or acoustic signature of the rotor over a greater range of frequencies allowing for greater noise attenuation in the atmosphere. Helicopter tail rotors can be recessed into the fairing of the tail (a fenestron), which reduces the noise level directly below the aircraft. In addition, this type of rotor typically has anywhere from 8 to 12 blades (as compared to 2 or 4 blades on a conventional tail rotor), increasing the frequency of the noise and thus its attenuation by the atmosphere. In addition, the placement of the tail rotor within a shroud can prevent the formation of tip vortices, circular patterns of rotating air and sound left behind a wing as it generates lift. This type of rotor is in general much quieter than its conventional counterpart.

The noise receptors that would be predominately affected by Project helicopter noise includes residential receptors located adjacent to the Project's eastern and southern boundaries. Project helicopter noise, particularly during takeoff and landing events, can enter a structure through multiple points such as windows, doors, cracks, walls, roofs, ventilators, and chimneys. The Federal Aviation Administration (FAA) provides guidance on developing and managing sound insulation programs (SIP) that mitigate noise impacts to structures exposed to aircraft noise. According to the FAA, the retrofitting of windows and doors provided the greatest reduction in exterior-to-interior noise propagation (FAA undated). Specifically, it is the type of materials used and quality of their installation (e.g., proper caulking and sealing) that ensures the greatest reduction of sound from entering a structure. According to the FAA, SIPs are designed to reduce interior noise due to aircraft noise in habitable residences and/or other noise-sensitive land uses by at least 5 dBA.

As previously discussed, Project helicopter operations at the Project Site would be intermittent and temporary, occurring approximately once per week and enduring less than five minutes, and therefore would not constitute a substantial change in the existing ambient community noise. Furthermore, the Project is currently not seeking a trauma designation for the Phase 2 Hospital which would be required in order to operate the helistop. Therefore, while it is acknowledged that Project helicopter noise levels could reach up to 91.8 dBA at the exterior of nearby noise- sensitive receptors during helicopter landing and takeoff events, and thus resulting in interior noise levels ranging from 71.8 to 66.8 dBA, retrofitting all of the windows and doors of the adjacent residences in order to possibly achieve a 5 dBA reduction over the course of a singular weekly event that lasts approximately 5 minutes is not feasible when coupled with the fact that such a reduction would not reduce Project helicopter noise to a level below the County significance threshold and would not appreciably reduce the level of noise experienced by nearby sensitive receptors during a helicopter landing/takeoff. This impact is **significant and unavoidable**.

Mitigation Measures

No feasible mitigation is available.

Impact 4.15-2: The proposed project would generate groundborne vibrations and groundborne noise during construction.
Impact Determination: *less than significant*

Threshold:	*Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.*

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in Table 4.15-14.

Table 4.15-14. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: FTA 2018; Caltrans 2020

The County's Noise Policy of the 2035 General Plan, Goal PHS-9.4, states that the County shall require construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby vibration-sensitive uses based on FTA criteria. For the purpose of this analysis, the FTA's recommendation of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for non-engineered timber and masonry buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. Consistent with FTA recommendations for

calculating construction vibration, construction vibration was measured from the center of the Project site (FTA 2018). The nearest structure of concern is located on the adjacent residential property approximately 330 feet distant.

Based on the representative vibration levels presented for various construction equipment types in Table 4.15-14 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential Project construction vibration levels. The FTA provides the following equation: [PPVequip = PPVref x $(25/D)^{1.5}$]. Table 4.15-15 presents the expected Project related vibration levels at a distance of 330 feet.

Table 4.15-15. Construction Vibration Levels at 330 Feet

Receiver PPV Levels (in/sec)[1]					Peak Vibration	Threshold	Exceed Threshold
Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Drilling			
0.00006	0.0007	0.001	0.001	0.001	0.001	0.2	**No**

[1]Based on the Vibration Source Levels of Construction Equipment included on Table 14 (FTA 2018).

As shown in Table 4.15-15, vibration as a result of construction activities would not exceed 0.2 PPV at the nearest structure. Thus, construction generated vibration levels would not exceed the recommended threshold.

Project operations would not include the use of any stationary equipment that would result in excessive vibration levels. Therefore, the Project would not result in groundborne vibration impacts during operations.

Project generated groundborne vibration would be **less than significant**.

Mitigation Measures

No mitigation required.

Impact 4.15-3: The proposed project would expose people to excessive airport noise.
Impact Determination: *less than significant*

Threshold:	*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.*

The Project site is located approximately 3.6 miles northwest of the Kingdon Airpark General Aviation Airport. The Proposed Project is not located within an airport land use plan or within two miles of a public airport or public use airport. Implementation of the Proposed Project would not affect airport operations nor result in increased exposure of people working at or visiting the project site to aircraft noise. The impact is **less than significant**.

Mitigation Measures

No mitigation required.

4.15.5 Cumulative Impacts

4.15.5.1 Cumulative Construction Noise

Construction activities associated with the Proposed Project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the Proposed Project was determined to be less than significant following compliance with NIOSH noise standards. Cumulative development in the vicinity of the Project site could result in elevated construction noise levels at sensitive receptors in the Project area. However, each project would be required to comply with the applicable noise limitations on construction. Therefore, the Project would **not contribute to cumulative impacts during construction**.

4.15.5.2 Cumulative Traffic Noise

Cumulative traffic noise levels throughout the Project vicinity (i.e., vicinity roadway segments that traverse noise-sensitive land uses) were modeled based on the traffic volumes identified by KD Anderson & Associates (2020) to determine the noise levels along Project vicinity roadways. Table 4.15-16 shows the calculated offsite roadway noise levels under cumulative conditions without the Project (Cumulative No Project) compared to cumulative conditions plus future buildout of the Project (Cumulative Plus Project). The calculated noise levels as a result of Cumulative Plus Project conditions at affected sensitive land uses are compared to the noise standards promulgated in the San Joaquin County 2035 General Plan and Development Title as well as the City of Stockton Development Title. Where no jurisdiction is noted, the roadway segment lies within unincorporated San Joaquin County. In the case that Cumulative No Project conditions exceed the applicable numeric noise thresholds, the FICON thresholds of significance are applied.

FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing and future noise-sensitive land uses (e.g., residential, etc.) are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL

As shown in Table 4.15-16, no roadway segment would exceed the applicable County or City noise standard or generate an increase of noise beyond the FICON significance standards in any scenario. Therefore, the Project would have a **less than cumulatively considerable mobile-source impact**.

4.15.5.3 Cumulative Onsite Operational Noise

Long-term operational noise sources associated with the Project, combined with other cumulative projects, could cause local noise level increases. Noise levels associated with the Proposed Project and related cumulative projects together could result in higher noise levels than considered separately. However, each project would be required to comply with the applicable noise limitations. As previously described, with the exception of noise generated as a result of helistop operation, onsite noise sources associated with the Proposed Project was found to be acceptable as they do not exceed the County noise standards. With regard to helicopter noise, helistop operations would be intermittent and temporary, occurring approximately once per week with a duration of approximately five minutes, and therefore would not constitute a substantial change in the existing ambient community noise environment, which is the cumulative average daytime noise level during a 24-hour day. Thus, due to the infrequency of helistop operations, Project generated helicopter noise would not result in a substantial contribution to cumulative noise levels in the Project area. Therefore, the Project would have a **less than cumulatively considerable impact** during operations.

Mitigation Measures

None required.

Table 4.15-16. Cumulative Traffic Noise Scenario

Roadway Segment	Cumulative No Project	Cumulative Plus Project	Noise Standard (dBA CNEL)	Exceed Standard and result in Noise Levels Exceeding Acceptable Exterior Noise Standards?
	CNEL @ 100 Feet from Roadway Centerline	CNEL @ 100 Feet from Roadway Centerline		
Eight Mile Road				
West of Interstate 5	64.8	64.8	*65*	**No**
Between Interstate 5 and Davis Road	63.6	63.7	*65*	**No**
Between Davis Road and Lower Sacramento Road	62.8	63.5	*65*	**No**
Between West Lane and Ham Lane	61.6	61.6	*65*	**No**
Between Ham Lane and Leach Road	62.5	62.5	*65*	**No**
Between Leach Road and Micke Grove Drive	61.7	61.9	*65*	**No**

Table 4.15-16. Cumulative Traffic Noise Scenario

Roadway Segment	Cumulative No Project	Cumulative Plus Project	Noise Standard (dBA CNEL)	Exceed Standard and result in Noise Levels Exceeding Acceptable Exterior Noise Standards?
	CNEL @ 100 Feet from Roadway Centerline	CNEL @ 100 Feet from Roadway Centerline		
Between Micke Grove Drive and State Route 99	62.9	63.9	*65*	**No**
East of State Route 99	60.4	63.2	*65*	**No**
State Route 99				
South of Eight Mile Road (City of Stockton)	N/A	N/A	N/A	N/A
North of Eight Mile Road	N/A	N/A	N/A	N/A
State Route 99 East Frontage Road				
North of Eight Mile Road	51.9	51.9	*65*	**No**
South of Eight Mile Road	58.2	58.2	*65*	**No**
State Route 99 West Frontage Road				
North of Eight Mile Road	47.9	48.2	*65*	**No**
South of Eight Mile Road (City of Stockton)	58.2	58.3	*65*	**No**
Micke Grove Drive				
North of Eight Mile Road	48.2	48.2	*65*	**No**
Interstate 5				
Interstate 5 Southbound	67.0	67.0	*>1.5*	**No**
Leach Road				
North of Eight Mile Road	50.8	51.0	*65*	**No**
Morada Lane				
East of West Lane (City of Stockton)	60.9	60.9	*65*	**No**
West of West Lane (City of Stockton)	51.6	53.0	*65*	**No**

Table 4.15-16. Cumulative Traffic Noise Scenario

Roadway Segment	Cumulative No Project	Cumulative Plus Project	Noise Standard (dBA CNEL)	Exceed Standard and result in Noise Levels Exceeding Acceptable Exterior Noise Standards?
	CNEL @ 100 Feet from Roadway Centerline	CNEL @ 100 Feet from Roadway Centerline		
Ham Lane				
Between Eight Mile Road and West Lane	44.8	45.8	*65*	**No**
Between West Lane and Armstrong Road	55.6	55.6	*65*	**No**
North of Armstrong Road	57.7	57.7	*65*	**No**
North of West Lane	45.8	45.8	*65*	**No**
West Lane				
Between Eight Mile Road and Ham Lane	60.1	60.1	*65*	**No**
Lower Sacramento Road				
North of Eight Mile Road	61.2	61.2	*65*	**No**
South of Eight Mile Road	60.9	61.1	*65*	**No**
Davis Road				
North of Eight Mile Road	50.8	50.9	*65*	**No**
South of Eight Mile Road	57.2	57.2	*65*	**No**
Armstrong Road				
East of West Lane	56.0	56.0	*65*	**No**
West of West Lane	55.7	55.7	*65*	**No**

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by KD Anderson & Associates 2020. Refer to Draft EIR Appendix H for traffic noise modeling assumptions and results.

Notes:
A total of 23 intersections were analyzed in the Traffic Impact Analysis; however, only roadway segments that impact sensitive receptors were included for the purposes of this analysis.
Roadway segments that were not analyzed in the traffic report for the Cumulate No Project and Cumulative Plus Project are labeled as N/A.

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4.16 POPULATION AND HOUSING

This section addresses potential project effects on population and housing in the project vicinity and the regulatory setting pertaining to that use.

4.16.1 Environmental Setting

As of January 1, 2020, the population of Stockton was estimated to be 318,522, a 9.2% increase from its 2010 population as recorded by the U.S. Census Bureau (San Joaquin County. 2016.). Table 4.16-1, below, shows population growth trends in Stockton, San Joaquin County, and California.

Table 4.16-1 Population Growth Trends in Stockton, San Joaquin County, and the State of California

Jurisdiction	2010 Population	2020 Population	Population Growth
Stockton	291,707	318,522	9.2%
San Joaquin County	685,306	773,632	12.9%
State of California	37,253,956	39,782,870	6.8%

Source: U.S. Census Bureau, California Department of Finance 2020

Both Stockton and San Joaquin County experienced robust population growth between 2000 and 2010, with a countywide growth rate of 2.0% per year and a citywide growth rate of 1.8% per year. This was substantially higher than the statewide average of 1.0% during the same period. This population growth was primarily due to significant immigration during the early part of the decade. Population growth slowed later in the decade due to economic conditions, leading to a net outflow of population. While immigration occurred again, the average annual growth rate post-2010 was notably lower than in the prior decade: 1.1% per year in San Joaquin County and 0.9% per year in the City of Stockton. Both percentages were slightly higher than the statewide per-year average of 0.7% (San Joaquin County. 2016.).

San Joaquin Council of Governments (SJCOG) forecasts that the population of Stockton will grow to 463,450 by 2040 (City of Stockton 2018b). San Joaquin County is also projected to see substantial growth and urbanization. The recently adopted San Joaquin County 2035 General Plan update forecasts that total population in the County, both incorporated and unincorporated areas, would be about 945,300 by 2035. This equates to an average annual population growth rate of 1.5%, which is approximately 25% more than the State's projected annual average growth rate of 1.2% between 2012 and 2035 (San Joaquin County 2016a).

Housing and Employment

As of January 1, 2019, Stockton had an estimated 100,877 housing units. Single-family detached units (typical houses) accounted for approximately 64.4% of total housing units in Stockton, with multifamily units of two or more per building accounting for approximately 26.9%. The remaining units were single-family attached units and mobile homes (California Department of Finance 2020).

Employment data from the California Employment Development Department indicate that in the Stockton-Lodi Metropolitan Statistical Area, which covers San Joaquin County, the average annual unemployment rate was 7.0% in 2017, the most recent year such data were available. This marked a decrease from 8.1% in 2016 and from a peak of 16.5% in 2010 (San Joaquin County 2035 General Plan EIR. 2016.). By comparison, the unemployment rate in California in 2017 was 4.8% (San Joaquin County. 2016.). San Joaquin County unemployment reached as high as an estimated 17.8% in April 2020, but has since declined to an estimated 14.8% as of July 2020.

4.16.2 Regulatory Setting

4.16.2.1 Local

San Joaquin County 2035 General Plan

San Joaquin County adopted an update to its General Plan in 2016. The San Joaquin County 2035 General Plan provides a guide to development, in this case for the unincorporated lands of the County. The San Joaquin County 2035 General Plan designates the project site as General Agricultural. The 2035 General Plan supports focused growth within incorporated cities and calls for annexation to the City prior to development of lands outside city limits. San Joaquin County 2035 General Plan Policy LU-1.10 states: "The County shall coordinate with San Joaquin LAFCo and cities within the County to ensure future annexation proposals and requests to expand Spheres of Influence reflect the growth and development patterns envisioned in this General Plan. The County shall provide input on annexation proposals and requests to expand Spheres of Influence in an effort to play a more active role in future expansion of cities into the unincorporated County."

San Joaquin County Development Code

The San Joaquin County Development Code (San Joaquin County Code Title 9) is applicable to lands in unincorporated San Joaquin County, such as the project site. It establishes zoning districts with allowable land uses and development regulations for each district. The project site is zoned by the County A/G-40 (Agriculture-General, 40-acre minimum parcel size). The General Agriculture designation generally applies to areas outside those planned for urban development, where soils can produce a wide variety of crops and/or support grazing. Typical building types include low-intensity structures associated with farming and agricultural processing and sales.

San Joaquin County Housing Authority

The San Joaquin County Housing Authority implements several programs that assist the low to moderate income community with housing costs. In 1999, the Housing Choice Voucher Program (HCVP) was introduced, superseding the 1974 Housing Assistance Payment Program (Section 8), and the 1967 Housing Act Leased Housing Section 23 program. HCVP eliminated the certificate process, providing tenants with greater flexibility in renting affordable units. HCVP also provides greater flexibility for property owners to set initial rent rates, and allows for market based rent adjustments. The County Housing Authority owns four Public Housing developments, which provide assistance for low to moderate income families, and one complex that provides assistance for the elderly.

4.16.3 Environmental Impacts and Mitigation Measures

4.16.3.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on the environment if it would:

- Physically divide an established community
- 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
- Induce substantial unplanned 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), or
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.16.3.2 Methods of Analysis

The potential effects of proposed project construction and operation on population and housing uses in areas likely to be directly or indirectly affected by these activities are qualitatively evaluated and presented herein.

4.16.3.3 Project Impacts and Mitigation Measures

Impact 4.16-1: The project would induce substantial unplanned population growth in an area
Impact Determination: *less than significant*

Threshold:	*Substantial unplanned 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)*

The project would construct a new medical center with related onsite support infrastructure. The Project does not propose extension of existing water, sewer or stormwater facilities as these utility needs would be developed and provided onsite. The site can be accessed from the existing road network and no road extensions are required to construct and operate the project. Therefore, proposed physical improvements would not directly or indirectly contribute to population growth.

The Project does not include housing development, and therefore would not directly increase county population. However, the Proposed Project would provide employment opportunities which may influence people currently residing outside the area to relocate closer to the Project site or within the City of Stockton or surrounding communities to take advantage of Project generated employment opportunities.

According to the *Economic Assessment of Demand and Urban Decay in the Stockton Area for Proposed Gill Medical Center* Report (King et al. 2021.) (Appendix I), the project, at full buildout, is expected to generate approximately 817 onsite long-term well-paying jobs and 600 additional employment opportunities in the community. This job growth could result in a potential indirect influence on the local population and place demands on housing in the area. However, the project area currently experiences a "leakage" of medical related jobs and patients seeking care due to the lack of nearby health care facilities. Leakage describes the phenomena of seeking a good or service outside of one's trade area (typically near one's residence or possibly near one's place of work). With regard to the medical care industry, it is likely that some residents in San Joaquin County receive medical care services in the Sacramento Area and the greater Bay Area, where there is a higher number of high-quality medical facilities and personnel as well as a greater number of specialists. Coincidently, many medical industry practitioners (especially nurses) who reside in San Joaquin County do not necessarily practice there, but rather work in these two alternative trade areas where there are more hospitals and Medical Office Buildings (MOBs). Therefore, most jobs generated by development of the Proposed Project are expected to be filled mainly by existing residents in the Stockton area.

Therefore, the Project is not expected to induce substantial direct or indirect unplanned population growth in the area and impacts would be **less than significant**. Both unemployment and job availability associated with the project would fluctuate over time, making any clear determination of the significance of population growth speculative.

Mitigation Measures

No mitigation is required.

Impact 4.16-2: The project would displace substantial numbers of people or existing housing. Impact Determination: *no impact*

Threshold:	*Substantial displacement of people or existing housing, necessitating the construction of replacement housing elsewhere*

The project would not displace any people or remove any existing housing. There would be **no impact**.

Mitigation Measures

No mitigation is required.

4.16.4 Cumulative Impacts

The geographic area considered in the cumulative analysis of population and housing is San Joaquin County. The cumulative projects in the San Joaquin County region would have the potential to result in a significant cumulative impact if they would, in combination: directly or indirectly induce substantial unanticipated population growth; displace a substantial amount of housing that would necessitate replacement housing elsewhere; or displace a substantial number of people that would necessitate replacement housing elsewhere.

The Proposed Project would result in employment growth, but as discussed above new employees are expected to be mostly existing residents from the greater Stockton/Lodi area. According to the San Joaquin County 2035 General Plan EIR, because cumulative projects would comply with all applicable land use plans to provide adequate development within a jurisdiction, the Proposed Project, in combination with the identified cumulative projects, **would not result in or contribute to a significant cumulative impact**.

Mitigation Measures

None required.

References

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4.17 PUBLIC SERVICES

This section addresses potential Project effects on public services and the regulatory setting pertaining to that use.

4.17.1 Environmental Setting

4.17.1.1 Fire Services

Fire protection services for the unincorporated areas of San Joaquin County are provided by independent special district fire departments, the California Department of Forestry and Fire Protection (CAL FIRE), and, in some cases, through contracted service with city fire departments. Collectively, there are 22 fire protection districts protecting the San Joaquin County region, which are staffed with paid firefighters, reserve firefighters, volunteer firefighters, and administrative staff that provide support services.

The Project site is located approximately 500 feet north of the City of Stockton within the City's General Plan Planning Area and is served by the Waterloo-Morada Fire Protection District (WMFD or District) formed in 1946. The District provides fire protection, prevention and suppression, hazardous material, water rescue, and emergency medical services. The District's existing service boundary is approximately 36 square miles and is located to the north and east of Stockton, south of Live Oak Road, west of Beecher Road, and north of Highway 26. Included within the boundary are the communities of Morada and Waterloo with the majority of the unincorporated land within the service area designated for rural residential, industrial uses and agriculture.

The WMFD currently operates two fire stations. The nearest existing station to the Project site is Station 2 located at 4946 E Eight Mile Road. Station 2 is currently comprised of a residential four bedroom home on seven acres that is being used as a firefighter residence. According to the District's Annual Measure N Report for FY-2020/21 (Waterloo Morada Fire District. December 8, 2021.), the Station 2 location is optimal for planned expansion that includes a training ground, 2 bay apparatus room, office area, shop, and bathroom. Station 2 is expected to be expanded over the next few years as District funding allows. Furthermore, operating from Station 2 location has reduced WMFD average response time to five minutes 36 seconds in May 2021, compared to an average response time of six minutes 41 seconds in May of 2019. A Site Approval application for Station 2 improvements is currently being processed by the County.

The next nearest station to the Project Site is WMFD Station 1 constructed in 1947 and located at 6925 East Foppiano Lane. Station 1 has had several remodels and additions since its original construction and is in need of further updating. Station 1 currently houses an on-duty crew of four including the District's Battalion Chief. In addition to the on duty crew the District's administrative offices are located at this location which includes the Administrative Secretary and the Fire Chief. The County has granted "Site Approval" for Station 1 expansion plans and remodel of the crew quarters is currently included in the 2021/22 budget.

The WMFD has structure fire mutual aid agreements with all surrounding adjacent fire districts, including the City of Stockton (Chief Walder. Pers. Com. February 7, 2022). The nearest City of Stockton fire station to the Project is Station 14 located at 3019 McNabb Street, Stockton.

4.17.1.2 Police Services

The San Joaquin County Sherriff's Department serves unincorporated San Joaquin County, including the Project site. The Sheriff's Office consists of seven divisions: Civil and Custody Division, Coroner's Office, Internal Affairs Division, Public Information and Records Division, Administration Division, Investigations Division, and Operations Services Division. The department headquarters is located at 7000 Michael Canlis Blvd, French Camp, 12 miles south of the Project site. Additionally, a California Highway Patrol Station is located along Highway 99, 5.3 miles southeast of the Project site.

4.17.1.3 Schools

Life Training Academy is located in Lodi, half a mile north of the Project site via West Lane. Ronald E. McNair High School is located one mile south of the Project site via West Lane. Westwood Elementary and Sutherland Elementary are each located about 1.5 miles south of the Project site, just past McNair High School. George Lincoln Mosher Elementary School is located 1.3 miles southeast of the Project site in the KB Home Montevello community.

4.17.1.4 Parks

The nearest County park to the project site is Micke Grove Regional Park, approximately 1.2 miles to the northeast. Micke Grove Park features a water park, rides, a zoo, a Japanese Garden and day-use picnicking. See *Section 4.18 Recreation* for an expanded discussion on parks and recreation in the project area.

4.17.1.5 Other Public Facilities

Stockton Town Hall is located at 425 North El Dorado Street in Stockton.

4.17.2 Regulatory Setting

The San Joaquin County 2035 General Plan establishes the following applicable policies related to public services:

IS-1.1: Essential Facilities and Services. The County shall strive to ensure that adequate public facilities and services essential for public health and safety are provided to all County residents and businesses and maintained at acceptable service levels. Where public facilities and services are provided by other agencies, the County shall encourage similar service level goals. (RDR/PSP/IGC)

IS-1.4: Infrastructure Maintenance. The County shall work with agencies to maintain, improve, and replace public facilities as necessary to maintain adequate levels of service for existing and future development and reduce the need for new facilities. Where public facilities and services are provided by other agencies, the County shall encourage similar service level goals. (PSP/IGC)

IS-1.5: Infrastructure and Service Expansions. The County shall base the expansion of public facilities and services on current needs and planned or projected development patterns. (PSP)

IS-1.13: Infrastructure Financing. The County shall approve new development only when financial mechanisms are in place to ensure that adopted County service standards are met and that long-term infrastructure and facility maintenance can be provided. (RDR)

IS-1.14: Equitable Infrastructure Financing. The County shall ensure that infrastructure and facility financing mechanisms for urban services are imposed equitably, and shall require the reimbursement from subsequent developments which benefit from the improved system. (RDR/PSP)

IS-1.17: Maximize Resources. The County shall make maximum use of Federal, State, regional, local, and private resources to address local infrastructure and facility needs. (PSP/FB)

IS-5.6: Consistent Fire Protection Standards for New Development. The County, in coordination with local water agencies and fire protection agencies, shall ensure consistent and adequate standards for fire flows and fire protection for new development. (RDR/IGC)

PHS-1.1: Effective Emergency Response. The County shall maintain adequate facilities equipment and staffing to respond effectively to emergencies. (PSP/SO) (Source: Existing GP, Emergency Preparedness, Policy 1)

PHS-4.6: Fire Protection Coordination. The County shall encourage well-organized and efficient coordination between fire agencies, CalFire, and the County. (IGC)

LU-8.4: New Parks and Open Spaces. The County shall ensure that sufficient parks, open space, waterways, and trails are planned throughout the County, to ensure adequate facilities are available to existing and future residents, including underserved areas and low-income neighborhoods. (PSP)

NCR-8.14: Joint Use Facilities. The County shall cooperate and coordinate with school districts in the joint planning, acquisition of land, and use of school buildings and facilities for park and recreation l opportunities. (IGC) (Source: Existing GP, Public Facilities, Recreation, Policy 10)

4.17.3 Environmental Impacts and Mitigation Measures

4.17.3.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, public services impacts are considered significant if implementation of the proposed project would:

- 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 following public services:
  - Fire Protection
  - Police Protection
  - Schools
  - Parks
  - Other Public Facilities

4.17.3.2 Methods of Analysis

Public service impacts related to Project construction and operational increases in employment population and land use intensity were evaluated based on information provided by the fire departments, police departments, and school districts with jurisdiction. This information addressed service capabilities, service ratios, response times, and performance objectives.

4.17.3.3 Project Impacts and Mitigation Measures

Impact 4.17-1: The proposed project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities. Impact Determination: *less than significant*

Threshold:	*Substantial adverse effect on the environment associated with the provision of new or physically altered governmental facilities needed to maintain acceptable service ratios, response times or other performance objects for public services.*

According to the *Economic Assessment of Demand and Urban Decay in the Stockton Area for Proposed Gill Medical Center Report* (King et al. 2021; Appendix I), the Project is expected to generate approximately 817 onsite well-paying jobs, but does not propose new housing. This job growth could result in a potential indirect influence on the local population and place demands on parks in the area. However, the Project area currently experiences a "leakage" of medical related jobs and patients seeking care due to the lack of nearby health care facilities. Leakage describes the phenomena of seeking a good or service outside of one's trade area (typically near one's residence or possibly near one's place of work). With regard to the medical care industry, many medical industry practitioners (especially nurses) who reside in San Joaquin County do not necessarily practice there, but rather work in these two alternative trade areas where there are more hospitals and medical office buildings. Therefore, most jobs generated by development of the proposed Project are expected to be filled by existing residents in the Project area and the project is not expected to have significant secondary growth inducing affects leading to the need for new or physically altered governmental facilities.

Fire Services

As discussed above, the Project is located within the WMFD boundaries and WMFD Station 2 at 4946 E Eight Mile Road would provide first response service to the Project site. Station 2 is located approximately 3 miles east of the Project site, a 5-minute drive in low-traffic conditions. WMFD Station 1 located at 6925 East Foppiano Lane approximately 7.5 miles southeast of the Project site, a 12-minute drive in low-traffic conditions, would provide WMFD backup response. The nearest City of Stockton fire station to the Project site is Station 14 located at 3019 McNabb Street in the City of Stockton. Station 14 is located approximately 5.8 miles west of the Project site, a 13-minute drive in low-traffic conditions.

According to the San Joaquin County 2035 General Plan Final EIR, policy contained in the 2035 General Plan Infrastructure and Services (IS) Element would ensure that adequate public facilities are provided for both existing residents and new developments, while reducing the need to construct new facilities (San Joaquin County. 2016.). For example, Policy IS-1.1 states that the County would strive to ensure that adequate public facilities and services are provided and maintained at acceptable service levels. Under Policy IS-1.4, the County would maintain and improve public facilities so as to maintain adequate levels of service while reducing the need for new facilities, and Policy IS-1.5 states the County would base the expansion of services on current and projected needs. Policies IS-1.13, IS-1.14, and IS-1.17 state the County's intent to only approve new developments when there is a mechanism for funding new services, including through the use of federal, state, regional, and local resources.

According to the Chief of the WMFD, currently planned expansions should be adequate to serve the Project site. The Fire Chief did not indicate that there would be a need to construct a new fire station or physically alter an existing fire station beyond current planned renovations/expansion plans, in order to serve the Project site. The Chief did indicate that new ladder equipment would be needed to fully serve planned Phase 2 development which includes a140,000 square-foot, 100-bed three-story hospital and related 60,000 square-foot two-story medical office building. However, as discussed in the 2035 General Plan EIR, it is expected that adopted service level policy described above, combined with adopted General Plan Implementation Programs, would ensure the necessary funding for needed equipment (i.e., ladder truck) prior to Phase 2 operations (expected no sooner than 2030). Furthermore, the planned expansion of the WMFD's existing fire stations would undergo environmental review, and would be required to demonstrate compliance with CEQA prior to planned physical improvements. Where feasible, consistent with CEQA, impacts from construction of new facilities would be mitigated to a less than significant level. Thus, the proposed 2035 General Plan, in combination with existing WMFD fire station expansion plans, would ensure a **less than significant impact** as defined in the thresholds of significance. No additional mitigation is required.

Police Services

Police are often called to hospitals to manage unruly patients. The Project would not significantly increase the need for police services within the City of Stockton's police service area or San Joaquin County's sheriff service area. New or altered facilities would not be required to facilitate police response to the proposed Project. A **less than significant** impact would occur.

Schools

The Proposed Project includes construction of a hospital and women's medical center and does not include construction of new housing. Therefore, the Proposed Project would not induce population growth or generate the need for new school facilities. Employees at the hospital or anticipated to come primarily from the existing local population. **No impact** would occur.

Parks

As described above, the Proposed Project does not require an expansion of residential housing and would not induce population growth. The Proposed Project would not displace an existing park and would not require the construction of additional park facilities. **No impact** would occur.

Other Public Facilities

As described above, the proposed Project does not require an expansion of residential housing and would not induce population growth. The proposed Project would not increase use of existing public facilities in the area because it would not promote population increase. **No impact** would occur.

Mitigation Measures

None required.

4.17.4 Cumulative Impacts

The geographic area considered for the analysis of cumulative impacts pertaining to public services is San Joaquin County. Cumulative projects would result in a need for expansion of existing public service facilities to support new development. Cumulative projects proposed under the general plans of surrounding cities and counties, such as commercial, residential or industrial projects, would result in an increased demand for services from within the region. Within each city, approval of development projects is dependent upon the ability to provide sufficient public services and facilities, and each city uses development impact fees to fund public service facility expansion projects.

Development of future land in San Joaquin County would result in a cumulative increase in demand for public services, which may require the provision of new or physically altered facilities, the construction of which could result in adverse environmental impacts. Cumulative public service and facility projects would undergo environmental review, and would be required to demonstrate compliance with CEQA prior to project approval. As discussed in the San Joaquin County 2035 General Plan EIR, where feasible, consistent with county policy, impacts from construction of new facilities would be mitigated to a less than significant level. The proposed Project, in combination with cumulative projects, would have a **less than cumulatively considerable impact**.

Mitigation Measures

None required.

References

Chief Walder. 2022. Personal communication February 7,

King, Philip G., Ph.D., Sharmila G. King, Ph.D., and Sarah Jenkins. 2021. *Economic Impact and Urban Decay Analysis. Prepared for Gill Medical Center Project, San Joaquin County CA*. September 30.

San Joaquin County, 2016. San Joaquin County 2035 General Plan Final EIR. September.

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4.18 RECREATION

This section addresses potential project effects on recreation in the project vicinity and includes a description of the environmental and regulatory setting relevant to recreation.

4.18.1 Environmental Setting

San Joaquin County, through its Parks and Recreation Department, owns and operates nine parks in the Stockton area (City of Stockton 2018b). As outlined in the San Joaquin County 2035 General Plan, the parks fall into three categories: neighborhood, community, and regional. The nearest County park to the project site is Micke Grove Regional Park, approximately 1.2 miles to the northeast. Micke Grove Park features a water park, rides, a zoo, a Japanese Garden and day-use picnicking.

4.18.2 Regulatory Setting

4.18.2.1 State

Quimby Act

The Quimby Act of 1975 authorizes cities and counties to pass ordinances requiring developers to set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated by the Quimby Act cannot be used for the operation and maintenance of park facilities. A 1982 amendment (AB 1600) requires agencies to clearly show a reasonable relationship between the public need for a recreation facility or park land, and the type of development project upon which the fee is imposed. Also, local ordinances must now include definite standards for determining the proportion of the subdivision to be dedicated and the amount of the fee to be paid.

4.18.2.2 Local

San Joaquin County 2035 General Plan

Goal LU-8: *Protect open space for its recreational, agricultural, safety, and environmental value and provide adequate parks and open space areas throughout the County.*

Policy NCR-8.2: Park Ratio Standard. The County shall encourage and support the development of recreational facilities to serve unincorporated communities at a ratio of 10 acres of regional parks and three acres of local parks per 1,000 residents.

To implement the above goal and policy, San Joaquin County collects a regional park fee from new development projects.

4.18.3 Environmental Impacts and Mitigation Measures

4.18.3.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, recreation impacts are considered significant if implementation of the proposed project would:

- 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; and,
- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

4.18.3.2 Methods of Analysis

The potential effects of proposed project construction and operation on recreational use in areas likely to be directly or indirectly affected by these activities are qualitatively evaluated and presented herein.

4.18.3.3 Project Impacts and Mitigation Measures

Impact 4.18-1: Increased use of existing recreational facilities, resulting in substantial or accelerated physical deterioration
Impact Determination: *less than significant*

Threshold:	*Substantial adverse effect on neighborhood and regional parks or other recreational facilities as a result of potential increased use*

According to the *Economic Assessment of Demand and Urban Decay in the Stockton Area for Proposed Gill Medical Center* (King et al. 2021) Report (Appendix J), the project, at full buildout, is expected to generate approximately 817 onsite long-term well-paying jobs and 600 additional employment opportunities in the community, but does not propose new housing. This job growth could result in a potential indirect influence on the local population and place demands on parks in the area. However, the project area currently experiences a "leakage" of medical related jobs and patients seeking care due to the lack of nearby health care facilities. Leakage describes the phenomena of seeking a good or service outside of one's trade area (typically near one's residence or possibly near one's place of work). With regard to the medical care industry, many medical industry practitioners (especially nurses) who reside in San Joaquin County do not necessarily practice there, but rather work in these two alternative trade areas where there are more hospitals and medical office buildings. Therefore, most jobs generated by development of the Proposed Project are expected to be filled by existing residents in the Project area. While it is possible some Project employees may use county recreation facilities before or after working hours, such instances are expected to be consistent with current recreational use patterns. As such, the Project would not significantly increase the use of existing neighborhood or regional parks and recreational facilities such that premature physical deterioration of the facility would occur. Impacts would be **less than significant** and no mitigation is required.

Mitigation Measures

None required.

Impact 4.18-2: Construction or expansion of recreational facilities that might have an adverse physical effect on the environment.
Impact Determination: *no impact*

Threshold:	*Substantial adverse effect on the environment as a result of construction or expansion of recreational facilities*

The Project includes onsite passive recreation opportunities in the form of walking paths and sitting areas near the Phase 1 Hospital and within the northern buffer setback. As discussed in the project description, these facilities would be designed to avoid sensitive resources. The Proposed Project does not include development of public recreational facilities or require the construction or expansion of existing public recreational facilities. There would be **no impact**.

Mitigation Measures

None required.

4.18.4 Cumulative Impacts

The geographic area considered for the analysis of cumulative impacts related to recreation is San Joaquin County. Cumulative projects would result in a need for expansion of existing recreation facilities to support new development. Cumulative projects proposed under the general plans of surrounding cities and counties, such as commercial, residential, or industrial projects, could result in an increased demand for recreation facilities within the County. Within each city, approval of development projects is dependent upon the ability to provide sufficient public services and facilities, and each city uses development impact fees to fund recreation facility expansion projects. As part of implementing the San Joaquin County 2035 General Plan update, the county established a development fee to provide adequate recreation facilities for unincorporated communities.

Future development of land in San Joaquin County would result in a cumulative increase in demand for recreation facilities, which may require the provision of new or physically altered facilities, the construction of which could result in adverse environmental impacts. Cumulative recreation projects would undergo environmental review, and would be required to demonstrate compliance with CEQA prior to project approval. As discussed in the San Joaquin County 2035 General Plan EIR, where feasible, consistent with county policy, impacts from construction of new recreation facilities would be mitigated to a less than significant level. As discussed above, because the Project does not include housing, would not result in substantial population growth, and would be subject to the County's regional park fee, the Project, in combination with cumulative projects, would have a **less than cumulatively considerable impact** on recreation.

Mitigation Measures

None required.

References

City of Stockton. 2018b. Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR. June.

King, Philip G., Ph.D., Sharmila G. King, Ph.D., and Sarah Jenkins. 2021. *Economic Impact and Urban Decay Analysis. Prepared for Gill Medical Center Project, San Joaquin County CA*. September 30.

4.19 TRANSPORTATION

This section describes the existing setting and proposed improvements to intersections and roadways required for the implementation of the proposed Project. This section evaluates the potential for the Gill Medical Center (GMC) Project to result in transportation and traffic impacts within San Joaquin County and the City of Stockton. This section is based on the information contained in the Traffic Impact Study for the Gill Medical Center Project (Traffic Study) prepared by KD Anderson & Associates (KD Anderson & Associates 2021). The Traffic Study is included as draft EIR Appendix J.

The analysis presented herein is conducted using existing background, near-term background conditions and long-term future background conditions. Future background conditions are based on the City of Stockton General Plan. Analysis of traffic operating conditions under the following seven scenarios is presented in The Traffic Impact study (Appendix J):

- Existing Conditions,
- Existing Plus Phase 1 of the GMC project,
- Existing Plus Buildout of the GMC project,
- Existing Plus Approved Projects (EPAP) No GMC Project Conditions,
- EPAP Plus GMC Project Conditions,
- Cumulative No Project Conditions, and
- Cumulative Plus Project Conditions.

EPAP conditions are a near-term background condition which includes existing traffic levels, and traffic associated with approved, but unconstructed, land use development projects in the vicinity of the project site.

Cumulative conditions with the City of Stockton General Plan are a long-term background condition which includes future year forecasts of traffic volumes, based on development of surrounding land uses. This set of scenarios assumes 2040 conditions with future development consistent with the San Joaquin County 2035 General Plan (General Plan).

4.19.1 Environmental Setting

This section presents a description of existing conditions in the study area. Information presented in this section is based on onsite field observations, traffic count data collected for this study, and other data available from local and state agencies. This section also describes analysis methods and thresholds used to determine the significance of project-related effects.

4.19.1.1 Study Area Roadways

The Traffic Study presents analyses of traffic operating conditions at intersections, on roadways, and at freeway ramp junctions, in the study area that may be affected by the proposed Project. The limits of the study area were identified through discussions with County of San Joaquin staff (Levers pers. comm.)

As shown in Figure 4.19-1. *Vicinity Map*, the Project site is located northeast of the intersection of Eight Mile Road and West Lane. Figure 4.19-1 also shows the existing road network in the project vicinity and the following describes the key roadways that comprise the study area. The location and alignment of these roadways are graphically shown in Figure 4.19-2. *Roadway Network and Study Intersections - Existing and Existing Plus Approved Project Conditions*, Figure 4.19-3. *Roadway Network and Study Intersections - Long-Term Future Cumulative Conditions,* and Figure 4.19-4. *City of Stockton Existing and Planned Bicycle Network*.

Interstate 5

Interstate 5 (I-5)is a major north-south freeway that traverses the western U.S., originating in southern California and continuing north towards Sacramento and beyond. It is aligned through the western portion of the City of Stockton, providing three travel lanes in each direction in the vicinity of the project site, and providing four travel lanes in each direction in other portions of the Stockton area. Twelve interchanges are provided along the 14-mile stretch of I-5 within and adjacent to the City limits. The portion of I-5 in the North Stockton area was recently improved. Current average daily traffic (ADT) volumes are between 63,000 and 74,000. The speed limit on I-5 in the vicinity of the project site is 70 miles per hour (mph).

State Route 99

State Route 99 (SR 99) traverses the Central Valley, connecting Sacramento and points north with numerous Central Valley cities, including Modesto, Merced, Fresno and Bakersfield. Three travel lanes are provided in each direction north of Wilson Way, while segments south of Wilson Way include two lanes per direction. Twelve interchanges are provided along the 12-mile length of SR 99 within and adjacent to the City limits. Average daily traffic volumes on SR 99 range between 79,000 and 80,000 in the vicinity of the project site. The speed limit on SR 99 is 65 mph in the vicinity of the proposed project site.

Eight Mile Road

Eight Mile Road is an east-west roadway south of the project site. As shown in Figure 3-5, the Project site is proposed to have access to Eight Mile Road via a project driveway. In the vicinity of the Project site, the majority of Eight Mile Road is two lanes wide (one lane in each direction). However, some portions of Eight Mile Road are four-lanes wide, and limited portions have three lanes in a single direction. In the vicinity of the project site, the posted speed limit along Eight Mile Road is 45 mph. Eight Mile Road has access to SR 99 at an interchange that includes a two-lane overcrossing of SR 99. A Project Study Report (PSR) has been prepared for proposed improvements to this interchange. Eight Mile Road also has access to I-5 at an interchange that includes an undercrossing of I-5. Grade-separated crossings of railroad tracks are located at approximately 0.5 mile east of the project site, and approximately 1.6 miles west of the Project site.

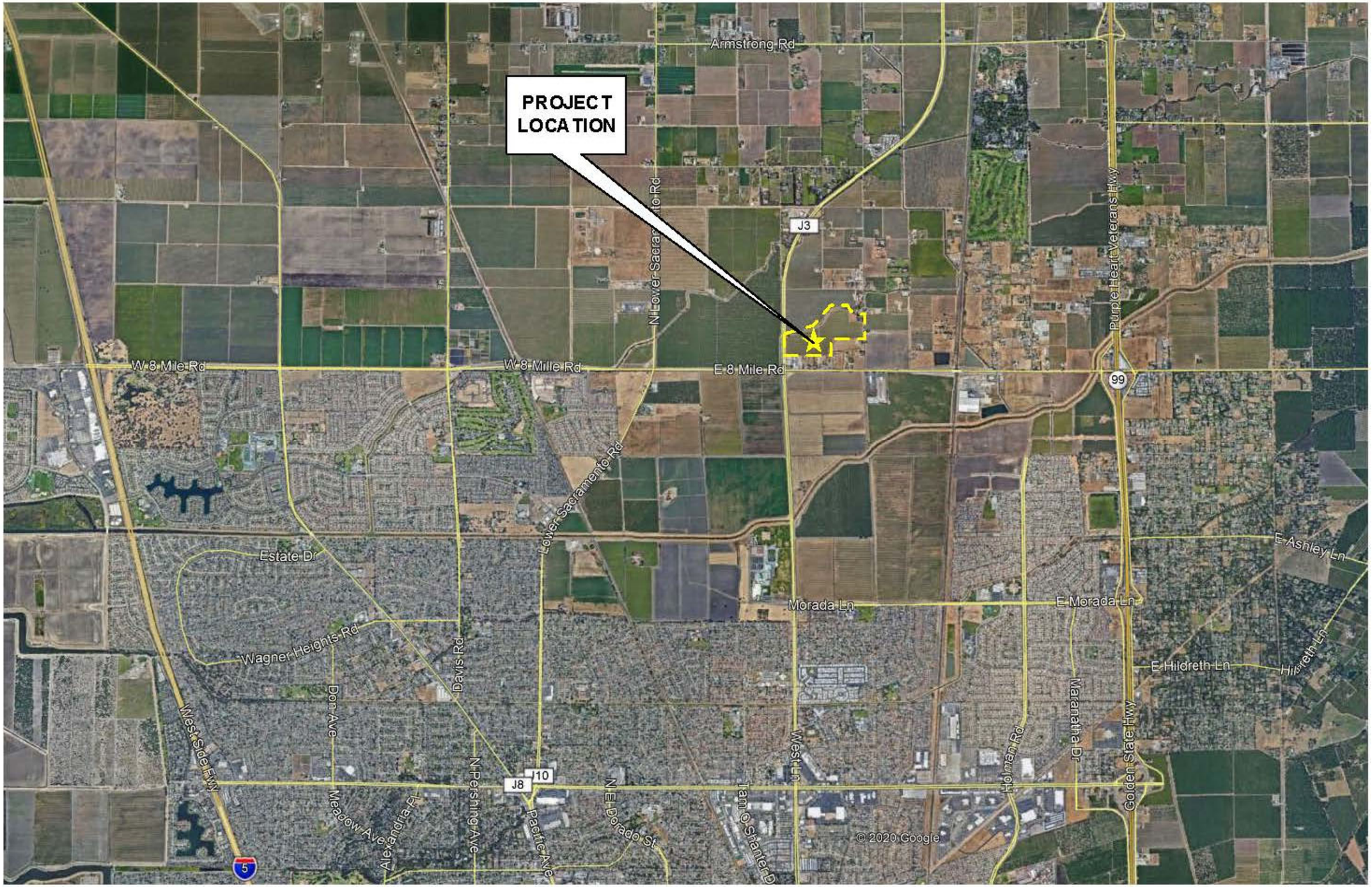

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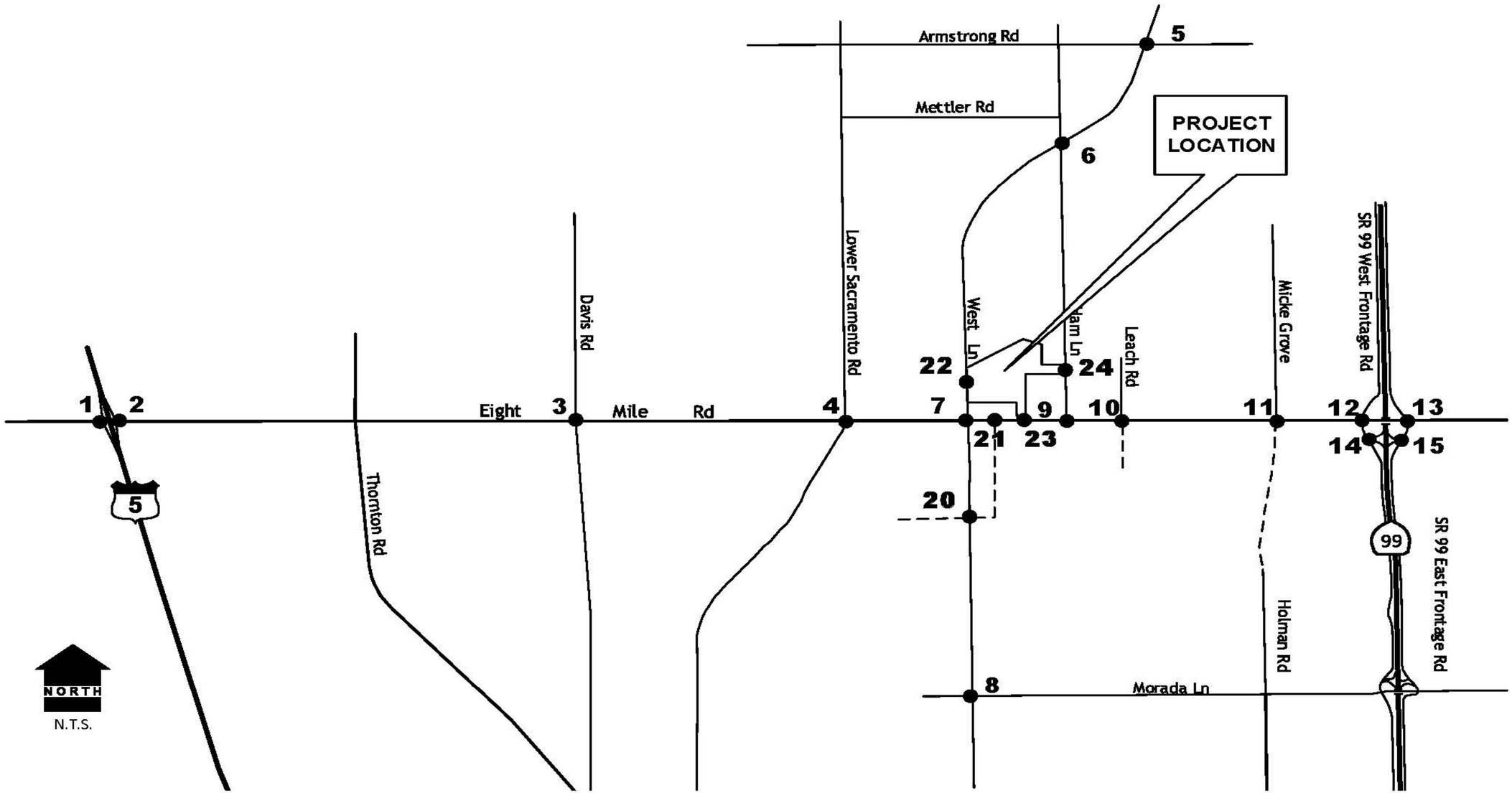
Figure 4-19.1. Vicinity Map
2020-053 Gill Medical Center



Note: Existing intersections are numbered 1 through 15. Future intersections, including project driveway intersections, are numbered 20 through 26. See the ***Study Intersections*** section of the traffic impact study for a detailed description.

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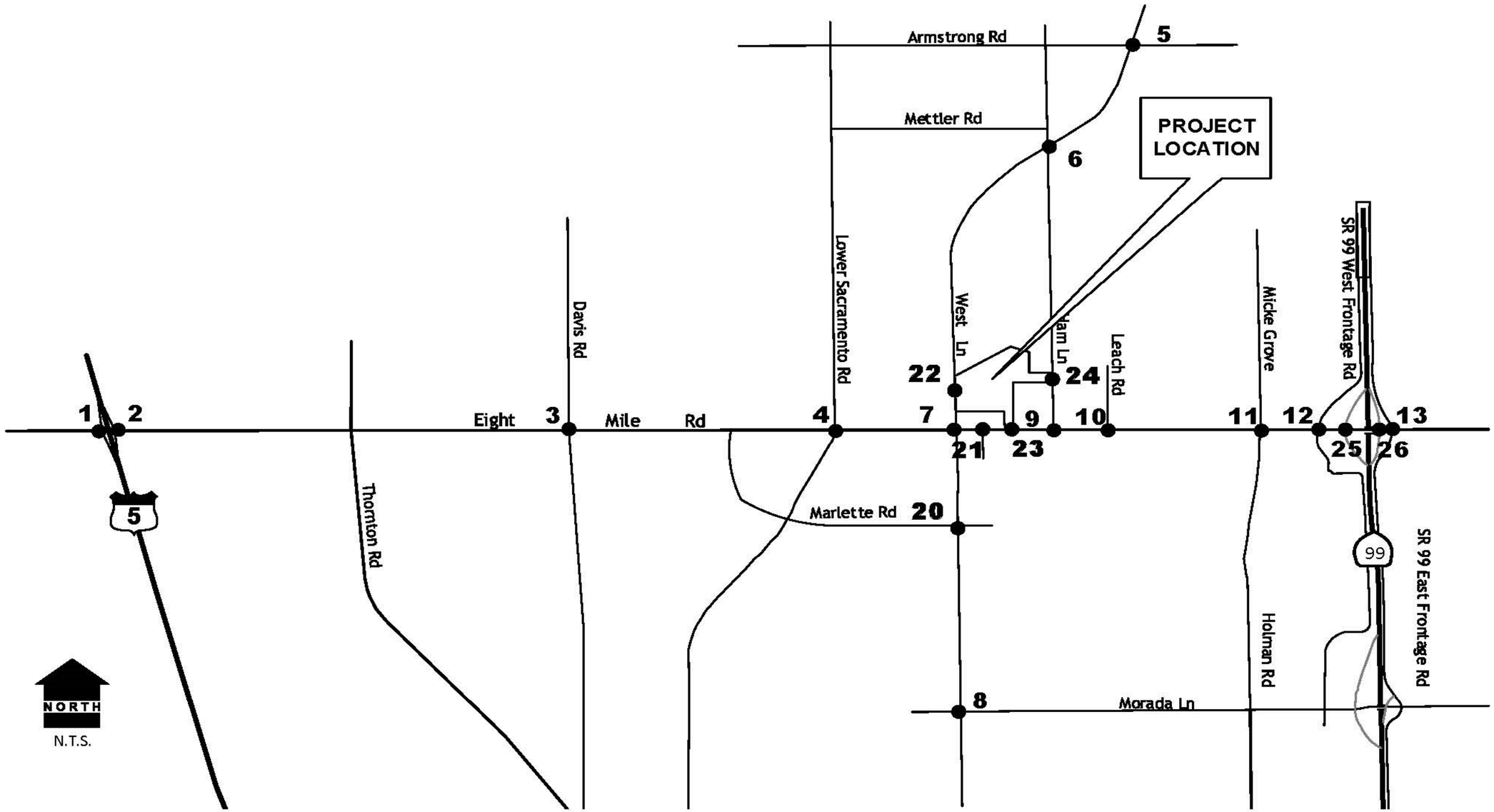
Figure 4-19.2. Roadway Network and Study Intersections - Existing and Existing Plus Approved Project Conditions

2020-053 Gill Medical Center



Note: Existing intersections are numbered 1 through 15. Future intersections, including project driveway intersections, are numbered 20 through 26. See the ***Study Intersections*** section of the traffic impact study for a detailed description.

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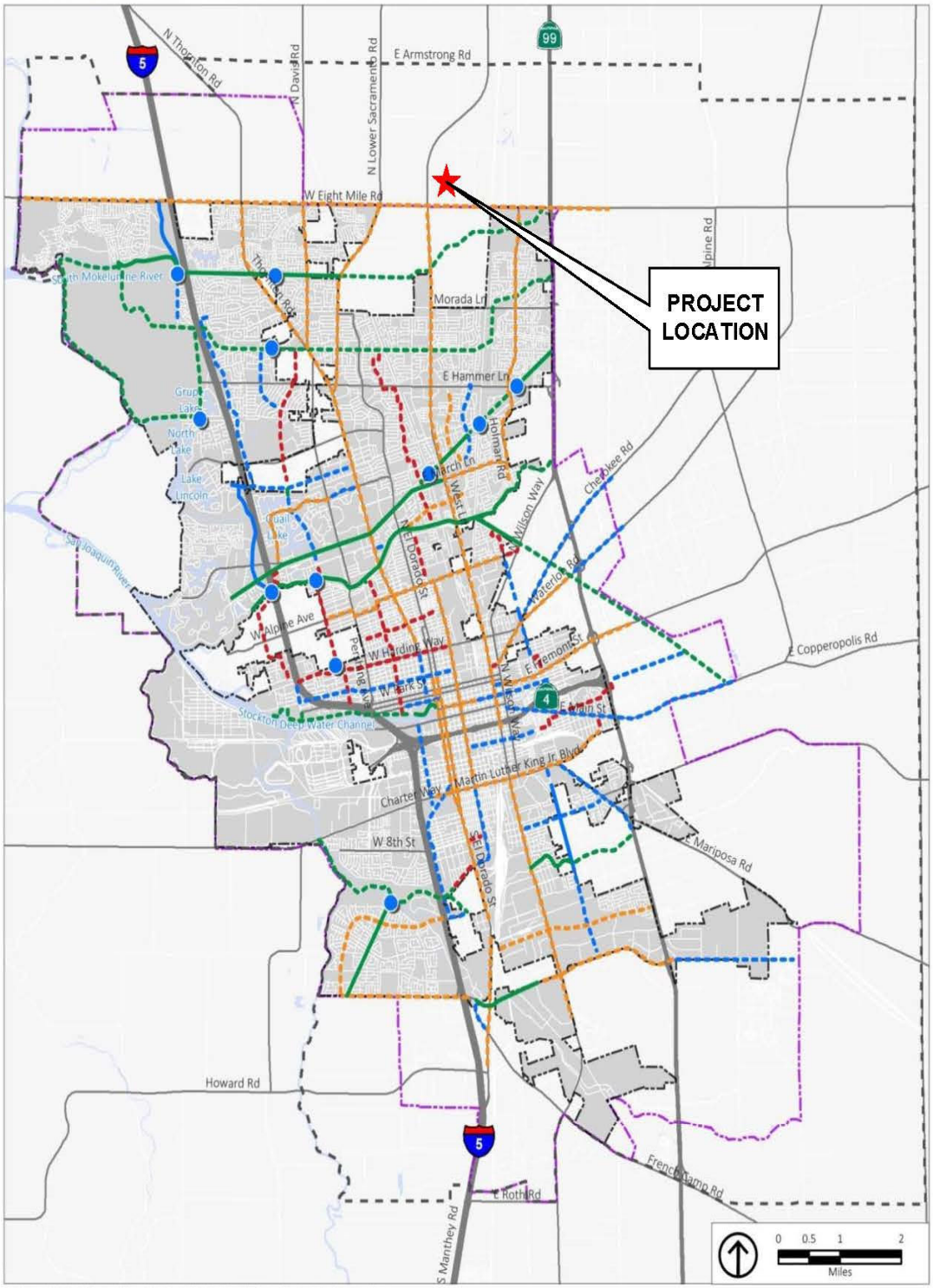
Figure 4-19.3. Roadway Network and Study Intersections - Long-Term Future Cumulative Conditions

2020-053 Gill Medical Center

Existing and Planned Bicycle Network



Source: City of Stockton; Fehr & Peers, 2016; PlaceWorks, 2017.

Existing Bicycle Network	Planned Bicycle Network	
Class I (Bike Path)	Class I (Bike Path)	New Bridge
Class II (Bike Lane)	Class II (Bike Lane)	General Plan Planning Area
	Class III (Bike Route)	City Limit
	Class IV (Separated Bikeway)	Sphere of Influence

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Figure 4-19.4. City of Stockton Existing and Planned Bicycle Network

2020-053 Gill Medical Center

West Lane/Hutchins Street/Airport Way is a north-south arterial roadway along the western frontage of the Project site. As shown in Figure 3-5, the Project site is proposed to have access to West Lane via a project driveway. The northern terminus is in the City of Lodi as Hutchins Street and the southern terminus is south of Manteca as Airport Way. Portions of West Lane are divided by a raised median. In the vicinity of the Project site, some portions of West Lane are four-lanes wide, other portions are six-lanes wide. West Lane is controlled by signalization at major intersections.

Ham Lane

Ham Lane is a north-south two-lane roadway east of the Project site. As shown in Figure 3-5, the Project site is proposed to have access to Ham Lane via a project driveway. The northern terminus of the portion of Ham Lane adjacent to the Project site is at Armstrong Road, and the southern terminus is at Eight Mile Road. Another discontinuous portion of Ham Lane is present in Lodi, north of Harney Lane. Ham Lane has a signalized intersection with West Lane, and an unsignalized intersection with Eight Mile Road.

SR 99 East Frontage Road and SR 99 West Frontage Road

SR 99 East Frontage Road and SR 99 West Frontage Road are undivided two-lane frontage roads located immediately east and west of SR 99. The northern termini of the frontage roads are north of Eight Mile Road. The southern termini are at an overcrossing of SR 99, approximately one-mile south of Hammer Lane. The frontage roadways are designed to intercept, collect, and distribute traffic crossing, entering, or leaving the freeway, and to furnish access to property that otherwise would be isolated as a result of the controlled access freeway. SR 99 East Frontage Road and SR 99 West Frontage Road provide direct access to light industrial, commercial, and residential development. SR 99 on-ramps and off-ramps form "hook ramp" intersections with the frontage roads at the SR 99 interchange at Eight Mile Road. As described in the PSR for the Eight Mile Road interchange on SR 99, the "hook ramp" intersections are planned to be replaced with a "diamond" interchange configuration, and the frontage roads would be re-aligned to locations further from SR 99. The speed limit on SR 99 East Frontage Road is 45 mph. The curved portions of SR 99 West Frontage Road are signed for 30 mph and 40 mph; the speed limit on other portions is unsigned.

Morada Lane

Morada Lane is a discontinuous east-west roadway. A portion of Morada Lane has a western terminus at Lower Sacramento Road and an eastern terminus at the Union Pacific Railroad tracks southwest of the Project site. This portion of Morada Lane has a 25 mph speed limit. Another portion of Morada Lane has a western terminus at a signalized intersection with McNair Lane, west of West Lane, and an eastern terminus approximately one mile east of SR 99. This portion of Morada Lane has 30 mph, 35 mph and 45 mph speed limits. Portions of Morada Lane are two-lanes wide while other portions are four to six-lanes wide. Morada Lane has access to SR 99 at an interchange that includes a two-lane overcrossing of SR 99. A PSR has been prepared for proposed improvements to this interchange.

Thornton Road

Thornton Road is a roadway with a northern terminus at the Sacramento County line and, as Pacific Avenue, has a southern terminus in downtown Stockton. Thornton Road generally has a north-south

alignment. However, a portion of Thornton Road south of Eight Mile Road has a northwest-southeast alignment. North of Eight Mile Road, Thornton Road is two lanes wide. In the vicinity of the Project site, the majority of Thornton Road is four lanes wide. The speed limit on Thornton Road is 55 mph north of Eight Mile Road, 45 mph between Eight Mile Road and Davis Road, and 40 mph south of Davis Road.

Davis Road

Davis Road is a north-south roadway with a northern terminus at the Mokelumne River, northwest of Lodi, and a southern terminus at Thornton Road. The majority of Davis Road is two lanes wide, with portions north of Thornton Road being three lanes wide and four lanes wide. In the vicinity of the proposed project site, the speed limit is 45 mph south of Eight Mile Road and 55 mph north of Eight Mile Road.

Lower Sacramento Road

Lower Sacramento Road is a roadway with a northern terminus at the Sacramento County line and a southern terminus at Rivara Road, south of Hammer Lane. Lower Sacramento Road generally has a north-south alignment. However, a portion immediately south of Eight Mile Road has a northeast-southwest alignment. North of Armor Drive, Lower Sacramento Road is two lanes wide. South of Armor Drive, it is four lanes wide. The speed limit on Lower Sacramento Road is 55 mph north of Armor Drive, 50 mph between Armor Drive and Katherine Way, and 40 mph south of Katherine Way.

Holman Road

Holman Road is a north-south arterial roadway with a northern terminus north of a signalized intersection at Morada Lane. Holman Road is planned to be extended north to the intersection of Eight Mile Road & Micke Grove Road. In the vicinity of the Project site, Holman Road is four lanes to six lanes wide. However, portions of Holman Road south of Hammer Lane are two lanes wide. The speed limit on Holman Road is 40 mph.

Micke Grove Road

Micke Grove Road is a two-lane north-south roadway with a northern terminus at Armstrong Road, and a current southern terminus at a "T" intersection at Eight Mile Road. Holman Road is planned to be extended north to Eight Mile Road and form the southern leg of the intersection of Eight Mile Road & Micke Grove Road. The speed limit on Micke Grove Road is 35 mph.

Marlette Road

Marlette Road is a discontinuous roadway on both sides of Lower Sacramento Road. A short, two-lane substandard roadway is present east of Lower Sacramento Road. To the northwest of Lower Sacramento Road, Marlette Road is also known as Destination Drive and has an intersection with Eight Mile Road. The portion of the roadway to the northwest intersects Lower Sacramento Road approximately 200 feet north of the intersection with the portion of the roadway to the east. Marlette Road is planned to be extended to the east to intersect with West Lane. The Tra Vigne Development Project (City of Stockton 2018a), which is located southeast of the intersection of Eight Mile Road & West Lane, includes a roadway connection with West Lane at the planned location of the intersection of West Lane & Marlette Road. The Tra Vigne roadway that would connect at this intersection is referred to as Tra Vigne Road B.

Armstrong Road

Armstrong Road is a two-lane east-west roadway. The western terminus of Armstrong Road is at DeVries Road, near Thornton Road. The eastern terminus is east of SR 99. The speed limit on Armstrong Road is unsigned west of West Lane, 55 mph east of West Lane, and 35 mph in the vicinity of SR 99.

4.19.1.2 Public Transportation

The San Joaquin Regional Transit District (SJRTD) is the primary provider of public transportation service in San Joaquin County, providing services to the Stockton metropolitan area, as well as inter-city, inter-regional, and rural transit service. The SJRTD provides fixed-route, flexible fixed-route, and dial-a-ride services in Stockton. Each service is described in more detail below (SJRTD 2020).

- Stockton Metropolitan Area Fixed Route Service operates 33 fixed routes within the Stockton Metropolitan Area.
- Intercity Fixed Route Service is provided by a route between Stockton and the Lodi Station in downtown Lodi connecting with Lodi Grapeline, Calaveras Transit, Delta Breeze, Sacramento South County Transit (SCT)/LINK buses.
- Interregional Commuter Service is a subscription commuter bus service. A total of eight routes connect San Joaquin County to Sacramento, the San Francisco Bay Area, and the Bay Area Rapid Transit (BART) system.
- SJRTD operates a Dial-a-Ride service for those individuals who, due to their disability, are functionally unable to use fixed-route services. Stockton Metro Area Dial-A-Ride (SMA-ADA) is a curb-to-curb service operating within Stockton Metropolitan Area for passengers with an Americans with Disabilities Act (ADA) Certification.
- Hopper Service is a deviated fixed-route service connecting Stockton, Tracy, Lodi, Manteca, Ripon, and Lathrop. The Metro Hopper provides seven routes. The County Hopper provides five routes.

The only SJRTD route in the vicinity of the Project site is Hopper Route 93 along West Lane, immediately west of the project site. This route provides service between Stockton and Lodi. The southern terminus of the route is at Sherwood Mall in Stockton. The northern terminus of the route is at the Lodi Transportation Station in downtown Lodi.

4.19.1.3 Park and Ride Facilities

Park and Ride lots are free parking facilities for commuters to use as a convenient meeting place for carpools, transit, and vanpools. Park and Ride lots in the Stockton area are listed below.

- The *Calvary First Church on Kelley Drive north of Hammer Lane* lot provides a transit connection to the SJRTD Inter-Regional Bus. The lot provides 40 parking spaces and a bicycle locker.
- The *LifeSong Church, 3034 Michigan Avenue* lot provides a transit connection to the SJRTD Inter-Regional Bus. The lot provides 45 parking spaces.

- The *I-5 at Benjamin Holt Drive; Marina Shopping Center* lot provides a transit connection to the SJRTD Inter-Regional Bus. The lot provides 45 parking spaces.
- The *Super Walmart Center, Hammer Lane and Sampson Street* lot provides 50 parking spaces.
- The *Morada Ranch Shopping Center* lot is at SR 99 and Morada Lane. The lot provides 35 parking spaces.

4.19.1.4 Bicycle and Pedestrian Systems

The generally level terrain and mild weather make bicycling and walking viable forms of transportation in Stockton. The City of Stockton has an extensive network of bicycle facilities, including off-street trails and paths, as well as on-street bicycle lanes and routes. Many of these facilities also support pedestrian travel. According to Caltrans guidelines, bicycle facilities are generally divided into four categories:

- *Class I Bikeway (Bike Path).* A completely separate facility designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.
- *Class II Bikeway (Bike Lane).* A striped lane designated for the use of bicycles on a street or highway. Vehicle parking and vehicle/pedestrian cross-flow are permitted at designated locations.
- *Class III Bikeway (Bike Route).* A route designated by signs or pavement markings for bicyclists within the vehicular travel lane (i.e., shared use) of a roadway.
- *Class IV Bikeway (Separated Bikeway).* A bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

The Project site is located in an area with currently sparse land use development. Neither sidewalks nor bicycle facilities are present along Eight Mile Road, West Lane, or Ham Lane in the immediate vicinity of the Project site.

The City of Stockton General Plan (City of Stockton 2018b) includes a map showing existing and planned bicycle facilities in the Stockton area, shown on Figure 4.19-5. *Central San Joaquin County Existing and Proposed Bikeways*. In the immediate vicinity of the project site, Figure 4.19-5 shows:

- a planned Class IV (separated bikeway) on Eight Mile Road from west of I-5 to east of SR 99, and
- a planned Class IV (separated bikeway) on West Lane from Eight Mile Road to downtown Stockton.

The *San Joaquin County Bicycle Master Plan Update* (County of San Joaquin 2010) presents a countywide assessment of existing bicycle facilities and recommended improvements to develop a future bicycle system.

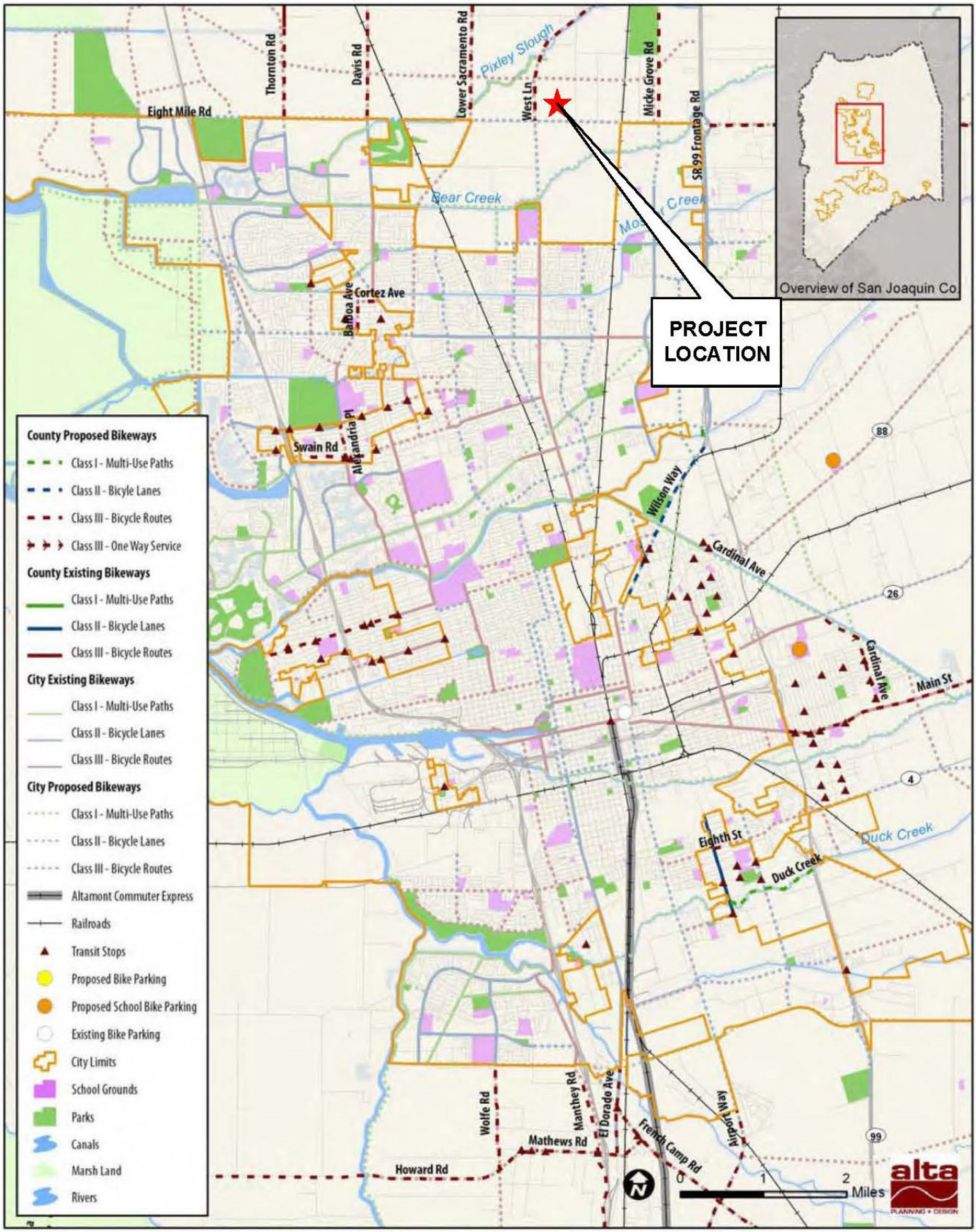

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Figure 4-19.5. Central San Joaquin County Existing and Proposed Bikeways

2020-053 Gill Medical Center

Figure 4.19-5 presents a map from the *San Joaquin County Bicycle Master Plan Update* showing the central San Joaquin County area. In the vicinity of the Project site, the plan includes:

- a Class III County Proposed Bicycle Route on West Lane from Eight Mile Road to the Lodi city limits,
- A Class II City Proposed Bicycle Lane on Eight Mile Road from Lower Sacramento Road to the UPRR railroad crossing east of West Lane, and
- A Class II City Proposed Bicycle Lane on West Lane from Eight Mile Road to Bear Creek.

4.19.1.5 Study Area Intersections

The traffic-related effects of the proposed Project were assessed by analyzing traffic operations at intersections that would serve Project-related travel. The following intersections were selected for analysis in consultation with County of San Joaquin staff (Levers pers. comm.) Existing intersections are numbered 1 through 15. Future intersections, including project driveway intersections, are numbered 20 through 26.

1. Eight Mile Road & I-5 Southbound Ramps
2. Eight Mile Road & I-5 Northbound Ramps
3. Eight Mile Road & Davis Road
4. Eight Mile Road & Lower Sacramento Road
5. West Lane & Armstrong Road
6. West Lane & Ham Lane
7. West Lane & Eight Mile Road
8. West Lane & Morada Lane
9. Eight Mile Road & Ham Lane
10. Eight Mile Road & Leach Road
11. Eight Mile Road & Micke Grove Road/Holman Road
12. Eight Mile Road & SR 99 West Frontage Road
13. Eight Mile Road & SR 99 East Frontage Road
14. SR 99 West Frontage Road & SR 99 Southbound Ramps (Eight Mile Road)
15. SR 99 East Frontage Road & SR 99 Northbound Ramps (Eight Mile Road)

The following two intersections would be constructed as part of the Tra Vigne Development Project (City of Stockton 2018a), which is located southeast of the intersection of Eight Mile Road & West Lane. The Tra Vigne Development Project is included as an approved project in the EPAP and Cumulative scenarios analyzed for this traffic impact study. As a result, these two intersections were only analyzed under the EPAP and Cumulative scenarios:

20. West Lane & Tra Vigne Road B
21. Eight Mile Road & Tra Vigne Road C

The following three intersections would only be present with construction of the proposed Project. As a result, these intersections were only analyzed under development conditions that included the proposed Project:

22. West Lane & West Project Driveway
23. Eight Mile Road & South Project Driveway
24. Ham Lane & East Project Driveway

The following two intersections would be constructed as part of the reconstruction of the Eight Mile Road interchange on SR 99. The reconstruction of the Eight Mile Road interchange on SR 99 is included in the Cumulative scenarios analyzed in the Traffic Study. As a result, these two intersections were only analyzed under the Cumulative scenarios:

25. Eight Mile Road & SR 99 Southbound Ramps
26. Eight Mile Road & SR 99 Northbound Ramps

The locations of study intersections analyzed under Existing and EPAP background scenarios are presented in Figure 4.19-2. The locations of study intersections analyzed under Cumulative background scenarios are presented in Figure 4.19-3. The numbers listed above correspond to the intersection numbers on these two figures.

4.19.1.6 Study area Roadway Segments

In addition to analyzing intersections, the traffic-related effects of the proposed Project on roadway segments were assessed in the Traffic Study. Major roadways adjacent to the project site, and roadways that would serve as major access routes, were analyzed. The following roadway segments were selected for analysis in consultation with County of San Joaquin staff.

- Eight Mile Road west of Lower Sacramento Road
- Lower Sacramento Road south of Eight Mile Road
- Eight Mile Road between Lower Sacramento Road & West Lane
- West Lane north of Eight Mile Road
- West Lane south of Eight Mile Road
- Eight Mile Road between West Lane & Ham Lane
- Ham Lane between West Lane and Eight Mile Road
- Eight Mile Road west of Micke Grove Road/Holman Road
- SR 99 north of Eight Mile Road
- SR 99 between Eight Mile Road and Morada Lane

The study roadway segments are specific to certain locations on the roadway network. However, in some cases, a roadway segment represents larger portions of roadway segments. For example, analysis results for the West Lane south of the Eight Mile Road roadway segment apply to West Lane from Eight Mile Road to Morada Lane. The descriptions of locations listed above and used in the Traffic Study are as specific as possible to minimize ambiguity.

4.19.1.7 Study Area Freeway Ramp Junctions

In addition to analyzing intersections and roadway segments, the Project traffic-related effects on freeway ramp junctions were assessed in the Traffic Study. Ramp junctions that would serve as major access routes, and would be affected by project-related traffic, were analyzed. The following ramp junctions were selected for analysis in consultation with County of San Joaquin staff:

- SR 99 Southbound Diverge to Eight Mile Road Off-Ramp
- SR 99 Southbound Merge from Eight Mile Road On-Ramp
- SR 99 Northbound Merge from Eight Mile Road On-Ramp
- SR 99 Northbound Diverge to Eight Mile Road Off-Ramp

The analysis of the ramp junctions listed above under Existing and EPAP background scenarios was based on the current configuration of the Eight Mile Road interchange on SR 99. The analysis of the ramp junctions listed above under Cumulative background scenarios was based on the reconstructed configuration of the Eight Mile Road interchange on SR 99 as described in the PSR prepared for proposed improvements to this interchange.

4.19.2 Regulatory Setting

4.19.2.1 SB 743

The new recommended metric in the CEQA guidelines for transportation impacts is VMT per capita per SB 743. The legislative intent of SB 743 is to balance the needs of congestion management with statewide goals for infill development, promotion of public health through active transportation and reduction of greenhouse gas emissions.

4.19.3 Environmental Impacts and Mitigation Measures

4.19.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. Transportation impacts are considered significant when the project would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines Section 1564.3, subdivision (b);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access.

Application of the above thresholds is further described below.

City of Stockton Significance Thresholds

The County of San Joaquin is the CEQA lead agency for the Project. The County considers it appropriate to use a City's significance thresholds in a traffic impact study for a project within that City's sphere of influence (Levers pers. comm.) The County considers this approach to be consistent with the San Joaquin County 2035 General Plan. The Project site is shown in the San Joaquin County Local Agency Formation Commission (LAFCO) *Stockton Sphere of Influence* map (San Joaquin County LAFCO 2020) in an "Area of Interest". The Project site is also shown in the *Envision Stockton 2040 General Plan* as being in the City "General Plan Planning Area" (City of Stockton 2018b). Because of the LAFCO and City of Stockton designations, it is considered appropriate to apply the City's significance threshold. While the Project site is not strictly in the City sphere of influence, it would be inappropriate to ignore the LAFCO designation as an Area of Interest and the City designation of the Project site being in the General Plan Planning Area.

The *City of Stockton Traffic Impact Analysis Guidelines* (City of Stockton 2003) presents the methods, assumptions and significance thresholds specified by the City of Stockton for use in preparing traffic impact studies. In general, the methods, assumptions and significance threshold presented in the guidelines are applied in the Traffic Study. It is important to note the significance thresholds specified in the guidelines are based on policies presented in the City General Plan. More specifically, the General Plan policies define ranges of LOS considered to be acceptable and unacceptable. The guidelines then use the General Plan policy ranges of LOS to identify whether a project impact is consistent or inconsistent with applicable policy.

Level of Service and Vehicle Miles Traveled

In the *City of Stockton Traffic Impact Analysis Guidelines*, the impacts of a project on LOS is an important factor in determining whether a project has a significant impact. However, recent changes to CEQA have changed how lead agencies use LOS in determining whether a project has a significant impact on transportation. As noted in the California Governor's Office of Planning and Research (OPR) document *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018),

> "Senate Bill 743 (Steinberg 2013), which was codified in Public Resources Code section 21099, required changes to the guidelines implementing CEQA (CEQA Guidelines) (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.) regarding the analysis of transportation impacts. . . OPR has proposed, and the California Natural Resources Agency (Agency) has certified and adopted, changes to the CEQA Guidelines that identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. With the California Natural Resources Agency's certification and adoption of the changes to the CEQA Guidelines, automobile delay, as measured by "level of service" and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3).)"

Notably, the *City of Stockton Traffic Impact Analysis Guidelines* was prepared before the recent changes to CEQA due to Senate Bill 743 (KD Anderson 2021). As a result, the City guidelines specify use of LOS in determining whether a project has a significant impact. Consistent with the approach described in the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA*, LOS is not used in the Traffic Study or this draft EIR as a basis for identifying significant impacts. Rather, the methods, assumptions and

significance thresholds presented in the City guidelines will be used to determine whether the project is consistent or inconsistent with General Plan policies on LOS, and whether the magnitude of inconsistency should be considered significant or less than significant. Therefore, in this draft EIR LOS is not used to identify a significant impact under CEQA; LOS is used to identify consistency with General Plan policies.

San Joaquin County 2035 General Plan Policy Consistency Criteria

As noted immediately above, in the Traffic Study prepared for the Project, the significance of the proposed Project's inconsistency with San Joaquin County 2035 General Plan policies is based on a determination of whether resulting LOS is considered acceptable. A project's inconsistency with 2035 General Plan policies is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would substantially worsen already unacceptable LOS.

The *City of Stockton Transportation Impact Analysis Guidelines* note that:

> "The City of Stockton's General Plan has a LOS 'D' standard for its roadway system. Intersections and roadway segments operating at LOS 'A', 'B', 'C', or 'D' conditions are considered acceptable, while those operating at LOS 'E' or 'F' conditions are considered unacceptable.
>
> "For a City intersection, a transportation impact for a project is considered significant if the addition of project traffic would cause an intersection that would function at LOS 'D' or better without the Project to function at LOS 'E' or 'F'.
>
> "For City intersections with a LOS 'E' or 'F' conditions without the project, a transportation impact for a project is considered significant if the addition of project traffic causes an increase of greater than 5 seconds in the average delay for the intersection."

Portions of the City's guidelines do not specifically address criteria used to quantify changes in operating conditions on roadway segments or freeway ramp junctions. For this draft EIR, the City's significance thresholds described above are also applied to roadway segments and freeway ramp junctions. As shown in Tables 4.19-1, 4.19-2 and 4.19-3, LOS at intersections is measured in seconds of delay, LOS on roadway segments is measured in traffic volume, and LOS at ramp junctions is measured in vehicle density. Therefore, for roadway segments and ramp junctions already at LOS E or F, an increase of greater than five seconds of delay cannot be identified. Because roadway segment LOS is measured in traffic volumes, rather than seconds of delay, an increase in traffic volumes is used in this draft EIR, in lieu of the threshold of five seconds of delay. At ramp junctions when the demand exceeds capacity, an increase in density is not identified; however, the densities of each area are based upon the volume. Therefore, for this draft EIR, if a roadway segment or ramp junction operates at LOS E or F without the project, the inconsistency with General Plan policies is considered significant if the addition of project traffic causes an increase of greater than five percent in traffic volumes.

Table 4.19-1. Intersection Level of Service Definitions

Level of Service	Signalized Intersections	Unsignalized Intersections
A	Vehicle progression is exceptionally favorable or the cycle length is very short. Delay < 10.0 seconds/vehicle	Little or no delay. Delay < 10 seconds/vehicle
B	Vehicle progression is highly favorable or the cycle length is short. Delay > 10 seconds/vehicle and < 20 seconds/vehicle	Short traffic delays. Delay > 10 seconds/vehicle and < 15 seconds/vehicle
C	Vehicle progression is favorable or the cycle length is moderate. Individual cycle failures may begin to appear at this level. Delay > 20 seconds/vehicle and < 35 seconds/vehicle	Average traffic delays. Delay > 15 seconds/vehicle and < 25 seconds/vehicle
D	Vehicle progression is ineffective or the cycle length is long. Many vehicles stop and the individual cycle failures are noticeable. Delay > 35 seconds/vehicle and < 55 seconds/vehicle	Long traffic delays. Delay > 25 seconds/vehicle and < 35 seconds/vehicle
E	Vehicle progression is unfavorable and the cycle length is long. Individual cycle failures are frequent. Delay > 55 seconds/vehicle and < 80 seconds/vehicle	Very long traffic delays, failure, extreme congestion. Delay > 35 seconds/vehicle and < 50 seconds/vehicle
F	Vehicle progression is very poor and the cycle length is long. Most cycles fail to clear the vehicle queue. Delay > 80 seconds/vehicle	Intersection blocked by external causes. Delay > 50 seconds/vehicle

Source: Transportation Research Board 2000 and Transportation Research Board 2010.

Table 4.19-2. City of Stockton General Plan Roadway Segment Level of Service Thresholds

Facility Class	Number of Lanes	Area Type	Level of Service				
			A	B	C	D	E
Freeway	4	All Areas	27,600	45,200	63,600	77,400	86,400
	6	All Areas	41,400	67,800	95,400	116,100	129,600
	8	All Areas	55,200	90,400	127,200	154,800	172,800
	10	All Areas	69,000	113,000	159,000	193,500	216,000

Table 4.19-2. City of Stockton General Plan Roadway Segment Level of Service Thresholds

Facility Class	Number of Lanes	Area Type	Level of Service				
			A	B	C	D	E
Arterial	2	Existing	8,400	9,300	11,800	14,700	17,300
	2	New	10,000	11,100	14,000	17,500	20,600
	4	Existing	18,600	20,600	26,000	32,500	38,200
	4	New	23,300	25,800	32,600	40,700	47,900
	6	Existing	28,800	32,000	40,300	50,400	59,300
	6	New	33,300	37,000	46,600	58,300	68,600
	8	Existing	38,100	42,300	53,300	66,600	78,400
	8	New	41,100	45,700	57,600	72,000	84,700
Collector	2	Existing	6,400	7,100	9,000	11,300	13,200
	2	New	6.400	7,100	9,000	11,300	13,200
	4	Existing	17,600	19,600	24,700	30,900	36,300
	4	New	21,100	23,500	29,600	37,000	43,500

Source: City of Stockton 2018c.
Notes: The Stockton General Plan does not provide thresholds for local roads. The "Existing" Area is generally located between I-5 and SR 99, and between Eight Mile Road and French Camp Road. Eight Mile Road is considered a "New" arterial due to lack of existing development in the area.

Table 4.19-3. Level of Service Criteria for Freeway Merge and Diverge Areas

Level of Service	Vehicle Density	Operating characteristics
A	Less than or equal to 10	LOS A represents unrestricted operations. Density is low enough to permit smooth merging and diverging, with very little turbulence in the traffic stream.
B	Greater than 10 Less than or equal to 20	At LOS B, merging and diverging maneuvers become noticeable to through drivers, and minimal turbulence occurs.
C	Greater than 20 Less than or equal to 28	At LOS C, speed within the influence area begins to decline as turbulence levels become much more noticeable. Both ramp and freeway vehicles begin to adjust their speeds to accomplish smooth transitions.

Table 4.19-3. Level of Service Criteria for Freeway Merge and Diverge Areas

Level of Service	Vehicle Density	Operating characteristics
D	Greater than 28 Less than or equal to 35	At LOS D, turbulence levels in the influence area become intrusive, and virtually all vehicles slow to accommodate merging and diverging. Some ramp queues may form at heavily used on-ramps, but freeway operation remains stable.
E	Greater than 35	LOS E represents conditions approaching or at capacity. Small changes in demand or disruptions within the traffic stream can cause both ramp and freeway queues to form.
F	Demand exceeds capacity	LOS F defines operating conditions within queues that form on both the ramp and the freeway mainline when capacity is exceeded by demand.

Note: Vehicle density is expressed as passenger car equivalents per mile per lane.
Source: Transportation Research Board 2010.

The *Envision Stockton 2040 General Plan* (City of Stockton 2018b) notes:

> "The City of Stockton strives to maintain LOS D or better for peak hour intersection and daily roadway segment operations. However, in the Downtown and other areas, exceptions to this standard are permissible to support other goals, such as encouraging safe travel by other modes of transportation than the car. The City can use VMT and LOS to support non-auto transportation modes, with the ultimate goal of maintaining and enhancing a complete roadway network that serves all travel modes in a balanced and equitable way."

This section of the City General Plan lists more than 14 facilities as exceptions to the LOS D policy standard, and lists the applicable standard. Among the facilities listed as exceptions is "Eight Mile Road, Lower Sacramento Road to West Lane – LOS E". Consistent with the City General Plan, a LOS E standard is applied in this draft EIR to the following study facilities under long-term Cumulative conditions:

- the intersection of Eight Mile Road & Lower Sacramento Road,
- the intersection of West Lane & Eight Mile Road, and
- the roadway segment Eight Mile Road between Lower Sacramento Road & West Lane.

For the facilities listed above, LOS E or better is considered acceptable, and LOS F is considered unacceptable under long-term Cumulative conditions. Under near-term Existing or EPAP background conditions, a LOS E standard is applied to the facilities listed above only if the facility is considered built out to its ultimate size, or would be built out with implementation of expansion measures.

SR 99 is a facility under the jurisdiction of Caltrans. While the City General Plan identifies LOS E and LOS F as standards for portions of the SR 99 corridor, Caltrans has set a LOS D standard (Dumas, pers. comm.). At the direction of City staff, because SR 99 is under the jurisdiction of Caltrans, LOS D is used as the LOS standard for the SR 99 corridor; LOS E and F are considered unacceptable. In the draft EIR transportation analysis, the Caltrans LOS D standard is applied to mainline freeway LOS, ramp junction LOS, and to LOS at freeway interchange intersections.

Based on the above discussion, a project's inconsistency with General Plan policies will be considered significant if:

- the project would result in traffic operating conditions changing from an acceptable LOS to an unacceptable LOS, or
- when LOS without the project is already unacceptable, the project would result in a substantial degradation of traffic operating conditions (e.g., an increase of more than five seconds of delay at an intersection, an increase of more than five percent in traffic volume on a roadway segment, or an increase of more than five percent in the freeway and ramp volumes for ramps).

Vehicle Miles Traveled Significance Threshold

The *Envision Stockton 2040 General Plan* (City of Stockton 2018b) Policy TR-4.3 addresses the topic of VMT as an impact in CEQA documents. The policy states,

> "Use the threshold recommended by the California Office of Planning and Research for determining whether VMT impacts associated with land uses are considered significant under State environmental analysis requirements."

The OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (California Governor's Office of Planning and Research 2018) provides recommended thresholds for determining the significance of VMT impacts associated with land use development projects. Specific thresholds are provided for residential, office, and retail commercial types of development. While a portion of the proposed Project includes office land uses, a specific threshold is not provided for the hospital land use and, therefore, does not provide adequate guidance for the overall project.

The City of Stockton General Plan Policy Action TR-4.3A states,

> "Establish a threshold of 15 percent below baseline VMT per capita to determine a significant transportation impact under the California Environmental Quality Act."

The 15 percent threshold in City of Stockton General Plan Action TR-4.3A is similar to thresholds for residential and office land use types recommended by OPR in the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, and is used in this draft EIR to determine the significance of VMT impacts associated with the Project.

Consistent with City of Stockton General Plan Action TR4.3A, if a project would result in a 15 percent or more reduction of vehicle travel, a project is considered to have a less than significant impact. A project that would not result in a reduction of 15 percent or more is considered to have a significant impact.

The percent change in vehicle travel is determined by comparing project-related travel to the Stockton area average. The unit of measure applied for this comparison in the *Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR* (City of Stockton 2018c) is "VMT per Service Population". The Envision Stockton 2040 General Plan Draft EIR defines service population as the "sum of population and employment".

The VMT per Service Population unit of measure applied in the Envision Stockton 2040 General Plan Draft EIR is also applied in the Traffic Study and this draft EIR. The Envision Stockton 2040 General Plan Draft EIR notes the VMT per Service population in the General Plan Planning Area is 24.16 VMT per Service Population. A 15 percent reduction from this value would be 20.54 VMT per Service Population (24.16 x 0.85 = 20.54). Therefore, in this draft EIR, if the Project would result in 20.54 VMT per Service Population or less, the project will be considered to have a less than significant impact on VMT. If the proposed Project would result in more than 20.54 VMT per Service Population, the project will be considered to have a significant impact on VMT.

At the time the analysis presented in the Traffic Study commenced, neither the City of Stockton nor the County of San Joaquin had adopted guidelines for analyzing VMT or determining the significance of a project's impact on VMT. Both the City and County were in the process of developing and adopting guidelines, but neither process was completed. The VMT analysis presented in this draft EIR is not intended to pre-empt either the City or County process of developing and adopting VMT guidelines. Rather, the analysis presented in this draft EIR is intended to be a good-faith effort at disclosing and identifying the VMT impacts of the proposed Project based on currently available data and guidance.

4.19.3.2 Methods of Analysis

Following is a description of the draft EIR transportation analysis methods.

Intersection Level of Service Analysis Procedures

Level of service (LOS) analysis provides a basis for describing existing traffic conditions and for evaluating the significance of project-related inconsistency with San Joaquin County 2035 General Plan transportation policies. Level of service measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions. The characteristics associated with the various LOS for intersections are presented in Table 4.19-1.

Level of service at both signalized and unsignalized intersections was analyzed using methods presented in the *Highway Capacity Manual*. Methods described in the *Highway Capacity Manual* were used to provide a basis for describing traffic conditions and for evaluating the significance of inconsistency with San Joaquin County 2035 General Plan policies. As specified by City of Stockton staff, methods from the *Highway Capacity Manual 2000* (Transportation Research Board 2000) were used to analyze local roadway intersections. As specified in the *City of Stockton Transportation Impact Analysis Guidelines* (City of Stockton 2003), the Traffix software analysis package was used to analyze local roadway intersections.

Caltrans District 10 recommends use of the *Highway Capacity Manual 6th Edition* (Transportation Research Board 2016) and the Synchro software package (Trafficware 2020). Therefore, as specified by City of Stockton staff, freeway ramp intersections were analyzed using *Highway Capacity Manual 6th Edition* methods and the Synchro software package.

The lengths of vehicle queues were also analyzed for this traffic impact study. Methods presented in the *Highway Capacity Manual 2000* and *Highway Capacity Manual 6th Edition* were used to analyze queuing. 95th percentile queue length values are presented in the Traffic Study.

Worksheets and output reports for the calculation of LOS and vehicles queues for all scenarios analyzed in the Traffic Study are presented in the Traffic Technical Appendix (See Draft EIR Appendix J).

For two-way stop-sign controlled unsignalized intersections (or one-way stop-sign controlled "T" intersections), the *Highway Capacity Manual* method considers gap acceptance and average delay of motorists on minor streets and in turn lanes to establish LOS. Level of Service is based on the length of the delay experienced by motorists on the worst single approach, rather than the intersection as a whole. It should be noted that overall intersection average LOS at unsignalized intersections is better, often much better, than LOS on the worst single approach.

Signal Warrants Procedures

Traffic signal warrants are a series of standards which provide guidelines for determining if a traffic signal is appropriate. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign-controlled minor streets. If one or more signal warrants are met, signalization of the intersection may be appropriate. However, a signal should not be installed if none of the warrants are met, because installation of signals would increase delays on the previously-uncontrolled major street, resulting in an undesirable increase in overall vehicle delay at the intersection. Signalization may also increase the occurrence of certain types of accidents. Therefore, if signals are installed where signal warrants are not met, the detriment of increased accidents and overall delay may be greater than the benefit in traffic operating conditions on the single worst movement at the intersection. Signal warrants, then, provide an industry-standard basis for identifying when the adverse effect on the worst movement is substantial enough to warrant signalization.

For the analysis conducted for this draft EIR, available data at unsignalized intersections are limited to a.m. and p.m. peak hour volumes. Thus, unsignalized intersections were evaluated using the Peak Hour Warrant (Warrant Number 3) from the California Department of Transportation (Caltrans) document *California Manual on Uniform Traffic Control Devices* (Caltrans 2014). This warrant was applied where the minor street experiences long delays in entering or crossing the major street for at least one hour of the day. The Peak Hour Warrant itself includes several components. Some of the components involve comparison of traffic volumes and vehicle delay to a series of standards. Another component involves comparison of traffic volumes to a nomograph.

Even if the peak hour warrant is met, a more detailed signal warrant study is recommended before a signal is installed. The more detailed study should consider volumes during the eight highest hours of the day, volumes during the four highest hours of the day, pedestrian traffic, and accident histories.

Signal warrant analysis worksheets for all stop sign-controlled intersections are presented in the Traffic Technical Appendix (see Draft EIR Appendix J).

Roadway Segment Level of Service Analysis Procedures

Roadway segment LOS was analyzed in the Traffic Study based on methods used in the *Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR* analysis (City of Stockton 2018c). These methods set maximum daily traffic volume thresholds for each LOS designation. The thresholds are shown in Table 4.19-2.

As shown in Table 4.19-2, the roadway segment LOS analysis method sets separate thresholds for:

- different types of facilities (i.e., freeways, arterials, and collectors);
- different number of lanes; and
- different area types (i.e., new versus existing).

As described in City of Stockton 2018c:

> "Thresholds for arterials and collectors were based on Highway Capacity Manual calculations and were developed in conjunction with City staff at the time the current General Plan analysis was prepared. The arterial thresholds distinguish between roads in the existing urbanized area and those in new development areas; because arterials in new development areas can be designed to higher standards, with medians, exclusive turn lanes, and controlled access from adjacent uses, the capacities are higher than those in previously-developed areas. Thresholds for freeways were based on Highway Capacity Manual procedures relating levels of service to vehicle density ranges."

As specified in City of Stockton 2018c, the "Existing" area is generally located between I-5 and SR 99, south of Eight Mile Road. Eight Mile Road itself is considered a "New" arterial due to the lack of existing development in the area.

Freeway Ramp Junction Level of Service Analysis Procedures

Freeway ramp junctions are areas where freeway on-ramps merge into freeways, and where freeway off-ramps diverge from freeways. Freeway ramp junctions which are considered to be potentially affected by project-related traffic are analyzed in this draft EIR.

Freeway ramp junction areas were analyzed using methods described in Chapters 12 and 13 of the *Highway Capacity Manual 2010* (Transportation Research Board 2010). The *Synchro* software package does not analyze freeway ramp junction LOS. Therefore, the McTrans *HCS+ Highway Capacity Software* package was used to perform the ramp junction LOS calculations.

The *Highway Capacity Manual 2010* methods were used to analyze two types of freeway facilities: on-ramp junctions (merge) and off-ramp junctions (diverge). The analysis of both types of facilities involves calculating the density of vehicles on a freeway facility, expressed as passenger cars per mile per lane (pcpmpl). The LOS designation is based on the vehicle density. Table 4.19-3 presents the relationship of vehicle density to LOS for ramp junctions.

Freeway ramp operating conditions are dependent on traffic volumes and the ramp characteristics. These characteristics include the length and type of acceleration and deceleration lanes, the free-flow speed of ramps, the number of lanes, grade, and the types of facilities connected to the ramps.

The *Highway Capacity Manual 2010* reports LOS A through E for ramps in terms of density. When the volume using the facility exceeds capacity, the V/C ratio is greater than 1, and the *Highway Capacity Manual 2010* identifies the facility as overcapacity. While a density is not stated when the facility is over capacity, the freeway and ramp volumes for the facility are documented. For this draft EIR, the freeway and ramp volumes are identified for all facilities where capacity has been exceeded.

Travel Forecasting

As part of the General Plan update process, the City of Stockton developed a series of travel demand forecasting simulation models. In consultation with City of Stockton staff (McDowell, pers. comm.), travel forecasts used in the Traffic Study and this draft EIR are based on travel demand forecasting models developed for the City of Stockton (City of Stockton 2004a; 2018b).

Travel models of the following two conditions were used to develop forecasts of future year traffic volumes for the Traffic Study:

- Existing Plus Approved Projects (EPAP), and
- 2040 Conditions with the updated General Plan.

The City's travel demand models produce forecasts of daily traffic volumes. The forecasts of daily volumes generated by the City's travel model are adequate for use in the analysis of roadway segment LOS, and are used for daily volume forecasts in this draft EIR. However, the daily volumes generated by the traffic model are not, by themselves, adequate for use in the peak hour LOS analysis of study intersections.

Daily traffic volumes from the travel models were used to generate growth factors. These growth factors were applied to existing peak hour intersection turning movement traffic volumes. The development of future year intersection turning movement traffic volumes requires that the turning movements at each intersection "balance". To achieve the balance, inbound traffic volumes must equal the outbound traffic volumes, and the volumes must be distributed among the various left-turn, through, and right-turn movements at each intersection. The "balancing" of future year intersection turning movement traffic volumes was conducted using methods described in the Transportation Research Board's (TRB) National Cooperative Highway Research Program (NCHRP) Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design* (Transportation Research Board 1982). The NCHRP 255 method applies the desired peak hour directional volumes to the intersection turning movement volumes, using an iterative process to balance and adjust the resulting forecasts to match the desired peak hour directional volumes.

4.19.3.3 Project Impacts and Mitigation Measures

The following analysis is conducted using existing background, near-term background conditions and long-term future background conditions. Future background conditions are based on the City of

Stockton General Plan. Analysis of traffic operating conditions under the following seven scenarios is presented in the Traffic Impact study (Appendix J):

- Existing Conditions,
- Existing Plus Phase 1 of the GMC project,
- Existing Plus Buildout of the GMC project,
- EPAP No GMC Project Conditions,
- EPAP Plus GMC Project Conditions,
- Cumulative No Project Conditions, and
- Cumulative Plus Project Conditions.

Impact 4.19-1: Conflict with a program plan, ordinance or policy addressing the circulation system
Impact Determination: *Less Than Significant with Mitigation Incorporated*

Thresholds:	*Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities.*

The transportation analysis presented below is based on the Existing Plus Phase 1, Existing Plus Project (i.e., full buildout of Phases 1 and 2) and Cumulative Plus Project conditions as modeled in the Project's Traffic Study (Appendix J). For a detailed discussion of trip generation, trip distribution, trip assignment associated with these modeling scenarios, refer to draft EIR Appendix J. the Project construction and operational phases are addressed separately below.

Project Construction

Project construction would result in temporary increases in local traffic due to the transport of construction personnel, equipment, and materials to the project site. There are no existing transit, bicycle or pedestrian facilities located on or adjacent the Project and no road closures would be required to implement the Project. Should construction within right-of-way be required for lane tappers, driveway improvements and/or entry element features, appropriate traffic controls would be implemented consistent with County standards. As a result, Project construction would have only short-term less than significant effects on local traffic and circulation LOS and would not conflict with any program, plan, ordinance or policy addressing the circulation system. Related impacts are **less than significant**, and no mitigation is required.

Project Operation Phase 1

Intersection Levels of Service

Phase 1 of the Project would include a driveway connection with West Lane along the western boundary of the project site. An emergency access drive from West Lane would also be provided along the project's northwestern boundary adjacent the 100-foot riparian setback buffer.

Table 4.19-4 presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under Existing Plus Phase 1 conditions. The worksheets presenting the calculation of LOS are included in the Traffic Study Technical Appendix (draft EIR Appendix J).

Table 4.19-4. Intersection Level of Service - Existing Plus Phase 1 Conditions

Study Intersections		Inters. Control	Signal Warrant Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	Eight Mile Road & I-5 Southbound Ramps	Signal		B	13.7	B	19.2
2	Eight Mile Road & I-5 Northbound Ramps	Signal		C	27.8	B	18.3
3	Eight Mile Road & Davis Road	Signal		C	29.2	C	25.2
4	Eight Mile Road & Lower Sacramento Road	Signal		C	32.7	D	41.8
5	West Lane & Armstrong Road	Signal		C	31.1	C	30.4
6	West Lane & Ham Lane	Signal		A	9.9	A	6.9
7	West Lane & Eight Mile Road	Signal		D	36.5	C	33.8
8	West Lane & Morada Lane	Signal		C		C	27.7
9	Eight Mile Road & Ham Lane	Signal	No	A	0.6	A	0.5
10	Eight Mile Road & Leach Road	Unsig	No	A	0.2	F	0.2
11	Eight Mile Road & Micke Grove Road/Holman Road	Unsig	No	A	0.5	A	1.2
12	Eight Mile Road & SR 99 West Frontage Road	AWSC	Yes	F	68.3	F	98.0
13	Eight Mile Road & SR 99 East Frontage Road	AWSC	Yes	D	25.8	F	67.4
14	SR 99 West Frontage Road & SR 99 SB Ramps	Unsig	Yes	A	6.5	A	6.0
15	SR 99 East Frontage Road & SR 99 NB Ramps	Unsig	No	A	6.8	A	10.0
20	West Lane & Tra Vigne Road B	- -		- -	- -	- -	- -
21	Eight Mile Road & Tra Vigne Road C	- -		- -	- -	- -	- -
22	West Lane & West Project Driveway	Unsig	No	A	0.1	A	0.2
23	Eight Mile Road & South Project Driveway	- -		- -	- -	- -	- -

Table 4.19-4. Intersection Level of Service - Existing Plus Phase 1 Conditions

Study Intersections		Inters. Control	Signal Warrant Met?	AM Peak LOS Delay		PM Peak LOS Delay	
24	Ham Lane & East Project Driveway	- -		- -	- -	- -	- -
25	Eight Mile Road & SR 99 Southbound Ramps	- -		- -	- -	- -	- -
26	Eight Mile Road & SR 99 Northbound Ramps	- -		- -	- -	- -	- -

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control. "AWSC" = All-way stop-sign control.
"I-5" = Interstate-5. "SR" = State Route. "SB" = Southbound. "NB" = Northbound.
Dashes ("- -") indicate intersection is not present under this scenario. Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.

Traffic volumes under Existing Plus Phase 1 conditions would be generally higher than under Existing Conditions and, as a result, vehicle delay at study intersections under Existing Plus Phase 1 conditions would be higher than under Existing Conditions. Under Existing Plus Phase 1 conditions, LOS at 14 of the 16 study intersections would be at acceptable LOS D or better during both the a.m. peak hour and the p.m. peak hour. Thus, no improvements are needed at these 14 intersections to achieve acceptable LOS. Impacts to the two study intersections that would operate at unacceptable LOS under Existing Plus Phase 1 conditions are discussed further below.

12. Eight Mile Road & SR 99 West Frontage Road.

Under Existing Plus Phase 1 conditions, the intersection of Eight Mile Road & SR 99 West Frontage Road would operate at LOS F with 68.3 seconds of delay during the a.m. peak hour, and at LOS F with 98.0 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable.

13. Eight Mile Road & SR 99 East Frontage Road

Under Existing Plus Phase 1 conditions, the intersection of Eight Mile Road & SR 99 East Frontage Road would operate at LOS D with 23.8 seconds of delay during the a.m. peak hour, and at LOS F with 67.4 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable.

Compared to Existing Conditions, the project-related increase in delay at these two intersections would not be greater than five seconds during either the a.m. peak hour or the p.m. peak hour. Therefore, based on information presented in the *San Joaquin County 2035 General Plan Policy Consistency Criteria* section above, the Phase 1 project-related inconsistency with intersection LOS *San Joaquin County 2035* General Plan policies is considered **less than significant**. No mitigation is required.

It should be noted that while no project-related improvements are required at these intersections under Existing Plus Phase 1 conditions, as shown in Table 4.19-5, implementation of recommended improvements for Existing Conditions at these two intersections would result in the following:

- At the Eight Mile Road & SR 99 West Frontage Road intersection operations would be LOS B with 14.4 seconds of delay during the a.m. peak hour and LOS C with 27.8 seconds of delay during the p.m. peak hour. LOS B and C are considered acceptable.
- At the Eight Mile Road & SR 99 East Frontage Road intersection operations would be LOS D with 23.8 seconds of delay during the a.m. peak hour, and at LOS F with 67.4 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable.

Table 4.19-5. Intersection Level of Service - Existing Plus Phase 1 Conditions With Recommended Improvements

Study Intersections	Inters. Control	AM Peak		PM Peak	
		LOS	Delay	LOS	Delay
12 Eight Mile Road & SR 99 West Frontage Road	Signal	B	14.4	C	27.8
13 Eight Mile Road & SR 99 East Frontage Road	Signal	C	22.0	C	34.2

Notes: Improvements are those recommended for Existing Conditions, not for Existing Plus Phase 1 conditions, and are shown for information only. No improvement are required due to Phase 1 project-related changes. "LOS" = Level of Service. "Inters. Control" = Type of intersection control. "Signal" = Signalized light control. "SR" = State Route. Delay is measured in seconds per vehicle.

Roadway Segment Levels of Service

Table 4.19-6 presents LOS on each study roadway segment under Existing Plus Phase 1 conditions. Traffic volumes under Existing Plus Phase 1 conditions would be generally higher than under Existing Conditions and as a result LOS at seven of the 10 study roadway segments would be at acceptable LOS C or better. No improvements are needed at these seven roadway segments to achieve acceptable LOS. Impacts to the three roadway segments that would operate at unacceptable LOS under Existing Plus Phase 1 conditions are discussed further below.

Table 4.19-6. Roadway Segment Level of Service - Existing Plus Phase 1

Roadway Segment	Number of Lanes	Daily Volume	Level of Service
Eight Mile Road West of Lower Sacramento Road	2	19,137	E
Lower Sacramento Road South of Eight Mile Road	2	16,191	E
Eight Mile Road Lower Sacramento Road to West Lane	2	22,254	F
West Lane North of Eight Mile Road	4	12,568	A
West Lane South of Eight Mile Road	4	16,270	A
Eight Mile Road West Lane to Ham Lane	2	12,803	C
Ham Lane West Lane to Eight Mile Road	2	540	A
Eight Mile Road West of Micke Grove Road/Holman Road	2	12,803	C
State Route 99 North of Eight Mile Road	6	79,002	C
State Route 99 Eight Mile Road to Morada Lane	6	80,088	C

Eight Mile Road West of Lower Sacramento Road

Under Existing Plus Phase 1 conditions, Eight Mile Road west of Lower Sacramento Road would operate at LOS E. LOS E is considered unacceptable.

Lower Sacramento Road South of Eight Mile Road

Under Existing Plus Phase 1 conditions, Lower Sacramento Road South of Eight Mile Road would operate at LOS E. LOS E is considered unacceptable.

Eight Mile Road Between Lower Sacramento Road and West Lane

Under Existing Plus Phase 1 conditions, Eight Mile Road Between Lower Sacramento Road and West Lane would operate at LOS F. LOS F is considered unacceptable.

Compared to Existing Conditions, the project-related increase in volumes at each of the three above intersections would not be greater than five percent. Therefore, based on criteria presented in the above *San Joaquin County 2035 General Plan Policy Consistency Criteria* section, the project-related inconsistency with road segment General Plan policies is considered **less than significant**. No improvements are required.

It should be noted that while no project-related improvements are required for these road segments under Existing Plus Phase 1 conditions, as shown in Table 4.19-7, implementation of recommended improvements for Existing Conditions on these three road segments would result in the following.

- **On the Eight Mile Road West of Lower Sacramento Road Segment** implementation of recommended improvements for Existing Conditions would result in this roadway segment operating at LOS A. LOS A is considered acceptable. This improvement is included in the City of Stockton Public Facility Fees (PFF) Program (City of Stockton 2004b), and the San Joaquin County Regional Transportation Impact Fee (RTIF) program (SJCOG 2018).
- **On the Lower Sacramento Road South of Eight Mile Road Segment** implementation of recommended improvements for Existing Conditions would result in this roadway segment operating at LOS A. LOS A is considered acceptable. This improvement is included in the City of Stockton PFF program, and the San Joaquin County RTIF program.
- **On the Eight Mile Road Between Lower Sacramento Road and West Lane** implementation of recommended improvements for Existing Conditions would result in this roadway segment operating at LOS A. LOS A is considered acceptable. This improvement is included in the City of Stockton PFF program.

Table 4.19-7. Roadway Segment Level of Service -Existing Plus Phase 1 With Recommended Improvements

Roadway Segment	Number of Lanes	Daily Volume	Level of Service
Eight Mile road West of Lower Sacramento Road	4	19,137	A
Lower Sacramento Road South of Eight Mile Road	4	16,191	A
Eight Mile Road Lower Sacramento Road to West Lane	4	22,254	A

Notes: Improvements are those recommended for Existing Conditions, not for Existing Plus Phase 1 conditions, and are shown for information only. No improvement are required due to Phase 1 project-related changes.

Ramp Junction Levels of Service

Table 4.19-8 presents LOS on each study ramp junction under Existing Plus Phase 1 conditions. Traffic volumes at these ramp junctions under Existing Plus Phase 1 conditions would be generally higher than under Existing Conditions. Under Existing Plus Phase 1 conditions, LOS at all four study ramp junctions would be at acceptable LOS C or better and related impacts are **less than significant**. No improvements are needed at these ramp junctions to achieve acceptable LOS.

Table 4.19-8. State Route 99 Ramp Merge and Diverge Level of Service - Existing Plus Phase 1

Ramp Junction	AM Peak				PM Peak			
	Freeway Volume	Hour Ramp Volume	Density	LOS	Freeway Volume	Hour Ramp Volume	Density	LOS
SR 99 Southbound Diverge to Eight Mile Road Off-Ramp (Existing)	3,639	267	25.9	C	3,022	293	22.5	C
SR 99 Southbound Merge from Eight Mile Road On-Ramp (Existing)	3,639	311	25.0	C	3,022	191	20.7	C
SR 99 Northbound Merge from Eight Mile Road On-Ramp (Existing)	2,936	369	22.0	C	3,826	242	25.6	C
SR 99 Northbound Diverge to Eight Mile Road Off-Ramp (Existing)	2,936	182	21.4	C	3,826	297	26.5	C

Notes: LOS = Level of Service. SR = State Route. Density is expressed in passenger cars per mile per lane.

Increased Demand for Public Transit

As shown in Table 4.19-9, Phase 1 development of the medical center would generate 386 trips per day. This would be less than 10 percent of the full buildout (Phases 1 and 2) project trip generation per day (386 ÷ 3,975 = 0.097).

Considering the relatively low number of trips generated by Phase 1 development, Phase 1 would have a **less than significant impact** on public transit service. No mitigation measures are required for Phase 1 development.

Table 4.19-9. Gill Medical Center Project Trip Generation Estimate

Land Use and ITE Land Use Code	Quantity (Thousand Square Feet)	Trips Generated						
			AM Peak Hour			PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
Medical Center (Hospital - ITE Code 610)	36.00	386	22	10	32	11	24	35
Medical Office Building (Medical-Dental Office Building - ITE Code 720)	60.00	2,088	130	37	167	58	149	208
Hospital (Hospital - ITE Code 610)	140.00	1,501	85	39	125	43	92	136
	Total	**3,975**	**237**	**86**	**324**	**112**	**265**	**379**

Sources: Institute of Transportation Engineers 2017.
Note: Totals may not equal the sum of components due to rounding.

Increased Demand for Bicycle and Pedestrian Facilities

Project implementation would result in increased demand for bicycle and pedestrian facilities. With the current sparse land use development in the Project vicinity, bicycle and pedestrian facilities are not present. However, approved and planned land use development immediately to the south of Eight Mile Road would result in these types of facilities being constructed in the Project vicinity.

As described in Chapter 3.0 Project Description, the proposed Project includes facilities to provide pedestrian access to, and circulation within, the project site. Phase 1 would provide:

- full curb, gutter and sidewalk at the driveway entrance and along the project frontage with West Lane;
- pedestrian sidewalks located on each side of the entrance drive and northern segment; and
- dedicated pedestrian pathways constructed to ADA standards linking all parking lots, the roundabout and the medical center building entrance to ensure a safe path of travel.

The majority of pedestrian travel to and from the project site would be along the east side of West Lane between the project site and Eight Mile Road. As discussed above, off-site bicycle facilities are planned on West Lane along the western Project frontage, and on Eight Mile Road south of the project site. The Project proposes curb, gutter and sidewalk along the frontage with West Lane. However, these improvements would end approximately 450 feet north of Eight Mile Road. This results in a gap in the planned sidewalk route and would require pedestrians to walk along the shoulder of West Lane between the project site and Eight Mile Road. Furthermore, the San Joaquin County Bicycle Master Plan calls for a Class III Bicycle Route on West Lane from Eight Mile Road to the Lodi city limits. While the Project would

provide full curb, gutter and sidewalk at the driveway entrance and along the project frontage with West Lane, bicycle facilities south of site are not included. The gap in sidewalk for pedestrians and lack of bicycle facilities on the east side of West Lane between the Project site and Eight Mile Road is a significant impact. With implementation of Mitigation Measures 4.19-1a and 4.19-1b, this impact would be reduced to **less than significant with mitigation incorporated.**

On-site facilities supporting the use of bicycles are not explicitly noted in draft EIR Chapter 3.0 Project Description or on the Project site plan (Figure 3-5). Implementation of the proposed project would result in demand for onsite bicycle facilities. A lack on on-site bicycle facilities is considered a significant impact. With implementation of Mitigation Measure 4.19-1b, this impact would be reduced to **less than significant with mitigation incorporated.**

Project Operation Phase 2

Intersection Levels of Service

In addition to Phase 1 circulation improvements which include a new West Lane driveway and West Lane emergency access road (described above), Phase 2 would add the following (as shown on Figure 3-5):

- A driveway connection with Eight Mile Road on the southern boundary of the project site, and
- A driveway connection with Ham Lane on the eastern boundary of the project site.

Table 4.19-10 presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under Existing Plus Project conditions (both Phases 1 and 2). The worksheets presenting the calculation of LOS are included in the Traffic Study Technical Appendix (see draft EIR Appendix J).

Table 4.19-10. Intersection Level of Service - Existing Plus Project Conditions

Study Intersections		Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
				LOS	Delay	LOS	Delay
1	Eight Mile Road & I-5 Southbound	Signal		B	13.7	B	19.2
2	Ramps Eight Mile Road & I-5 Northbound	Signal		C	27.8	B	18.3
3	Ramps Eight Mile Road & Davis Road	Signal		C	29.9	C	26.2
4	Eight Mile Road & Lower Sacramento Road	Signal		C	34.6	D	46.3
5	West Lane & Armstrong Road	Signal		C	31.2	C	30.4
6	West Lane & Ham Lane	Signal		B	10.3	A	7.2
7	West Lane & Eight Mile Road	Signal	No	D	38.5	D	38.6
8	West Lane & Morada Lane	Signal		C	32.1	C	27.8

Table 4.19-10. Intersection Level of Service - Existing Plus Project Conditions

Study Intersections		Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
				LOS	Delay	LOS	Delay
9	Eight Mile Road & Ham Lane	Signal		A	1.2	A	3.4
10	Eight Mile Road & Leach Road	Unsig	No	A	0.2	A	0.2
11	Eight Mile Road & Micke Grove Road/Holman Road	Unsig	No	A	0.5	A	1.3
12	Eight Mile Road & SR 99 West Frontage Road	AWSC	Yes	F	83.1	F	126.0
13	Eight Mile Road & SR 99 East Frontage Road	AWSC	Yes	E	35.2	F	73.7
14	SR 99 West Frontage Road & SR 99 SB Ramps	Unsig	Yes	A	6.5	A	6.2
15	SR 99 East Frontage Road & SR 99 NB Ramps	Unsig	Yes	B	10.2	B	11.7
20	West Lane & Tra Vigne Road B	- -		- -	- -	- -	- -
21	Eight Mile Road & Tra Vigne Road C	- -		- -	- -	- -	- -
22	West Lane & West Project Driveway	Unsig	No	A	0.0	A	0.0
23	Eight Mile Road & South Project Driveway	Unsig	No	A	0.7	A	2.8
24	Ham Lane & East Project Driveway	Unsig-	No	A	3.9	A	5.8
25	Eight Mile Road & SR 99 Southbound Ramps	-		- -	- -	- -	- -
26	Eight Mile Road & SR 99 Northbound Ramps	- -		- -	- -	- -	- -

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control. "AWSC" = All-way stop-sign control.
"I-5" = Interstate-5. "SR" = State Route. "SB" = Southbound. "NB" = Northbound.
Dashes ("- -") indicate intersection is not present under this scenario. Delay is measured in seconds per vehicle. Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.

Traffic volumes under Existing Plus Project conditions would be generally higher than under Existing Conditions and, as a result, vehicle delay at study intersections under Existing Plus Project conditions would be higher than under Existing Conditions. Under Existing Plus Project conditions, LOS at 16 of the 18 study intersections would be at acceptable LOS D or better during both the a.m. peak hour and the p.m. peak hour. No improvements are needed at these 16 intersections to achieve acceptable LOS. Impacts to the two study intersections that would operate at unacceptable LOS under Existing Plus Project conditions are discussed further below.

12. Eight Mile Road & SR 99 West Frontage Road.

Under Existing Plus Project conditions, the intersection of Eight Mile Road & SR 99 West Frontage Road would operate at LOS F with 83.1 seconds of delay during the a.m. peak hour, and at LOS F with 126.0 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable.

Compared to Existing Conditions, the Project-related increase in delay would be greater than five seconds during either the a.m. peak hour or the p.m. peak hour. Therefore, based on criteria presented in the above *General Plan Policy Consistency Criteria* section, the project-related inconsistency with San Joaquin County 2035 General Plan policies is considered significant. With implementation of Mitigation Measure 4.19-1c this impact would be reduced to **less than significant with mitigation incorporated**.

As shown in Table 4.19-11, Mitigation Measure 4.19-1c would improve traffic operations to LOS B with 14.5 seconds of delay in the a.m. peak hour and LOS B with 19.5 seconds of delay in the p.m. peak hour. LOS B is considered acceptable.

Table 4.19-11. Intersection Level of Service - Existing Plus Project Conditions With Recommended Improvements

Study Intersections	Inters. Control	AM Peak		PM Peak	
		LOS	Delay	LOS	Delay
12 Eight Mile Road & SR 99 West Frontage Road	Signal	B	14.5	B	19.5
13 Eight Mile Road & SR 99 East Frontage Road	Signal	C	23.9	C	21.0

Notes: "LOS" = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized control. "SR" = State Route.
Delay is measured in seconds per vehicle.

13. Eight Mile Road & SR 99 East Frontage Road

Under Existing Plus Project conditions, the intersection of Eight Mile Road & SR 99 East Frontage Road would operate at LOS E with 35.2 seconds of delay during the a.m. peak hour, and at LOS F with 73.7 seconds of delay during the p.m. peak hour. LOS E and F are considered unacceptable. Compared to Existing Conditions, the project-related increase in delay would be greater than five seconds during either the a.m. peak hour or the p.m. peak hour. Therefore, based on criteria presented in the above *San Joaquin County 2035 General Plan Policy Consistency Criteria* section, the project-related inconsistency with 2035 General Plan policies is considered significant. With implementation of Mitigation Measure 4.19-1d this impact would be reduced to **less than significant with mitigation incorporated**.

As shown in Table 4.19-11, implementation of the above recommended improvements would improve traffic operations to LOS C with 23.9 seconds of delay in the a.m. peak hour and LOS C with 21.0 seconds of delay in the p.m. peak hour. LOS C is considered acceptable.

Roadway Segment Levels of Service

Table 4.19-12 presents LOS on each study roadway segment under Existing Plus Project conditions. Traffic volumes under Existing Plus Project conditions would be generally higher than under Existing Conditions and as a result LOS at seven of the 10 study roadway segments would be at acceptable LOS C or better. No improvements are needed at these seven roadway segments to achieve acceptable LOS.

The following describes the three study roadway segments that would operate at unacceptable LOS under Existing Plus Project conditions.

Table 4.19-12. Roadway Segment Level of Service - Existing Plus Project

Roadway Segment	Number of Lanes	Daily Volume	Level of Service
Eight Mile Road West of Lower Sacramento Road	2	19,869	E
Lower Sacramento Road South of Eight Mile Road	2	16,801	E
Eight Mile Road Lower Sacramento Road to West Lane	2	23,676	F
West Lane North of Eight Mile Road	4	13,474	A
West Lane South of Eight Mile Road	4	17,182	A
Eight Mile Road West Lane to Ham Lane	2	13,981	C
Ham Lane West Lane to Eight Mile Road	2	1,425	A
Eight Mile Road West of Micke Grove Road/Holman Road	2	13,869	C
State Route 99 North of Eight Mile Road	6	79,016	C
State Route 99 Eight Mile Road to Morada Lane	6	80,906	C

Eight Mile Road West of Lower Sacramento Road

Under Existing Plus Project conditions, Eight Mile Road west of Lower Sacramento Road would operate at LOS E. LOS E is considered unacceptable.

Lower Sacramento Road South of Eight Mile Road

Under Existing Plus Project conditions, Lower Sacramento Road South of Eight Mile Road would operate at LOS E. LOS E is considered unacceptable.

Compared to Existing Conditions, the project-related increase in volumes would not be greater than five percent. Therefore, based on criteria presented in the above *San Joaquin County 2035 General Plan Policy Consistency Criteria* section, the project-related inconsistency with 2035 General Plan policies for the above two road segments is considered **less than significant**. No improvements are required.

It should be noted that while no project-related improvements are required on these roadway segments under Existing Plus Project conditions, Table 4.19-13 shows implementation of recommended improvements for Existing Conditions would result in this roadway segment operating at LOS A. LOS A is considered acceptable. This improvement is included in the City of Stockton PFF program (City of Stockton 2004b), and the San Joaquin County RTIF program (SJCOG 2018).

Table 4.19-13. Roadway Segment Level of Service - Existing Plus Project With Recommended Improvements

Roadway Segment	Number of Lanes	Daily Volume	Level of Service
Eight Mile Road West of Lower Sacramento Road *	4	19,869	A
Lower Sacramento Road South of Eight Mile Road *	4	16,801	A
Eight Mile Road Lower Sacramento Road to West Lane **	4	23,676	B

Eight Mile Road Between Lower Sacramento Road and West Lane

Under Existing Plus Project conditions, Eight Mile Road Between Lower Sacramento Road and West Lane would operate at LOS F. LOS F is considered unacceptable. Compared to Existing Conditions, the project-related increase in volumes would be greater than five percent. Therefore, based on criteria presented in the above *San Joaquin County 2035 General Plan Policy Consistency Criteria* section, the project-related inconsistency with 2035 General Plan policies is considered significant. With implementation of Mitigation Measure 4.19-1e this impact would be reduced to **less than significant with mitigation incorporated**.

A summary of LOS with recommended improvements is presented in Table 4.19-13. With this recommended improvement, this roadway segment would operate at acceptable LOS A and reduce the project-related inconsistency with San Joaquin County 2035 General Plan policies to a less than significant level. This improvement is included in the City of Stockton PFF program.

Ramp Junction Levels of Service

Table 4.19-14 presents LOS on each study ramp junction under Existing Plus Project conditions. Traffic volumes under Existing Plus Project conditions would be generally higher than under Existing Conditions. Under Existing Plus Project conditions, LOS at all four study ramp junctions would be at acceptable LOS C or better and related impacts are **less than significant**. No improvements are needed at these ramp junctions to achieve acceptable LOS.

Table 4.19-14. State Route 99 Ramp Merge and Diverge Level of Service - Existing Plus Project

Ramp Junction	AM Peak Hour				PM Peak Hour			
	Freeway Volume	Ramp Volume	Density	LOS	Freeway Volume	Ramp Volume	Density	LOS
SR 99 Southbound Diverge to Eight Mile Road Off-Ramp (Existing)	3,639	268	25.9	C	3,022	293	22.5	C
SR 99 Southbound Merge from Eight Mile Road On-Ramp (Existing)	3,639	329	25.1	C	3,022	246	21.2	C

Table 4.19-14. State Route 99 Ramp Merge and Diverge Level of Service - Existing Plus Project

Ramp Junction	AM Peak Hour				PM Peak Hour			
	Freeway Volume	Ramp Volume	Density	LOS	Freeway Volume	Ramp Volume	Density	LOS
SR 99 Northbound Merge from Eight Mile Road On-Ramp (Existing)	2,936	369	22.0	C	3,826	243	25.6	C
SR 99 Northbound Diverge to Eight Mile Road Off-Ramp (Existing)	2,936	231	21.5	C	3,826	320	26.5	C

Notes: LOS = Level of Service. SR = State Route. Density is expressed in passenger cars per mile per lane.

Increased Demand for Public Transit

Phase 2 development of the medical office building and 100-bed hospital would generate more than 90 percent of the overall project trips ((2,088 + 1,501) ÷ 3,975 = 0.903). Consequently, Phase 2 development would result in a relatively larger increase in demand for public transit compared to Phase 1 only.

In May 2020, a representative of the applicant participated in a video conference with Ms. Kimberly Gayle, Deputy Chief Executive Officer of SJRTD. During this conference, the potential for SJRTD to provide service to the project site via Hopper Route 93 was discussed (Jolley pers. comm.) Hopper Route 93 currently travels along West Lane adjacent to the project site. However, access to the southbound portion of the Hopper route from the project site would require a new transit stop along the west side of West Lane. The following factors make development this transit stop infeasible:

- physical constraints (i.e., pedestrians would have to cross the four-lane divided West Lane);
- land ownership (i.e., neither the County nor the applicant own the land on the west side of West Lane, where the southbound transit stop would be located); and
- potential safety concerns (i.e., pedestrian travel across and along West Lane).

As a result, the Phase 2 impact of increased demand for public transit is considered potentially significant. With implementation of Mitigation Measure 4.19-1f, this impact would be reduced to a **less than significant with mitigation incorporated**.

Increased Demand for Bicycle and Pedestrian Facilities

As discussed above, Phase 2 development would generate more than 90 percent of overall vehicle trips and therefore would produce a higher demand for bicycle and pedestrian facilities compared to Phase 1. The Project vicinity is only sparsely developed with no bicycle and/or pedestrian facilities existing on roads located adjacent the Project site. However, when Phase 2 construction proceeds in 2030, approved and planned development immediately south of Eight Mile Road would result in these types of facilities being constructed with a corresponding increase in pedestrian travel demand in the Project vicinity.

As discussed above, Phase 1 construction would include the following pedestrian facilities:

- full curb, gutter and sidewalk at the driveway entrance and along the project frontage with West Lane;
- pedestrian sidewalks located on each side of the West Land entrance drive and northern segment; and,
- dedicated onsite pedestrian pathways constructed to ADA standards linking all parking lots, the roundabout and the medical center building entrance to ensure a safe path of travel.

Phase 2 would add the following:

- pedestrian sidewalks located on each side of the new Ham Lane and Eight Mile Road entrance drives; and
- expansion of Phase 1 onsite dedicated pedestrian pathways constructed to ADA standards to serve Phase 2 development.

As noted above, Phase 2 of would include sidewalks along the Ham Lane entrance driveway. Pedestrian facilities are expected to be provided along West Lane south of the project site before pedestrian facilities along Ham Lane south of the project site. Ham Lane is currently a narrow roadway with no shoulders and roadside ditches. As a result, directing pedestrian travel to Ham Lane could result in unsafe pedestrian travel along Ham Lane, and this is considered a significant impact. With implementation of Mitigation Measure 4.19-1g, this impact will be reduced to a **less than significant with mitigation incorporated**.

Mitigation Measures

4.19-1a: Provide Curb, Gutter and Sidewalk Between the Project Site and Eight Mile Road

The applicant shall construct curb, gutter and sidewalk along the east side of West Lane between the southern edge of the project site and Eight Mile Road. County of San Joaquin staff has determined that County-owned right-of-way is approximately 110 feet wide along this portion of West Lane. A preliminary assessment indicates this right-of-way width is adequate to construct curb, gutter and sidewalk.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.19-1b: Provide On- and Offsite Bicycle Facilities

The applicant shall implement the following to ensure adequate provision of bicycle facilities.

On-Site Bicycle Facilities. The applicant shall provide on-site facilities supporting the use of bicycles. These facilities shall include secure bicycle parking in close proximity to proposed structures, and onsite bicycle paths or bicycle lanes connecting to the proposed bicycle facilities on West Lane.

West Lane Driveway Connection. The connection of the Project site driveway to West Lane shall be designed to facilitate and protect bicycle travel. Design features should include striping to guide bicycles across the driveway and signage to advise motorists of the bicycle crossing (similar to a typical Class II bicycle lane crossing a right turn lane at an intersection). The Project site driveway shall be constructed to provide for future installation of planned bicycle facilities along the west side of West Lane. The project site driveway shall be designed to facilitate the future construction of a buffered Class 2 bicycle lane along the west side of West Lane.

Timing/Implementation: *During the construction period*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.19-1c: Conduct improvements to the Eight Mile Road/SR 99 West Frontage Road Intersection

The Project applicant shall provide fair share funding for the following improvements to the Eight Mile Road/SR 99 West Frontage Road intersection.

- Signalize the intersection. This intersection meets peak hour signal warrants.
- Improve the eastbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane.
- Improve the westbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane.

Timing/Implementation: *As directed by County of San Joaquin Development Services Division*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.19-1d: Conduct improvements to the Eight Mile Road/SR 99 East Frontage Road Intersection

The Project applicant shall provide fair share funding for the following improvements to the Eight Mile Road/SR 99 East Frontage Road intersection.

- Signalize the intersection. This intersection meets peak hour signal warrants.
- Improve the eastbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane.
- Improve the westbound approach to include an exclusive left-turn lane, an exclusive through lane, and an exclusive right-turn lane.
- Change the lanes on the northbound approach. Change the approach lanes from a northbound combined through/left-turn lane and an exclusive northbound-to-eastbound right-turn lane, to an exclusive northbound-to-westbound left-turn lane and a northbound combined through/right-turn lane.

Timing/Implementation: *As directed by County of San Joaquin Development Services Division*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.19-1e: Conduct improvements to the segment of Eight Mile Road Between Lower Sacramento Road and West Lane

The Project applicant shall provide fair share funding for the following improvement to the segment of Eight Mile Road Between Lower Sacramento Road and West Lane.

- Widen this roadway segment from two lanes to four lanes.

Timing/Implementation: *As directed by County of San Joaquin Development Services Division*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.19-1f: Provide a Designated On-Site Public Transit Facility

The applicant shall provide a designated onsite public transit facility. This facility shall be designed to be accessible to public agency vehicles and vehicles operated by private or non-profit entities and social service providers. The onsite public transit facility shall be located near the Phase 2 medical office building and hospital because these facilities generate more than 90 percent of overall Project trips. In addition, the applicant shall coordinate with SJRTD and private and non-profit organizations to encourage the use of public transit when traveling to the project site.

Timing/Implementation: *During the Phase 2 construction period*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.19-1g: Eliminate Sidewalks Along the Ham Lane Driveway

The applicant shall revise the project site plan to eliminate sidewalks along the Ham Lane driveway until such time that sidewalks are provided on Ham Lane between Eight Mile Road and the Ham Lane driveway entrance. Pedestrians should be encouraged to use the West Lane access route until Ham Lane and the Ham Lane entrance driveway sidewalks are constructed. This shall be memorialized in the Development Agreement or as a Condition of Approval.

Timing/Implementation: *Prior to and during construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

Impact 4.19-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) for Vehicle Miles Traveled (VMT)
Impact Determination: *Significant and Unavoidable*

Thresholds:	*Result in inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)*
	Impact Determination

As noted in the above Vehicle Miles Traveled Significance Threshold section, at the time of Traffic Study preparation, neither the City of Stockton nor the County of San Joaquin had adopted guidelines for analyzing VMT for CEQA documents. Therefore, the VMT analysis contained in this draft EIR is intended to be a good-faith effort at disclosing and identifying the VMT impacts of the Project absent city or county adopted guidance.

As described in more detail in the Vehicle Miles Traveled Significance Threshold section above, the impacts of the Project on VMT is evaluated by comparing project-related VMT to a citywide average, expressed as "VMT per Service Population. To achieve a 15 percent reduction in VMT, consistent with City of Stockton General Plan Policy Action TRT-4.3, a project is considered to have a significant impact on VMT if it would generate more than 20.54 VMT per Service Population.

VMT associated with the Project was calculated using the City of Stockton General Plan travel demand model (City of Stockton 2018b). Two estimates of VMT were calculated. The two estimates may be thought of as "gross" and "net". These two estimates are described below:

- The estimate of gross VMT associated with the Project was calculated by applying a "select link" procedure to the General Plan travel demand model. This procedure identified all vehicle trips to and from the Project site. Project trips were then multiplied by the model-estimated length of these trips, in miles. The sum of the length of the vehicle trips associated with the Project was calculated to estimate direct project-related VMT.
- The estimate of net VMT associated with the Project was calculated by running the General Plan travel demand model both with and without the project. VMT for all travel in the model area was then calculated for both runs of the model. The net change in VMT was calculated by subtracting the model area VMT total for the run without the project from the model area VMT total with the project. In the model run without the project, vehicle trips that would otherwise travel to the project site instead travelled to locations offering similar services (i.e., hospital and medical office building).

Using the methods described immediately above, the Project is estimated to result in 51,587 gross VMT per day and 34,182 net VMT per day. As noted in Chapter 3.0 Project Description, under the worst case shift schedule, an estimated 505 employees would work at the proposed Project site. As a result, the Project is expected to result in 102.15 gross VMT per Service Population (51,587 ÷ 505 = 102.15) and 67.68 net VMT per Service Population (34,182 ÷ 505 = 67.68).

The VMT per Service Population for both the gross and net values are relatively large because of differences in how VMT is estimated and how service population is defined. The differences primarily involve how project-related customer travel is applied. Customer travel is included in the VMT estimate. That is, travel by customers to and from the Project is included in the VMT estimate. Conversely, customers are not included as part of the project "service population." The Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR (City of Stockton 2018c) defines

service population as the "sum of population and employment." Customers are not considered population (i.e., residents) at the Project site, and are not employed at the Project site. Because customers are included in the VMT estimate, but not the service population, the ratio of VMT per Service Population is relatively large.

The estimate of gross VMT is larger than net VMT. In this draft EIR, the conservatively larger gross VMT value is used to identify the significance of the project-related impact. The lower net VMT value is presented for information and disclosure.

Because the project-related 102.15 VMT per Service Population is greater than 20.54 VMT per Service Population, the proposed project is considered to have a significant impact on VMT. The impact of the proposed Project on VMT could be reduced by implementing recommended Mitigation Measures 4.19-1f and 4.19-2a through 2c. However, because of the magnitude of difference between Project-related VMT per Service Population and the VMT per Service Population significance threshold, implementation of these mitigation measures would not reduce this impact to a less than significant level, and this impact is considered **significant and unavoidable**.

Mitigation Measures

Implement Mitigation Measure **4.19-1f.** Provide a Designated On-Site Public Transit Facility presented above.

In addition, the following ridesharing measures shall be implemented. The recommended measures are adapted from the California Air Pollution Control Officers Association (CAPCOA) document *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010). Ridesharing measures are intended to increase vehicle occupancy (i.e., the number of people in each vehicle) which results in fewer cars driving the same number of person trips, and thus decreases project-related VMT.

4.19-2a: Implement Measures to Increase Ridesharing

The Project applicant shall implement the following to promote ride sharing.

- Designate parking spaces for ride sharing vehicles
- Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles, and
- Provide a web site or message board for coordinating rides.

Timing/Implementation: *Prior to and during construction and operation*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.19-2b: Provide Employer-Sponsored Vanpool/Shuttle

The Project applicant shall implement a vanpool/shuttle program for employees that work on the Project site. This would involve purchasing or leasing vans for employee use and subsidizing the cost of at least program administration. The employee/driver

typically receives personal use of the van, often for a mileage fee. Scheduling is within the employer's purview, and rider charges are normally set on the basis of vehicle and operating cost.

Timing/Implementation: *Prior to Operation*

Monitoring/Enforcement: County of San Joaquin Community Development Department

4.19-2c: Implement Measures to Encourage Telecommuting

The Project applicant shall work with onsite employers to encourage employee tele-commuting and working at home on a part-time or full-time basis to the degree feasible. Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees. Alternative work schedules could take the form of staggered starting times, flexible schedules, or compressed work weeks. It is recognized that the ability of some employees to telecommute or work remotely is not feasible and therefore this measure shall be implemented to the degree practicable.

Timing/Implementation: *Prior to Operation*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

Impact 4.19-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment). Impact Determination: *Less Than Significant*

Thresholds:	*Result in hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)*

The Project construction phase would be typical of similar projects and would primarily involve worker and construction equipment and material deliveries. No hazards due to design features or incompatible uses are expected during construction.

Project operation does not involve changes to the existing public road network. The Project is located in an active agricultural area where drivers are used to accommodating occasional "farm equipment" traffic. No unusual conflicts are anticipated. All proposed access driveways would be constructed consistent with County standards for sight line and turn pocket storage length. Finally, onsite circulation does not include sharp curves or dangerous intersections (see Figure 3-5). Roundabouts, rather than stop signs, are proposed at the main onsite driveway "intersections." Impacts due to geometric design features or incompatible uses are **less than significant**.

Mitigation Measures

None required.

Impact 4.19-4: Result in inadequate emergency access
Impact Determination: Less than Significant

Thresholds:	*Result in inadequate emergency access*

As shown on the Project Site Plan (Figure 3-5) as part of Phase 1 improvements an emergency access road from West Lane would be constructed along the project's northwestern boundary adjacent the 100-foot riparian setback buffer. This driveway would provide a secondary emergency access during Phase 1 operation. Phase 2 buildout would add two additional site access driveways from the south via Eight Mile Road and from the east via Ham Lane. The Project would not result in inadequate emergency access and this impact is **less than significant**.

Mitigation Measures

None required.

4.19.4 Cumulative Impacts

The analysis of Cumulative Plus Project conditions describes long-term traffic operations in the year 2040 assuming background land use development consistent with the County of San Joaquin and City of Stockton General Plans and proposed Project buildout (Phases 1 and 2). The Cumulative Plus Project conditions assumes roadway improvements assumed for the Cumulative No Project condition as discussed above and in the Traffic Study (Appendix J) plus the three proposed Project site access driveways. Comparing traffic operation under this condition to traffic operations under Cumulative No Project conditions allows an identification of the long-term project-related effects of the proposed Project relative to adopted LOS policy as discussed above in section 4.1.3.1 Thresholds of Significance.

For a detailed discussion of trip generation, trip distribution, trip assignment associated with cumulative plus project conditions, refer to draft EIR Appendix J.

Table 4.19-15 presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under Cumulative Plus Project conditions. The worksheets presenting the calculation of LOS are included in the Traffic Study Technical Appendix (draft EIR Appendix J).

Table 4.19-15. Intersection Level of Service - Cumulative Plus Project Conditions

Study Intersections		Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
				LOS	Delay	LOS	Delay
1	Eight Mile Road & I-5 Southbound Ramps	Signal		D	37.2	B	14.6
2	Eight Mile Road & I-5 Northbound Ramps	Signal		C	24.8	C	23.4
3	Eight Mile Road & Davis Road	Signal		C	28.4	C	25.9

Table 4.19-15. Intersection Level of Service - Cumulative Plus Project Conditions

Study Intersections		Inters. Control	Signal Warrant Met?	AM Peak		PM Peak	
				LOS	Delay	LOS	Delay
4	Eight Mile Road & Lower Sacramento Road	Signal		C	28.8	C	28.8
5	West Lane & Armstrong Road	Signal		C	27.1	C	27.9
6	West Lane & Ham Lane	Signal		B	12.3	A	8.3
7	West Lane & Eight Mile Road	Signal		C	31.4	C	28.9
8	West Lane & Morada Lane	Signal		C	33.5	C	33.9
9	Eight Mile Road & Ham Lane	Signal		A	7.7	A	9.4
10	Eight Mile Road & Leach Road	Signal		C	20.2	C	21.4
11	Eight Mile Road & Micke Grove Road/Holman Road	Signal		C	29.5	C	33.8
12	Eight Mile Road & SR 99 West Frontage Road	Signal		C	28.9	C	28.5
13	Eight Mile Road & SR 99 East Frontage Road	Signal		C	23.1	C	24.7
14	SR 99 West Frontage Road & SR 99 SB Ramps	- -		- -	- -	- -	- -
15	SR 99 East Frontage Road & SR 99 NB Ramps	- -		- -	- -	- -	- -
20	West Lane & Tra Vigne Road B	Signal		C	27.9	C	27.8
21	Eight Mile Road & Tra Vigne Road C	Signal		B	17.3	B	16.9
22	West Lane & West Project Driveway	Unsig	No	A	0.0	A	0.0
23	Eight Mile Road & South Project Driveway	Unsig	Yes	A	0.3	A	1.1
24	Ham Lane & East Project Driveway	Unsig	No	A	2.9	A	4.3
25	Eight Mile Road & SR 99 Southbound Ramps	Signal		B	15.9	A	8.1
26	Eight Mile Road & SR 99 Northbound Ramps	Signal		C	27.7	C	31.5

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control. "AWSC" = All-way stop-sign control.
"I-5" = Interstate-5. "SR" = State Route. "SB" = Southbound. "NB" = Northbound.
Dashes ("- -") indicate intersection is not present under this scenario. Delay is measured in seconds per vehicle. Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.

Traffic volumes under Cumulative Plus Project conditions would be generally higher than under Cumulative No Project conditions and, as a result, vehicle delay at study intersections under Cumulative Plus Project conditions would be higher than under Cumulative No Project conditions.

4.19.4.1 Intersection Levels of Service

Under Cumulative Plus Project conditions, LOS at all 20 study intersections would be at acceptable LOS D or better during both the a.m. peak hour and the p.m. peak hour. No improvements are needed at these 20 intersections to achieve acceptable LOS.

4.19.4.2 Roadway Segment Levels of Service

Table 4.19-16 presents a summary of LOS on the 10 study roadway segments under Cumulative Plus Project conditions. All 10 of the roadway segments would operate at acceptable LOS C or better. No improvements are needed on these 10 roadway segments to achieve acceptable LOS.

Table 4.19-16. Roadway Segment Level of Service - Cumulative Plus Gill Medical Center Project Conditions

Roadway Segment	Number of Lanes	Daily Volume	Level of Service
Eight Mile Road West of Lower Sacramento Road	4	24,897	B
Lower Sacramento Road South of Eight Mile Road	4	25,181	C
Eight Mile Road Lower Sacramento Road to West Lane	4	20,758	A
West Lane North of Eight Mile Road	4	12,140	A
West Lane South of Eight Mile Road	6	21,805	A
Eight Mile Road West Lane to Ham Lane	6	22,365	A
Ham Lane West Lane to Eight Mile Road	2	2,297	A
Eight Mile Road West of Micke Grove Road/Holman Road	6	21,932	A
State Route 99 North of Eight Mile Road	8	107,366	C
State Route 99 Eight Mile Road to Morada Lane	8	119,325	C

Ramp Junction Levels of Service

Table 4.19-17 presents the a.m. peak hour and p.m. peak hour LOS at each study ramp junction under Cumulative Plus Project conditions. The worksheets presenting the calculation of LOS are included in the Traffic Technical Appendix (draft EIR Appendix J).

Table 4.19-17. State Route 99 Ramp Merge and Diverge Level of Service - Cumulative Plus Project Conditions

Ramp Junction	AM Peak				PM Peak			
	Freeway Volume	Hour Ramp Volume	Density	LOS	Freeway Volume	Hour Ramp Volume	Density	LOS
SR 99 Southbound Diverge to Eight Mile Road Off-Ramp (Future)	4,994	352	21.7	C	4,147	409	18.4	B
SR 99 Southbound Merge from Eight Mile Road On-Ramp (Future)	4,994	667	26.6	C	4,147	478	22.0	C
SR 99 Northbound Merge from Eight Mile Road On-Ramp (Future)	3,975	450	21.1	C	5,180	301	24.2	C
SR 99 Northbound Diverge to Eight Mile Road Off-Ramp (Future)	3,975	395	17.8	B	5,180	575	24.0	C

Notes: LOS = Level of Service. SR = State Route. Density is expressed in passenger cars per mile per lane.

Traffic volumes under Cumulative Plus Project conditions would be generally higher than under Cumulative No Project conditions and, as a result, vehicle density at study ramp junctions under Cumulative Plus Project conditions would be higher than under Cumulative No Project conditions.

Under Cumulative Plus Project conditions, LOS at all four of the study ramp junctions would be at acceptable LOS C or better during both the a.m. peak hour and the p.m. peak hour. No improvements are needed at these ramp junctions to achieve acceptable LOS.

Based on the above cumulative impact analysis, the Project would result in a **less than cumulatively considerable** impact to LOS policy.

4.19.4.3 Vehicle Miles Traveled

Project VMT impacts are assessed above as part of Impact 4.19-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) for Vehicle Miles Traveled (VMT). As discussed in Impact 4.19-2, because the project-related 102.15 VMT per Service Population is greater than 20.54 VMT per Service Population, the Project results in a significant VMT impact. The analysis finds that the VMT impact can be reduced by implementing recommended Mitigation Measures 4.19-1f and 4.19-2a through 2c. However, because of the magnitude of VMT impact, even with implementation of recommended mitigation measures this VMT impact would remain significant and unavoidable. Therefore, the proposed Project results in a **considerable contribution to existing regional medical sector cumulative VMT impacts**.

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4.20 TRIBAL CULTURAL RESOURCES

This section describes the affected environment and regulatory setting and considers and evaluates the potential impacts of the Project on Tribal Cultural Resources (TCRs) in the Project Area. The following analysis of the potential environmental impacts related to TCRs is derived primarily from the following sources and agencies:

- California Native American Heritage Commission Sacred Lands File Search, March 25, 2020;
- ECORP's 2020 Cultural Resources Inventory and Evaluation for the Gill Women's Medical Center Project, San Joaquin County, California;
- Ethnographic overviews of the Miwok (Barret and Gifford 1933; Kroeber 1936; Levy 1978); and,
- AB52 consultation between San Joaquin County and the Buena Vista Rancheria of Mi-Wuk Indians.

Regional pre-contact information of the California Native Americans has been previously discussed in *Section 4.7 Cultural Resources*. The reader is referred to that section for further information on California Native Americans during the pre-contact time period.

4.20.1 Environmental Setting

4.20.1.1 Ethnographic, Religious, and Cultural Context

Ethnographically, the Project Area is in the northern portion of the territory occupied by the Penutian speaking Miwok. At the time of contact, the Miwok were one of the largest groups in California, occupying vast stretches of land extending from the Sierra Nevada Range, across the Great Valley, and into portions of the North Coast above San Francisco. The Project is in Northern Sierra Miwok territory, which includes land in the foothills and higher elevations of the Sierra Nevada Range, between the Cosumnes River to the north, and the divide between Calaveras and the Stanislaus rivers to the south (Levy 1978). Sierra Miwok groups moved with the seasons to gather resources within their territory. The most important food sources were acorns (acorns from tan oak and black oak were preferred), seeds, nuts and other plant resources, deer, antelope, rabbits, and fish (Levy 1978).

The Miwok lived in small groups called "tribelets" (Kroeber 1936) with a range of 100 to 300 people (Levy 1978). Each tribelet was an independent socio-political organization. Each tribelet had a few permanent settlements (villages) and several seasonal campsites. The typical Sierra Miwok mountain dwelling was a cone shaped dwelling constructed of bark. Earth roundhouses that were partially underground were constructed for ceremonial purposes. After the death of a chief, the roundhouse would be burned as part of the Miwok mourning ceremony (Levy 1978).

Sierra Miwok used bows and arrows as their primary weapon for hunting and warfare. They made their bows from ash, oak, willow, pepperwood, maple, or hazel. Flaked and ground stone tools included knives, arrow and spear points, arrow straighteners, scrapers, rough cobble pestles and shaped pestles, and

bedrock mortars. Non-utilitarian artifacts included pipes and charmstones. Obsidian was highly valued as a raw material for stone tools (Levy 1978).

The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. The Spanish arrived on the central California coast in 1769, and by 1776 José Canizares had explored the Miwok territory bordering the Nisenan on the south. By the time California became a state in 1850, the entirety of the Sierra Miwok territory had been encroached upon by explorers and colonists (Robinson 1948).

Gold seekers in California encountered central Sierra Miwok groups in 1848 and encroached the Miwok territory. The tribe suffered greatly, as they lived in the foothills and Sierra Nevada where the gold was largely sought. The culture was disrupted and many customs became matters of memory (Barrett and Gifford 1933). Despite this, Miwok groups continue to live and thrive in the Central Valley and Sierra Nevada foothills. Cultural revitalization is a large focus of current tribal efforts. The California Valley Miwok Tribe has been federally recognized since 1916, and other local Miwok groups include the Buena Vista Rancheria of Mi-wuk Indians, Ione Band of Miwok Indians, Wilton Rancheria, Southern Sierra Miwuk Nation, The United Auburn Indian Community of Auburn Rancheria, and others. These professional tribal community organizations presently work to maintain the health and welfare of their tribal areas, resources, and people.

4.20.2 Regulatory Framework

4.20.2.1 Federal

National Historic Preservation Act

The NHPA requires that the federal government list significant historic resources on the National Register of Historic Places (NRHP), which is the nation's master inventory of known historic resources. The NRHP is administered by the National Parks Service (NPS) and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or traditional cultural significance at the national, state, or local level. The act defines the responsibilities of federal agencies to protect and preserve historic properties found eligible for or listed in the NRHP. Sections 106 and 110 include specific provisions for the identification and evaluation of these properties for inclusion in the NRHP, such as consulting with interested parties that often include local Native American tribes.

Through amendments to the NRHP in 1992 and their implementing regulations, federal responsibilities for consultations with interested parties, and especially Indian tribes, during the Section 106 process were expanded. The result has been a more focused effort by federal agencies to involve interested parties in identifying historic properties of cultural significance and, if warranted, in considering effects that may result from a federal undertaking. Traditional Cultural Properties (TCPs) are more often identified as resources during these consultation efforts.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a historic district can also be included in the NRHP. In 1990, National

Register Bulletin 38 presented guidelines for evaluating traditional cultural significance as a kind of cultural significance for which historic properties can be found eligible for inclusion in the NRHP using established criteria (Parker and King 1990; revised in 1992 and 1998). The process for considering TCPs is situated within the framework of the NRHP as the preservation of tangible cultural properties that have historical and ongoing significance to living communities, as evidenced in their traditional cultural practices, values, beliefs, and identity.

The criteria for listing in the NRHP include resources that:

a) are associated with events that have made a significant contribution to the broad patterns of history;

b) are associated with the lives of persons significant in our past;

c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or,

d) have yielded or may likely yield information important in prehistory or history.

Additionally, the NRHP guidelines describe a type of cultural significance for which properties may be eligible for inclusion in the NRHP. A property with traditional cultural significance will be found eligible for the NRHP because it is associated with cultural practices or beliefs of a living community that:

a) are rooted in that community's history, and,

b) are important in maintaining the continuity of the cultural identity of the community.

This type of significance is grounded in the cultural patterns of thought and behavior of a living community and refers specifically to the association between their cultural traditions and a historic property.

4.20.2.2 State

Assembly Bill 52

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to those California Native American tribes that requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include TCRs, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the Public Resources Code defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the

purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Section 21074(a) of the Public Resource Code defines TCRs for the purpose of CEQA as:

1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or,
b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or,
c. 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b also meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as a Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies provide tribes that requested notification an opportunity to consult at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is used to develop appropriate avoidance, impact minimization, and mitigation measures.

In accordance with Section 21082.3(c)(1) of the PRC, "… information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with subdivision (r) of Section 6254 of, and Section 6254.10 of, the Government Code, and subdivision (d) of Section 15120 of Title 14 of the CCR, without the prior consent of the tribe that provided the information." Therefore, the details of tribal consultation summarized herein are provided in a confidential administrative record and not available for public disclosure without written permission from the tribes.

4.20.2.3 Local

San Joaquin County 2035 General Plan Policy Document

The San Joaquin County 2035 General Plan emphasizes the importance of cultural and historic resources in the County. The County is committed to ensuring that development occurs in a manner that limits impacts to natural and cultural resources and will avoid development in areas in naturally and culturally sensitive areas whenever possible, especially in the Delta. Preserving these resources is

important and their protection needs to be considered during the planning, permitting, and construction of any new development.

The following policy relates to tribal cultural resources and preservation:

NCR-6.6: Tribal Consultation: The County shall consult with Native American tribes regarding proposed development projects and land use policy changes consistent with the State's Local and Tribal Intergovernmental Consultation requirements.

4.20.3 Methods of Analysis

4.20.3.1 Summary of Tribal Consultation

AB 52 consultation requirements went into effect on July 1, 2015 for all projects that have not already published a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration or published a Notice of Preparation of an EIR (Section 11 [c]). At the time County of San Joaquin was ready to initiate CEQA review, it had received written requests to receive project notices from two California Native American Tribes which identified themselves as being traditionally and culturally affiliated with the lands subject to San Joaquin County jurisdiction: Buena Vista Rancheria of Me-Wuk Indians (Buena Vista) and The United Auburn Indian Community of Auburn Rancheria (UAIC).

On July 15, 2020, the County of San Joaquin determined that it had a complete project description and it was ready to begin review under CEQA. On July 15, 2020, San Joaquin County mailed notification letters offering consultation under AB52 for the current project to those two tribes that requested notification. In accordance with PRC Section 21080.3.1(d) of the Public Resources Code, San Joaquin County requested responses to the offer to consult within 30 days of the receipt of the letter.

United Auburn Indian Community of the Auburn Rancheria

UAIC responded to the County via email on August 11, 2020 and requested the cultural resources report for the Project so the tribe could review and suggest the appropriate mitigation measures but did not request consultation. On August 13, 2020 the County emailed a copy of the cultural report to UAIC and asked for clarification as to whether UAIC wanted to request consultation under AB52 for the Project. UAIC did not respond to the County. UAIC did not provide any information on TCRs to the County.

Buena Vista Rancheria of Me-Wuk Indians

On July 29, 2020, Buena Vista Rancheria responded via email to the County. In its response, the tribe noted that although there are no known TCRs that might be impacted by the Project, its proximity to Bear Creek is cause for concern because cultural items and native burials are often encountered during earth disturbance activities near waterways. The tribe requested consultation to determine whether tribal monitoring would be necessary during construction for the protection and preservation of tribal cultural resources.

On August 13, 2020, the County sent a letter to Buena Vista Rancheria via email and U.S. certified mail initiating consultation under Section 21080.3.1(e) of the California Public Resources Code. A virtual meeting invitation was sent the same day following the email. The virtual meeting was scheduled for August 24, 2020 and the agenda included a discussion about the project, the potential for TCRs to exist, and if needed, appropriate mitigation measures.

No representatives from Buena Vista called into the August 24 meeting. On August 25, 2020 Mr. Richard Hawkins, Tribal Historic Preservation Officer (THPO) for the Buena Vista Rancheria, called Theadora Fuerstenberg of ECORP Consulting, Inc., the County's consultant, and said Buena Vista still wanted to consult on the Project and requested the meeting be rescheduled to September 2, 2020. Mr. Hawkins stated that Buena Vista's concern is the proximity of the Project to Bear Creek, and he ultimately wanted to know more about the project to determine whether the tribe should have monitors present during project construction to address unanticipated discoveries of TCRs.

A virtual meeting was held on September 2, 2020, with John Funderberg from San Joaquin County, Ms. Fuerstenberg from ECORP, and Mr. Hawkins from Buena Vista. Mr. Hawkins stated that Bear Creek was not as close to the Project Area as he originally thought, and he is, therefore, less concerned about buried TCRs in the Project Area. Mr. Hawkins said he would discuss the project with Buena Vista's Tribal Historic Preservation Committee on Wednesday September 9, 2020. Mr. Hawkins also said he will be retiring on September 11, 2020 and that Buena Vista's THPO, Mike DeSpain, would be taking over AB52 consultation for the Project after September 10, 2020.

The County emailed Mr. DeSpain on September 18, 2020 acknowledging that he would be taking over consultation duties for Buena Vista on the Project. The County invited Mr. DeSpain to a virtual meeting on October 1, 2020 to discuss continued consultation on potential buried TCRs and Mr. DeSpain accepted.

Mr. DeSpain was not in attendance at the October 1, 2020 meeting. The County sent a follow-up email to Mr. DeSpain on October 1, 2020 and again on October 12, 2020 asking him to confirm Buena Vista's interest in continuing AB52 consultation for the Project. To date, Buena Vista has not provided any information on TCRs to the County.

4.20.4 Tribal Cultural Resources

Information about potential impacts to TCRs was drawn from: 1) the results of a search of the Sacred Lands File of the NAHC; 2) existing ethnographic information about pre-contact lifeways and settlement patterns; 3) information on archaeological site records obtained from surveys of the Project area and the California Historical Resources Information System (as relayed in ECORP 2020); and 4) the tribal consultation record under AB 52 for the Project between the County and Buena Vista Rancheria.

4.20.4.1 Sacred Lands File Search

A search of the NAHC Sacred Lands File was requested on March 25, 2020. The NAHC responded on March 27, 2020, that the sacred lands file search was negative, which means that no sacred lands have been recorded within the Project area. The NAHC included a list of suggested tribal representatives to contact who may have more information. The Buena Vista Rancheria of Me-Wuk Indians and the United

Auburn Indian Community were on the list of tribes to contact. Both of these tribes were offered an opportunity to consult, as summarized above.

4.20.4.2 Ethnographic Information

The ethnographic information reviewed for the Project, including ethnographic maps (Levy 1978; Wallace 1978) lists the nearest Native American village along the Mokelumne River six miles north of the Project Area, and also indicated that the Northern Valley Yokuts territory of *Jalalon* is directly south of the Project Area although no villages are mapped in the territory. Ethnographic literature from Barret and Gifford (1933) indicated that most of the pre-contact habitation sites located along waterways in the San Juaquin valley were wiped out during land and water reclamation efforts for agricultural endeavors in the nineteenth century. Although there is nothing in the ethnographic literature that suggests that the Project location is known to have ethnographic villages or resources within its boundaries, the significant land and water changes may have obscured or obliterated small unmapped or unrecorded habitation sites. However, this possibility remains relatively low due to the lack of nearby ethnographic areas mentioned in the literature.

4.20.4.3 Archaeological Site Records

The entire Project Area was subjected to an archaeological survey and records search review, and no Native American sites were identified within its boundaries. In addition, approximately 15 percent of the area within a 0.5-mile radius surrounding the Project Area has been subject to cultural surveys; no pre-contact archaeological sites have been previously recorded in the vicinity. A pedestrian survey was completed for the Project Area (ECORP 2020) and identified only two historic period resources related to agriculture and ranching. No sites associated with Native American culture were found during the survey. Additional information about these non-Native American cultural resources can be found in Chapter 4.7 of this Draft EIR.

4.20.4.4 Tribal Consultation Results

Buena Vista did not identify any TCRs within the Project Area. However, based on the information provided by the tribe, there remains a possibility that undiscovered TCRs could become known during construction.

4.20.5 Environmental Impacts and Mitigation Measures

4.20.5.1 Thresholds of Significance

Following Appendix G of the CEQA Guidelines, TCR impacts are considered to be significant if the project would result in any of the following:

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

a. Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC § 5020.1(k); or,

b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

Impact 4.20-1: Impacts to Tribal Cultural Resources
Impact Determination: *less than significant with mitigation incorporated*

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

No TCRs were identified within or immediately adjacent to the Project area. Therefore, the proposed project would not result in a significant impact to known TCRs. However, ground disturbing activities could result in the unanticipated discovery of TCRs and prehistoric archaeological sites which may be considered TCRs. As such, impacts to unknown TCRs is considered **potentially significant**.

Implementation of Mitigation Measure 4.20-1a would ensure minimal risk of harm to currently unknown potential TCRs and address any needed mitigation during Project implementation. Therefore, with implementation of Mitigation Measure 4.20-1a, potential impacts to unknown TCRs would be reduced to **less than significant with mitigation incorporated**.

Mitigation Measures

4.20-1a: Unanticipated Discovery.

If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the nature of the find. The County shall invite a Tribal Representative from Buena Vista Rancheria of Me-Wuk Indians to make recommendations about whether or not the discovery represents a TCR (PRC §21074) and, if so, to make recommendations for

culturally-appropriate treatment. If the find includes human remains, the procedures outlined in Mitigation Measure 4.7-3a: Human Remains Discovery shall be followed. The contractor shall implement any measures determined by the County to be necessary. Work at the discovery location cannot resume until the treatment has been implemented to the satisfaction of the County.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *County of San Joaquin Community Development Department*

4.20.6 Cumulative Impacts

Section 15130 (a) of the State CEQA Guidelines states:

> An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

San Joaquin County contains extensive cultural resources, including Native American archaeological sites, such as village sites, burial grounds, procurement sites, and lithic scatters. As development occurs within San Joaquin County over time, TCRs currently identified and those that may be identified in the future could be adversely affected. As discussed under Impact 4.20-1 above, confidential Tribal consultation resulted in agreement that there exists the possibility that unknown TCRs may be significantly impacted by Project construction. This impact would contribute to the cumulative impact on San Joaquin County Tribal Resources. To address this impact, Mitigation Measure 4.20-1a was developed in consultation with the Buena Vista Rancheria of Me-Wuk Indians. Implementation of the measure would reduce any potential impact on TCRs to less than significant. Given that any potential impact on TCRs due to the Project would be minimized or avoided entirely through implementation of 4.20-1a, the contribution of the Project to the cumulative impact on San Joaquin County TCRs would be **less than cumulatively considerable** and no further mitigation is required.

Mitigation Measures

None required.

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4.21 Utilities and Service Systems

This section of the EIR describes existing conditions in the Project area, the regulatory framework necessary to evaluate potential Project impacts on utilities and service systems, and potential cumulative impacts that could result from the Project. This section addresses the following utilities and service systems: water, wastewater treatment, storm water drainage, electric power, natural gas, solid waste and telecommunications facilities. Existing electric power, natural gas and telecommunications facilities are located adjacent the Project site and can be extended to and have capacity to serve the Project without resulting in significant environmental effects due to construction of new facilities. Therefore, these utilities are not discussed further, and the remainder of the section addresses impacts due to construction of water, wastewater treatment, storm water drainage and solid waste facilities that are required to serve the Project.

4.21.1 Environmental Setting

The following utilities and service systems setting information is drawn from the San Joaquin County 2035 General Plan EIR (San Joaquin County 2016a, b).

4.21.1.1 Water Supply

Potable Water

Potable water for irrigation and domestic use in the County is provided through multiple agencies and water projects, including federal, regional, and local water districts, special districts, and private systems. Irrigation, water, and water conservation districts are located throughout the County, some small, others spanning several planning areas. While some cities and unincorporated areas of the County are served by imported surface water from water districts or municipal water systems, some communities are not located within water districts or do not have water systems that provide water service. These communities must rely on private wells and groundwater. However, most water supply districts in San Joaquin County have been transitioning away from groundwater sources to surface water to reduce overdraft of groundwater. The following unincorporated communities are not served by a water district and rely on groundwater pumping: Banta, Stoneridge, Glenwood, Noble Acres, Collierville, Coopers Corner, New Jerusalem, French Camp, and Peters.

The Central Valley Project (CVP) delivers about seven million acre-feet of water each year for agricultural, urban, and wildlife uses throughout the Central Valley, including San Joaquin County. Roughly five million acre-feet are dedicated to farmland irrigation, and 600,000 acre-feet are dedicated to municipal and industrial uses in the Central Valley. CVP contractors on the San Joaquin River and the Mendota Pool receive around 4,600 acre-feet (AF) from the Sacramento-San Joaquin Delta via the Tracy Pumping Plant and the Delta Mendota Canal. Water is also conveyed into the San Luis Canal, which serves the Friant Dam on the San Joaquin River and CVP contractors near the Madera and Friant-Kern canals. Water for water rights holders in the Stanislaus River watershed and northern San Joaquin Valley is stored in the New Melones Reservoir located east of San Joaquin County.

The Goodwin Tunnel Project is part of the New Melones Conveyance System that diverts water from New Melones Reservoir to the Stockton East Water District Water Treatment Facility. The Goodwin Tunnel diverts water into natural creeks and waterways and then moves the water to a treatment facility. The local water districts manage the distribution of water from main canals to individual users, while irrigation distribution systems rely on lateral canals and pipelines to convey water to individual farms. Public Law 84-130 allows the United States Bureau of Reclamation (USBR), who manages the operation and maintenance of dams and power plants, to administer loans for private users to build their own distribution systems.

Domestic water is supplied to customers throughout San Joaquin County by cities, water districts, maintenance districts (MD), County Service Areas (CSAs), Community Service Districts (CSDs), and other local agencies, using both surface and groundwater sources. The Project site is not located within any existing domestic water provider services district.

Irrigation Districts

Irrigation districts provide a reliable and economical source of irrigation water to the agricultural areas of the County. Some irrigation districts provide water to cities and water districts that process the water for domestic use. Irrigation districts in San Joaquin County (e.g., the South San Joaquin Irrigation District) also treat and distribute domestic water and provide other services such as electricity. There are 14 irrigation districts throughout San Joaquin County that provide irrigation water to agricultural areas, and some of these also may treat water for domestic or other uses.

The Woodbridge Irrigation District (WID) is located in northwest San Joaquin County with a service area that includes the Project site. The District, which owns and operates the Woodbridge Dam located on the Mokelumne River, covers 32,992 acres and includes a system of canals that spans over 100 miles in length. A Woodbridge Irrigation District agricultural canal exists onsite along the northwest boundary. The District also provides water for irrigation and provides the City of Lodi with 6,000 acre-feet per year of surface water.

Project Site

The Project site is currently in agricultural production planted in vineyards and not served by any municipal potable water system. Although located within their service area, the site is not currently receiving agricultural irrigation service from WID or any other municipal or service district. Two wells are currently located on the project site. One has historically provided irrigation water for the existing onsite vineyards, the second was recently constructed to serve the proposed Project. Prior to vineyard development, the site was historically grazed. The nearest public potable water utility is that of the City of Stockton. With the recent annexation of the Tra Vigne development project, the current Stockton City limit is at Eight Mile Road, approximately 500 feet south of the Project site. The Project site is not eligible for City water service because it is located outside the City water service area.

4.21.1.2 Wastewater

Sanitary sewer service within San Joaquin County is provided by several special districts that serve individual communities and include community service districts, public utility districts, sanitary districts, and sewer maintenance districts. Some special districts are connected to cities but operate independently, while other districts were created to serve planned developments that were never built. Some agencies provide sewer collection services only, and contract with major sewer districts who have sewer treatment facilities for wastewater treatment and disposal. The cities of Escalon, Ripon, and Tracy primarily provide service to residents in incorporated areas and rely on private septic systems to serve unincorporated areas.

Several of the unincorporated communities lack sanitary sewer infrastructure and use individual or community septic systems. These communities include: Acampo, Banta, Chrisman, Collierville, Coopers Corner, the Delta Planning Area, Farmington, French Camp, Glenwood, Lammersville, Morada, New Jerusalem, Noble Acres, Peters, Stoneridge, Thornton, Vernalis, and Victor. The community of Banta has experienced problems with high groundwater levels, and some lots are too small to be serviced by a septic system. Coopers Corner and Morada are both served solely by individual septic systems. Several residences in the Delta Planning Area have individual systems while some communities have their own wastewater disposal systems. There are five locations within San Joaquin County that are able to discharge effluent into the Delta waters, which include: Lodi, Tracy, Manteca/Lathrop, Mountain House, and Stockton.

Project Site

The Project site is not currently located within or served by a wastewater collection or sanitary sewer treatment district and there are no existing onsite wastewater generating uses. Similar to water, the nearest public wastewater utility is that of the City of Stockton. Because the Project site is located outside the City wastewater service area, it is not eligible for City wastewater service.

4.21.1.1 Stormwater

Stormwater in San Joaquin County is managed consistent with the San Joaquin County Stormwater Management Plan (SWMP). The SWMP was developed to fulfill requirements for stormwater discharges from the Small Municipal Separate Storm Sewer System (MS4) operators in accordance with Section 402(p) of the Federal Clean Water Act (CWA). The SWMP was also developed to comply with General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ. The SWMP continues most of the previous program objectives and proposes a range of continuing and enhanced Best Management Practices (BMPs) and control measures. The implementation of the stormwater management program requires a coordinated management effort by the City of Stockton (City) and the County. While named as co-permittees to one permit, the City and County currently have separate programs and submit documents and reports separately to the CVRWQCB. However, the programs are essentially identical and the co-permittees collaborate with each other to address common issues and to ensure consistency in program development and implementation. Although the co-permittees coordinate with each other, each agency is responsible for implementing actions within their respective jurisdictions as related to their

storm drains and/or watercourses. The City and County are legal entities with the authority to administer, implement, and enforce the stormwater management program within their separate jurisdictions.

Project Site

Project site topography is mostly flat and developed with vineyards. The Project site does not contain any constructed stormwater improvements. Stormwater that falls on the site mostly infiltrates, evaporates or is directed to adjacent roadside drainages (West Lane and Ham Lane) managed by the County Public Works Department.

4.21.1.2 Solid Waste

The unincorporated County is divided into six solid waste collection franchise areas, which are serviced by five solid waste collection services, including Central Valley Waste Services, Allied Waste, Gilton Solid Waste Management, Stockton Scavengers Association, and Delta Disposal Services. The San Joaquin County Code requires residential service once a week and commercial and industrial service a minimum of two times per week. In addition to curbside collection services, drop boxes are also provided to collect wastes in the unincorporated communities. There are three active solid waste disposal/landfill facilities in San Joaquin County, as listed in the California Department of Resources Recycling and Recovery (CalRecycle) Solid Waste Information System (SWIS). The Foothill Landfill and North County Landfill are Class III Landfills that are owned and operated by the San Joaquin County Public Works Department. The County also operates Lovelace Materials Recovery Facility and Recycle Center, a Household Hazardous Waste facility. The Forward Landfill is the only Class II landfill in the County and is owned and operated by Forward Inc./Allied Waste North America.

The County has implemented several aggressive special waste collection and recycling programs that have led it to surpass the recycling goals required by the State. Composting, enhanced recycling, and waste oil programs are provided at recycling centers, materials recovery facilities, and transfer facilities throughout the County. These facilities and programs include: nine active or planned green and agricultural waste composting facilities; nine transfer or processing facilities, and 73 recycling centers. In 2000, CalRecycle estimated the unincorporated area of San Joaquin County generated 369,581 tons of waste and disposed of 181,045 tons annually. Between 2000 and 2006, the County achieved a solid waste diversion rate around 58 percent, exceeding the state mandated goal of 50 percent diversion. The CalRecycle estimates that the three remaining landfills (the Forward Landfill, North County Landfill, and Foothill Sanitary Landfill) have sufficient capacity to serve the County potentially through 2054.

The Certified Unified Programs Agency acts to consolidate six State-mandated environmental programs at the local level, and within the County includes the Hazardous Materials Program and the Hazardous Waste Program. These programs ensure the proper handling and disposal of hazardous material and wastes created by local businesses and industries, including hospitals.

Project Site

The Project site is currently in agricultural production and generates minimal amounts of solid waste.

4.21.2 Regulatory Setting

Relevant federal, state, and local laws and regulations pertaining to utilities and service systems are discussed below.

4.21.2.1 Federal

There are no federal regulations addressing utility and service system issues related to the Project.

4.21.2.2 State

California Department of Water Resources

The DWR is responsible for the management and regulation of water usage, including the delivery of water to two-thirds of California's population through the nation's largest State-built water development and conveyance system, the State Water Project. Working with other agencies and the public, DWR develops strategic goals and near-term and long-term actions to conserve, manage, develop, and sustain California's watersheds, water resources, and water management systems. DWR also works to prevent and respond to floods, droughts, and catastrophic events that would threaten public safety, water resources and management systems, the environment, and property.

Urban Water Management Planning Act

In 1983, the California legislature enacted the Urban Water Management Planning Act (Water Code Section 10610–10656). The Act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 AFY, should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The Act requires that urban water suppliers adopt an Urban Water Management Plan (UWMP) at least once every five years and submit it to the DWR.

Sustainable Groundwater Management Act (SGMA)

The Sustainable Groundwater Management Act (SGMA) established a new structure for managing California's groundwater resources at the local level by local agencies. SGMA required Groundwater Sustainability Agencies (GSAs) to form in the State's high- and medium-priority basins and subbasins by June 30, 2017. The Water Code states that a GSA shall have five years from the date of reprioritization to be managed under a Groundwater Sustainability Plan (GSP). The planning deadline for California's first round of GSPs was January 31, 2020, for basins subject to critical conditions of overdraft, and January 31, 2022, for all other high- and medium-priority basins.

Statewide Water Conservation Act of 2009 (Senate Bill X7-7)

In November 2009, the California State legislature passed SB X7-7 requiring a 20 percent reduction in per capita urban water use by 2020, with an interim target of 10 percent in 2015. The legislation requires urban water users to develop consistent water use targets and to use those targets in their UWMPs.

Assembly Bill (AB) 1668 and Senate Bill (SB) 606

AB 1668 and SB 606 establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. The two bills strengthen the state's water resiliency in the face of future droughts.

California Department of Resources Recycling and Recovery (CalRecycle; formerly the California Integrated Waste Management Board)

CalRecycle oversees, manages, and monitors waste generated in California. It provides limited grants and loans to help California cities, counties, businesses, and organizations meet the State waste reduction, reuse, and recycling goals. CalRecycle develops, manages, and enforces waste disposal and recycling regulations, including Assembly Bill (AB) 939 and Senate Bill (SB) 1016.

Assembly Bill (AB) 939

AB 939 (Public Resources Code [PRC] 41780) requires cities and counties to prepare Integrated Waste Management Plans (IWMPs) and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements (SRRE) as part of their IWMPs. These Elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

Senate Bill (SB) 1016

SB 1016 requires that the 50-percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 also changed the CalRecycle review process for each municipality's IWMP. The CalRecycle Board reviews a jurisdiction's compliance with diversion rate targets in accordance with a specified schedule.

4.21.2.3 Local

Stockton and San Joaquin County NPDES Municipal Permit

The County of San Joaquin includes the City of Stockton, as well as surrounding incorporated and unincorporated urbanized areas (which contain densely settled territory containing 100,000 or more people). Due to the proximity of the county's urbanized areas to the City of Stockton, the urbanized area's physical interconnection to the City's storm drain system, and the locations of their discharges relative to the City's system, the County is designated as a part of the medium Small Municipal Separate Storm Sewer System (MS4). This MS4 designation must comply with the CWA under the NPDES Phase I program.

The City of Stockton, the urbanized areas of the county that are enclosed within the city, and the urbanized areas of the county which surround the City are subject to the NPDES Phase I municipal permit, Order No. RS-2009-0105 adopted on October 8, 2009.

San Joaquin Stormwater Management Program (SWMP)

The development and implementation of the SWMP for San Joaquin County was to fulfill requirements for stormwater discharges from the Small Municipal Separate Storm Sewer System (MS4) operators in accordance with Section 402(p) of the Federal Clean Water Act (CWA). The SWMP was also developed to comply with General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ. The SWMP continues most of the previous program objectives and proposes a range of continuing and enhanced Best Management Practices (BMPs) and control management effort by the City of Stockton (City) and the County. While named as co-permittees to one permit, the City and County currently have separate programs and submit documents and reports separately to the CVRWQCB. However, the programs are essentially identical and the co-permittees collaborate with each other to address common issues and to ensure consistency in program development and implementation. Although the co-permittees coordinate with each other, each agency is responsible for implementing actions within their respective jurisdictions as related to their storm drains and/or watercourses. The City and County are legal entities with the authority to administer, implement, and enforce the stormwater management program within their separate jurisdictions.

The County has prepared a Stormwater Management Program (SWMP) to limit, to the Maximum Extent Practicable (MEP), the discharge of pollutants from the San Joaquin County (SJC) storm sewer system in the Phase II permit areas. The SJC Phase II boundaries are contiguous with those determined by the 2000 Census as urbanized areas within the county, outside of the incorporated cities, with a population estimated at 24,697. The SWMP is reviewed on an annual basis and modifications are submitted to CVRWQCB. The SWMP consists of six minimum control measures (MCM) established by the U.S. Environmental Protection Agency (USEPA) and the SWRCB for Phase II stormwater discharges to result in significant reductions of pollutants discharged into receiving water bodies as follows:

- Public education and outreach to ensure greater public support and compliance for the SWMP.
- Public involvement and participation to provide opportunities for the public to play an active role in both the development and implementation of the SWMP and to educate them about stormwater quality issues.
- Illicit discharge detection and elimination to minimize illicit discharges into the storm sewer system.
- Construction site runoff control to minimize polluted stormwater runoff from construction activities.
- Post-construction controls for new development and redevelopment to minimize the impact to stormwater quality. Pollution prevention and good housekeeping for municipal operations to ensure a reduction in the amount and type of stormwater pollutants from routine activities in the operation and maintenance of municipal operations.

The following goals and policies of the San Joaquin County 2035 General Plan (San Joaquin County. 2016b.) are applicable to the Project:

IS-1.1: *Essential Facilities and Services The County shall strive to ensure that adequate public facilities and services essential for public health and safety are provided to all County residents and businesses and maintained at acceptable service levels. Where public facilities and services are provided by other agencies, the County shall encourage similar service level goals. (RDR/PSP/IGC)*

IS-1.2: *Infrastructure Standards The County shall require new developments that include improvements to existing infrastructure or new infrastructure to meet the requirements and standards of the County or other agencies providing services. (RDR/IGC)*

IS-1.3: *Facilities and Services Deficiencies The County shall coordinate with other public facilities districts and agencies (e.g., special districts, community service districts) to identify and find solutions to key infrastructure deficiencies in the County. (IGC)*

IS-1.4: *Infrastructure Maintenance The County shall work with agencies to maintain, improve, and replace public facilities as necessary to maintain adequate levels of service for existing and future development and reduce the need for new facilities. Where public facilities and services are provided by other agencies, the County shall encourage similar service level goals. (PSP/IGC)*

IS-1.5: *Infrastructure and Service Expansions The County shall base the expansion of public facilities and services on current needs and planned or projected development patterns. (PSP)*

IS-1.8: *Infrastructure Financing, Design, and Construction The County shall require new development to fund the initial financing, design, and construction of required infrastructure facilities. All financing (including operation and maintenance) and improvement plans shall be subject to County review and approval. (RDR)*

IS-1.13: *Infrastructure Financing The County shall approve new development only when financial mechanisms are in place to ensure that adopted County service standards are met and that long-term infrastructure and facility maintenance can be provided. (RDR)*

IS-4.8: *Water Conservation Measures The County shall require existing and new development to incorporate all feasible water conservation measures to reduce the need for water system improvements. (RDR)*

IS-4.9: *Groundwater Management The County shall continue to support cooperative, regional groundwater management planning by local water agencies, water users, and other affected parties to ensure a sustainable, adequate, safe, and economically viable groundwater supply for existing and future uses within the County. (IGC)*

IS-4.13: *Water Quality Standards The County shall require that water supplies serving new development meet State water quality standards. If necessary, the County shall require that*

water be treated to meet State standards and that a water quality monitoring program be in place prior to issuance of building permits. (RDR)

IS-4.15: *Test Wells Prior to issuing building permits for new development that will rely on groundwater, the County shall require confirmation for existing wells or test wells for new wells to ensure that water quality and quantity are adequate to meet the needs of existing, proposed, and planned future development. (RDR/PSR)*

IS-4.19: *Water Efficient Landscaping The County shall encourage water efficient landscaping and use of native, drought-tolerant plants consistent with the Model Landscape Ordinance. (RDR)*

IS-5.1: *Adequate Water Treatment and Distribution Facilities The County shall ensure, through the development review process, that adequate water, treatment and distribution facilities are sufficient to serve new development, and are scalable to meet capacity demands when needed. Such needs shall include capacities necessary to comply with water quality and public safety requirements. (RDR)*

IS-6.3: *Adequate Wastewater Facilities The County shall ensure through the development review process that wastewater collection, treatment, and disposal facilities are sufficient to serve existing and new development, and are scalable to meet capacity demands when needed. (RDR)*

S-6.6: *Wastewater Treatment System Standards The County shall require that the development, operation and maintenance of wastewater treatment systems meet the requirements and standards of the wastewater treatment agency and the County, including the requirements and standards of the County Environmental Health Department. (RDR)*

IS-7.1: *Adequate Stormwater Facilities The County shall require that stormwater drainage facilities are properly designed, sited, constructed, and maintained to efficiently capture and dispose of runoff and minimize impacts to water quality. (RDR)*

PHS-7.1: *Minimize Hazardous Materials and Wastes The County shall discourage the use of hazardous materials and the creation of hazardous wastes. (PSP)*

PHS-7.2; *Avoid Contamination of Resources The County shall strive to ensure that hazardous materials and wastes do not contaminate air, water, or soil resources. (RDR/PSP)*

PHS-7.3: *Control Hazardous Materials The County shall require the use, storage, and disposal of hazardous materials and wastes to comply with local, State, and Federal safety standards. (RDR)*

PHS-7.4: *County Hazardous Waste Management Plan The County shall maintain and implement the County Hazardous Waste Management Plan. (PSP)*

PHS-7.6: *Require Hazardous Materials Management Plans The County shall require businesses that use or store materials and wastes on-site to prepare Hazardous Materials Management Plans (Business Plans) that map and inventory all hazardous materials and contain contingency plans for accidents, designate an individual or individuals as emergency coordinator(s), and ensure that all employees understand the potential for accidents and the appropriate response. Plans must follow the requirements for Federal, State, and/or local defined special flood hazard areas. (RDR/PSP)*

PHS-7.8: *Consistency with Hazardous Waste Management Plan The County shall require all new development to be consistent with the County Hazardous Waste Management Plan (CHWMP). Any proposed hazardous waste facility, or expansion of an existing hazardous waste facility, shall be consistent with the CHWMP. (RDR)*

PHS-7.11: *Hazardous Materials Transportation Routes The County shall continue to maintain route designations for hazardous materials transport within San Joaquin County. (PSP)*

PHS-7.12: *Hazardous Liquids Storage Tanks The County shall maintain and implement hazardous material regulations for the storage of hazardous liquids in underground or aboveground storage tanks. (RDR/PSP)*

4.21.3 Environmental Impacts and Mitigation Measures

This Section describes potential impacts related to utilities and service systems that could result from the Project. This Section also recommends mitigation measures as needed to reduce potentially significant impacts.

4.21.3.1 Thresholds of Significance

Based on the CEQA Guidelines, Appendix G: Items XIX (a) through (e), implementation of the Project would result in a significant impact related to utilities and service systems if it would:

(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 would cause significant environmental effects;

(b) Not 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 does not have 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; or

(e) Fail to comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.

In addition, based on the CEQA Guidelines, Appendix G: X (b) and X (e), implementation of the Project would have a significant impact on groundwater resources if it would:

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

(e) conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.21.3.2 Project Impacts and Mitigation Measures

Impact 4.21-1: Implementation of the proposed Project would 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 would cause significant environmental effects. Impact Determination: *Less Than Significant with Mitigation Incorporated*

Threshold:	*Would 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 would cause significant environmental effects.*

The Project site is not currently served by any public water, sewer, or storm drain Utilities. Therefore, these facilities are proposed onsite and would be constructed consistent with development phasing. For a description, see draft EIR Section 3.6.5 Utilities. The environmental effects of constructing and operating onsite water, wastewater and storm water facilities is primarily addressed in draft EIR Section 4.12 Hydrology and Water Quality. In addition, the impact on all other resource areas due to constructing these facilities is addressed in the balance of draft EIR Chapter 4.0 sections. As discussed in the above draft EIR sections, impacts of developing new onsite utilities can be reduced to less than significant with implementation of all identified construction phase mitigation measures. Therefore, the construction and operation of Project required water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunications facilities is **less than significant with mitigation incorporated**.

Mitigation Measures

Implement the following draft EIR construction phase mitigation measures. For the full text of listed measures, see the appropriate Chapter 4.0 draft EIR mitigation measure sections.

- 4.5-2a: Prepare Air Impact Assessment to Reduce Construction NO_x Emissions
- 4.6-1a: Conduct Environmental Awareness Training for Construction Personnel
- 4.6-1b: Install Fencing and/or Flagging to Protect Sensitive Biological Resources

- *4.6-1c: Sanford's Arrowhead*
- 4.6-1d: Western Pond Turtle
- 4.6-1e: Protect Water Quality and Minimize Sedimentation Runoff to Non-Wetland Waters (Woodbridge Irrigation Canal)
- 4.6-1f: Giant Garter Snake
- 4.6-1g: Conduct Preconstruction Surveys for Nesting Migratory Birds and Raptors
- 4.6-1h: Burrowing Owl
- 4.6-5a: Comply with the San Joaquin County Oak Tree Ordinance
- 4.7-1a: Unanticipated Discovery
- 4.7-3a: Human Remains Discovery
- 4.9-5a: Worker Awareness Training
- 4.9-5b: Unanticipated Discovery of Paleontological Resources
- 4.11-1a: Hazardous Substance Management, Handling, Storage, Disposal, and Emergency Response Plan
- 4.11-2a. Maintain Appropriate Setbacks from the "North Stockton Unit A" 1 Well
- 4.20-1a: Unanticipated Discovery

Impact 4.21-2: Implementation of the proposed Project would not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
Impact Determination: *less than significant*.

Threshold:	*Would not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.*

As discussed in draft EIR Section 4.12 Hydrology and Water Quality, sufficient ground water supplies are available to meet Project construction and operational demands. Related impacts are **less than significant**.

Mitigation Measures

None required.

Impact 4.21-3: Implementation of the proposed Project would result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
Impact Determination: *No Impact*

Threshold:	*Would result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.*

During construction the only wastewater demand would be for onsite construction workers. This demand would be served by onsite portable toilets.

Operational impacts related to wastewater treatment are discussed in draft EIR Chapter 3.0 Project Description and Section 4.12 Hydrology and Water Quality. As discussed in these sections, Project generated wastewater would be treated onsite by a private sewage treatment package plant system. Therefore, the Project would not impact the capacity of any existing wastewater treatment plant or any treatment plant's ability to continue meeting existing service commitments. There would be **no impact**.

Mitigation Measures

None required.

Impact 4.21-4: Implementation of the proposed Project would 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.
Impact Determination: *less than significant*.

Threshold:	*Would 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.*

Physical landfill capacity is defined as the remaining volumetric capacity of existing landfills. Physical capacity represents the volume available to be filled and is different from the rate at which materials would enter the landfill. On an annual basis, the County generates around 700,000 tons of Class III waste, or municipal solid waste, of which 390,000 tons are sent to County-owned facilities, including the Foothill and North County landfills, and 310,000 tons are sent to the Forward Landfill which is owned and operated by Allied Waste (San Joaquin County. 2016b). Nearly all of the solid waste that is sent to both the North County and Foothill landfills each year originates in the County, with a very small percentage of waste attributed to residents of neighboring counties using the drop off areas located at each landfill. Forward Landfill accepts additional tons of Class III waste from neighboring counties and it accepts Class II waste (i.e., contaminated soils) that are not allowed by permit at the County Landfills.

Using standard generation rates from CalRecycle (10.53 lbs per employee per day), it is estimated that the proposed Project would generate an additional 2,422 lbs per day (230 employees x 10.53 = 2,422), for a total of 442 tons annually (2,422 x 365 days/2000 lbs in a ton = 442 tons/year). This represents a conservative estimate; according to the San Joaquin County 2035 General Plan the actual waste generated

by new development could be lower assuming the County's continued implementation of waste diversion programs. According to CalRecycle, as of 2008, the Forward Landfill had approximately 78 percent remaining capacity (23.7 million cubic yards) and an estimated closure date of 2020. As of 2009, the North County Landfill had 89 percent remaining capacity (41 million cubic yards) and an estimated closure date of 2048. The Foothill Sanitary Landfill had around 91 percent (125 million cubic yards) of capacity remaining in 2010 and an estimated closure data of 2082. The San Joaquin County 2035 General Plan Background Report concluded that the County, with increasing success of County diversion programs, could extend capacity of its existing landfills to 2054 or beyond.

The Project would be constructed and operated consistent with county policy and applicable regulations, including those for hospital generated medical waste as discussed in draft EIR Section 4.11 Hazards and Hazardous Materials. Several policies describe the County's role in providing adequate infrastructure and services for new development (Policies IS-1.1, 1.2, and 1.5) and maintaining existing infrastructure and service systems (IS-1.3 and 1.4). Policies IS-1.8 and IS-1.13 require that adequate financing for infrastructure improvements is demonstrated prior to approval of new developments.

While the Project would increase solid waste disposal needs, given it would be constructed consistent with the federal, state and local regulations and policies discussed above, it would not 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. This impact is **less than significant**.

Mitigation Measures

None required.

Impact 4.21-5: Implementation of the proposed Project would fail to comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.
Impact Determination: *less than significant*.

Threshold:	*Would fail to comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.*

The project includes construction and operation of a medical center. During construction, standard construction debris would be generated and hauled offsite for disposal at regulated landfills. During operation, the project would generate solid waste consistent with hospital and office building uses. This would include standard office waste as well as potentially hazardous medical waste.

Hospitals are required to comply with all applicable environmental federal, state, and local laws addressing waste management. Consistent with these regulations, the Project is required to prepare a Hazardous Waste Management Plan (MWMP) and a Hazardous Waste Business Plan (HMBP) prior to receiving a certificate of occupancy for each newly constructed building. Preparation of these plans is also required by San Joaquin County 2035 General Plan Public Health and Safety Element policy PHS-7.6 (presented above). The County also maintains the San Joaquin County Integrated Waste Management

Plan which was developed to ensure appropriate landfills are available to meet the County's solid waste disposal needs.

There is nothing unusual about the Project that would cause it to fail to comply with Federal, State, and local management and reduction statutes and regulations related to solid waste. The impact is **less than significant**.

Mitigation Measures

None required.

Impact 4.21-6: Implementation of the proposed Project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
Impact Determination: *less than significant*.

Threshold:	*Would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.*

As discussed in draft EIR Chapter 3.0 Project Description and Section 4.12 Hydrology and Water Quality, groundwater would serve as the Project's supply source. As discussed in Section 4.12, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Related impacts are **less than significant**.

Mitigation Measures

None required.

Impact 4.21-7: Implementation of the proposed Project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
Impact Determination: *less than significant*.

Threshold:	*Would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.*

As discussed in draft EIR Chapter 3.0 Project Description and Section 4.12 Hydrology and Water Quality, groundwater would serve as the Project's supply source. As discussed in Section 4.12, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Related impacts are **less than significant.**

Mitigation Measures

None required.

4.21.4 Cumulative Impacts

As discussed above, the Project does not contribute to cumulative impacts related to the need to construct new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities. The above project level analysis finds that electric power, natural gas, and telecommunications facilities can be extended to and serve the Project without significant impacts. Furthermore, construction of onsite water, wastewater and stormwater facilities was found to be less than significant with mitigation incorporated. Therefore, the Project would not contribute to utility impacts related to expansion of service systems. Finally, the Project would be constructed and operated consistent with all applicable state and local solid waste management plans, regulations and policies and there is nothing unusual about the Project that would cause it to fail to comply with solid waste polies or regulations. Therefore, the Project results in a **less than cumulatively considerable** contribution to utility and services systems cumulative impact.

Mitigation Measures

None required.

References

San Joaquin County. 2016a. San Joaquin County 2035 General Plan Final EIR. September.

_____. 2016b. San Joaquin County 2035 General Plan Policy Document. December 2016.

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4.22 WILDFIRE

This section addresses potential project effects on wildfire risk and response in the Project vicinity and the regulatory setting pertaining to that effect.

4.22.1 Environmental Setting

The Project site is currently in agricultural production and is developed with vineyards. The proposed Project is not located within a heavily wooded area nor is it surrounded by wildlands or forests. The project site is almost entirely surrounded by agricultural land, with some industrial and residential uses adjacent to the southern site boundary. The Project site is bound by West Lane on the west, light industrial and residential uses followed by Eight Mile Road on the south, North Ham Lane on the east, and the Woodbridge Irrigation District (WID) agricultural canal and existing agricultural operations on the north.

4.22.2 Regulatory Setting

4.22.2.1 State

The State of California Department of Forestry and Fire Protection (CAL FIRE) created Draft State Responsibility Area (SRA) and Local Responsibility Area (LRA) Fire Hazard Severity Zones Maps in 2007. SRA Fire Hazard Severity Zone Map designations guide Wildfire impacts analysis under Appendix G of the CEQA Guidelines. The project site and surrounding land is generally flat and designated "Other Unzoned" for fire hazard severity by CAL FIRE, indicating the lowest possible fire hazard severity risk. The nearest High Fire Hazard Severity Zone is located approximately 19 miles east and the nearest Moderate Fire Hazard Severity Zone is located approximately 11 miles east.

4.22.3 Environmental Impacts and Mitigation Measures

4.22.3.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, wildfire impacts are considered significant if implementation of the proposed project would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones.
- Exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones.
- 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 for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones.

- 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 for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones.

4.22.3.2 Methods of Analysis

The potential effects of proposed project construction and operation on wildfire risk and response likely to be directly or indirectly affected by these activities are qualitatively evaluated and presented herein.

4.22.3.3 Project Impacts and Mitigation Measures

Impact 4.22-1: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would substantially impair an adopted emergency response plan or emergency evacuation plan.
Impact Determination: *No Impact*

Threshold:	*Substantial adverse effect on an adopted emergency response plan or emergency evacuation plan for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones.*

As stated above, the project site and surrounding land is designated "Other Unzoned" for fire hazard severity by CAL FIRE and is located over 19 miles from the nearest high fire hazard severity zone. Furthermore, the proposed Project does not divide an established community or otherwise restrict travel to or on major roadways that facilitate emergency response or evacuation. Therefore, construction of the Proposed Project will not impair or conflict with an adopted emergency response or evacuation plan for areas in very high fire hazard severity zones. There would be **no impact**.

Mitigation Measures

None required.

Impact 4.22-2: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would, 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.
Impact Determination: *No Impact*

Threshold:	*Substantial adverse effect on exacerbation of wildfire risks due to slope, prevailing winds, and other factors, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones.*

See above discussion. The proposed Project is not located in or near an area zoned as a very high fire hazard severity zone. There would be **no impact**.

Mitigation Measures

None required.

Impact 4.22-3: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would 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.
Impact Determination: *No Impact*

Threshold:	*Substantial adverse exacerbation of wildfire risks or temporary or ongoing impacts to the environment due to required installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones*

See above discussion. Installation and maintenance of associated project infrastructure would not exacerbate fire risk in or near an area designated as a very high fire hazard severity zone. There would be **no impact**.

Mitigation Measures

None required.

Impact 4.22-4: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would 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.
Impact Determination: *No Impact*

Threshold:	*Substantial adverse effect to exposure of 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 for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones*

See above discussion. The proposed project is not located in or near an area designated as a very high fire hazard severity zone. There would be **no impact**.

Mitigation Measures

None required.

4.22.4 Cumulative Impacts

The geographic area considered for the analysis of cumulative impacts related to wildfire is the local project vicinity. Wildfire risk in the County and at the Project site is generally low. The project site and surrounding area is primarily in agricultural use. Future development of land in San Joaquin County would result in a cumulative increase in demand for fire protection, which may require the provision of new or physically altered facilities, the construction of which could result in adverse environmental impacts. Cumulative fire protection projects would undergo environmental review and would be required to demonstrate compliance with CEQA prior to project approval. Where feasible, impacts from construction of new facilities and response plans will be mitigated to a less than significant level. The proposed project, in combination with cumulative projects, would have a **less than cumulatively considerable impact**.

Reference

California Department of Forestry and Fire Protection (CAL FIRE). 2007. *Fire Hazard Severity Zone Maps*. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

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5.0 OTHER CEQA ANALYSIS

This section discusses additional topics statutorily required by CEQA, including growth inducement and irreversible changes.

5.1 Growth-Inducing Impacts

The CEQA Guidelines Section 15126.2(d) require that an EIR "discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth-inducing impacts can occur in a variety of ways, including the construction of new homes and businesses, and the extension of urban services, such as utilities and improved roads, to previously undeveloped areas.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as a project providing the extension of water supply lines to an in an area where the lack of water service historically limited the growth in the area.

CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed project. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

CEQA Guidelines Section 15126.2[d]) states that it is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment. However, growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service. A project that would induce "disorderly" growth (growth that conflicts with local land use plans) could indirectly cause additional adverse environmental impacts and other public services impacts. Thus, to assess whether a growth-inducing project would result in adverse secondary effects, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

The proposed Project would construct a medical center with two hospitals and a medical office building. The Project does not propose extension of existing water, sewer or stormwater facilities as these utility

needs would be developed and provided onsite as part of the Project. The site would be accessed from the existing road network and no public road extensions are required to construct or operate the project. With exception of the hospitals and office building, proposed physical improvements would not directly or indirectly contribute to population growth.

The Project would provide employment opportunities which may influence people currently residing outside the area to relocate closer to the Project site or within the City of Stockton or surrounding communities. According to the *Economic Assessment of Demand and Urban Decay in the Stockton Area for Proposed Gill Medical Center* Report (King et al. 2021, Appendix I), at full buildout the project is expected to generate approximately 817 onsite long-term well-paying jobs and 600 additional employment opportunities in the community. This job growth could result in a potential indirect influence on the local population and place demands on housing in the area. However, as discussed in the Economic Assessment prepared for the Project, the Project area currently experiences a "leakage" of medical related jobs and patients seeking care due to the lack of nearby health care facilities. Leakage describes the phenomena of seeking a good or service outside of one's trade area (typically near one's residence or possibly near one's place of work). With regard to the medical care industry, it is likely that some residents in San Joaquin County receive medical care services in the Sacramento Area and the greater Bay Area, where there is a higher number of high-quality medical facilities and personnel as well as a greater number of specialists. Coincidently, many medical industry practitioners (especially nurses) who reside in San Joaquin County do not necessarily practice there, but rather work in these two alternative trade areas where there are more hospitals and Medical Office Buildings (MOBs). Therefore, most jobs generated by development of the Project are expected to be filled mainly by existing residents in the Stockton area.

The Project site is along the City of Stockton northern Fringe Area and is uniquely located to serve planned and approved growth in the north Stockton area. This includes the City of Stockton 341-acre Tra Vigne development project, as well as citizens residing in rural areas to the east, west and north, and residents of the City of Lodi. The Project is consistent with existing County A/G and AG-40 planning and zoning classifications (which limit growth) as well as County policy to provide adequate community supporting facilities and is better described as growth serving than growth accommodating. Therefore, the Project fits in context with existing and approved but not yet constructed development and is consistent with related County land use policy as discussed in draft EIR Section 4.13 Land Use.

The Project does not include housing and therefore does not have a direct growth inducing impact. However, the Project does have the following indirect growth inducing characteristics:

- creation temporary construction jobs;
- creation of new permanent employment opportunities including up to 600 onsite well-paying jobs; and,
- Creation of increased demand on transportation infrastructure, community noise, and adverse environmental impacts such as degradation of air quality, and conversion of agricultural land to developed uses.

In summary the Project is not expected to induce substantial direct or indirect unplanned population growth in the area. Growth inducing impacts are **less than significant**.

5.2 Significant Irreversible Environmental Changes

CEQA Guidelines require that an EIR identify and focus on significant environmental effects, including significant irreversible environmental changes that would be caused by the project should the project be implemented.

CEQA Guidelines Section 15126.2 (c) states that "uses of nonrenewable resources during the initial and continued phases of the Proposed Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly secondary impacts (such as highway improvements which provide access to a previously inaccessible area), generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitment of resources should be evaluated to assure that such current consumption is justified."

5.2.1 Nonrenewable Resources

Implementation of the Proposed Project would result in an irretrievable commitment of renewable and nonrenewable resources including land, water, energy resources, and construction materials. Development consistent with the proposed Project would also convert agricultural land to urban and irretrievably commit materials and energy to construction of the medical center. Nonrenewable and limited resources that would likely be consumed as part of Project development would include, but are not limited to, oil, gasoline and diesel fuel, lumber, sand and gravel, steel, and other materials use in the construction of improvements necessary for implementation of the Project. However, the amount of resources to be committed is not considered to be significant and are comparable to other developments of this type. No special construction materials or resources are anticipated to be needed as part of the Project.

5.3 Urban Decay

The State CEQA Guidelines define the parameters under which the consideration of socioeconomic impacts is included in an environmental evaluation. State CEQA Guidelines Section 15131 states that "[e]conomic or social information may be included in an EIR or may be presented in whatever form the agency desires." Further, Section 15131(a) of the State CEQA Guidelines states:

> "[e]conomic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes."

State CEQA Guidelines Section 15131(b) also provides that "[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project."

The term most used to describe the physical effects that can result when new retail uses cause existing business closures and physical deterioration of the areas in which such businesses are located is "urban decay". In recent years, the California Courts have defined the term "urban decay" as the physical manifestation of a project's potential socioeconomic impacts and have specifically identified the need to address the potential for urban decay in environmental documents for large retail projects. The leading case is *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, in which the court set aside two environmental impact reports for two proposed Wal-Mart projects that would have been located less than five miles from each other because those reports "do not fulfill their informational obligations because they failed to consider the projects' individual and cumulative potential to indirectly cause urban/suburban decay by precipitating a downward spiral of store closures and long-term vacancies in existing shopping centers," in other words, they fail to adequately assess the potential for urban decay.[1] The court emphasized that "experts are now warning about land use decisions that cause a chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake." (Id. at p. 1204.) The court also discussed prior case law that addressed the potential for large retail projects to cause "physical deterioration of [a] downtown area" or "a general deterioration of [a] downtown area." (*Id*. at pp. 1206, 1207).

The *Bakersfield* court also described the circumstances in which the duty to address urban decay issues arise. Accordingly, there are two pertinent questions to be asked regarding the effects of the proposed project in terms of this economic impact and urban decay analysis:

1 would the proposed new hospital campus result in revenue losses that are sufficiently large at existing hospitals to force some to close; and
2. would those closed hospitals remain unoccupied long enough to create physical changes that could be defined as urban decay?

The potential environmental impacts of shifts in patients from existing hospitals to the proposed Project may be deemed to be significant if the project:

- Is projected to result in economic or social changes that would cause substantial and adverse physical changes; or
- Would cause urban decay.

Unless these criteria are met, economic effects of the Project would *not* be deemed significant. Philip G. King, PH.D., conducted an analysis of the Project's potential to cause urban decay. Results are contained in the study *Economic Assessment of Demand and Urban Decay in the Stockton Area for Proposed Gill Medical Center* (King et al. 2021.) (see Draft EIR Appendix I).

[1]The co-author of this report, Philip G. King, Ph.D., along with his mentor, C. Daniel Vencill, Ph.D., professor of economics at San Francisco State University, co-authored the report referenced in the Bakersfield decision, upon which the court relied in adopting the term "urban decay" and in holding such an effect is physical, rather than merely social or economic, and therefore subject to consideration under CEQA.

The King analysis focuses on the current and projected supply of and demand for hospital and health care services in the region in order to evaluate the potential for the Project to oversaturate the hospital and health care market, leading to facility closures or "urban decay" as defined in recent judicial opinions interpreting CEQA.

As explained in the King study, substantial evidence demonstrates that the Project's market area is substantially underserved by both hospital services and related health services and that the Project will provide a positive economic impact to the primary market area in San Joaquin County. Due to the undersupply of these services, for which demand continues to increase, the Project is not expected to cause any business closures or otherwise cause or contribute to physical deterioration or urban decay. For details of this analysis, the reader is referred to Appendix I.

Reference

King, Philip G., Ph.D., Sharmila G. King, Ph.D., and Sarah Jenkins. 2021. *Economic Impact and Urban Decay Analysis. Prepared for Gill Medical Center Project, San Joaquin County CA*. September 30.

6.0 ALTERNATIVES TO THE PROPOSED PROJECT

6.1 Introduction

The CEQA Guidelines specify that an Environmental Impact Report (EIR) must describe a reasonable range of alternatives to the project, or to the location of the project, which could feasibly attain most of the basic project objectives (Guidelines §15126.6(a)). The alternatives analysis must focus on alternatives that are capable of eliminating or substantially reducing the significant adverse impacts caused by the project (Guidelines §15126.6(c)), and alternatives to the "whole of the project" rather than the project's component parts. An EIR must include an alternatives analysis even if the EIR concludes that the project would not cause any significant adverse impacts.

The "no project" alternative, which considers impacts that would occur if existing conditions continued, must be considered (Guidelines §15126.6(e)), and the EIR must also identify the environmentally superior alternative. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The EIR should not consider alternatives "whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." An EIR need not evaluate an alternative that is considered speculative, theoretical, or unreasonable. Not every potentially feasible alternative need be considered; rather, the relevant test is whether a "reasonable range" of feasible alternatives is considered for that particular project (Guidelines §15126.6(a)).

As discussed in Section 3.3, the primary Project purpose is to bring much needed hospital services to the currently underserved north Stockton area of San Joaquin County. The Project is not intended to replace any existing health care services in the area, but rather to supplement what already exists with increased availability and quality of services – including general hospital services. The Project's service area would include the cities of Stockton and Lodi and the surrounding rural communities. According to the Economic Assessment of Demand and Urban Decay in the Stockton Area for Proposed Gill Medical Center Report (King et al. 2021), the Project's service area population is medically underserved both in comparison to the State overall and national benchmarks for health. Furthermore, the service area also includes populations with extremely low community health markers, which may be improved by increased access to high-quality medical care. Therefore, the Project is intended to relieve some of the stresses felt by existing medical facilities in San Joaquin County and, in particular, the Project service area. The reader is referred to Draft EIR Appendix I for further discussion of Project need.

The purpose of Phase 1 development is to provide an HCAI 1 full-service hospital for labor and delivery services including traditional and alternative birthing services , which currently do not exist in San Joaquin County. In addition to these services, Phase 1 would have an in- and outpatient surgery center, emergent care services, radiology center, lab, pharmacy and nursery. The purpose of Phase 2 development is to add to the hospital campus by incorporating an additional HCAI 1 100-bed hospital and medical office building.

Based on the CEQA Guidelines, several factors need to be considered in determining the range of alternatives analyzed in an EIR and the level of analytical detail that should be provided for each

alternative. These factors include (1) significant impacts of the proposed project; (2) the ability of alternatives to avoid or substantially lessen the significant impacts attributable to the project; and (3) the feasibility of the alternatives. While not the determining factor, part of an element of selecting an alternative for consideration in an EIR is that alternative's ability to meet the objectives of the project.

As discussed in Chapter 4.0 of this draft EIR, the Project would result in the following significant unavoidable impacts:

Impact 4.10-1: Project GHG emissions exceed compliance thresholds of a GHG plan, policy, or regulation.

Impact 4.15-1: The proposed project could generate a substantial increase in ambient noise levels in excess of applicable standards identified by the Lead Agency.

Impact 4.19-2: Project Vehicle Miles Traveled (VMT) exceed compliance thresholds of CEQA Guidelines Section 15064.3, subdivision (b).

All other significant Project impacts can be either avoided or reduced to less than significant by implementing identified policy, and regulation and/or mitigation measures identified in the draft EIR. The following presents a detailed comparative analysis of alternatives to the Project, including a "No Project Alternative" as required under Section 15126.6 of the CEQA Guidelines.

6.2 Alternatives Selected for Analysis

For purposes of this draft EIR, four alternatives to the Project were selected for further analysis. The selection of alternatives for review in this draft EIR meets CEQA requirements for the comparative analysis of alternatives to be presented in the EIR and constitute a reasonable range of alternatives for comparison to the Project. The alternatives selected for further analysis include the following and each is described below:

- Alternative 1: No Project Alternative
- Alternative 2: Reduced Project - Phase 1 Hospital Only
- Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water
- Alternative 4: Alternative Location - Stockton Economic and Education Enterprise Zone at I-5 and Eight Mile Road

6.2.1 Alternative 1: No Project Alternative

Section 15126.6 of the CEQA Guidelines requires evaluation of the No Project Alternative.

Under the No Project Alternative, the Gill Medical Center Project would not be implemented. Specifically, the proposed HCAI 1 general acute-care full-service hospitals and medical office building, onsite circulation and landscape improvements, emergency helistop landing/take off pad and associated water, wastewater and storm water facilities would not be constructed. Also, proposed medical services, including emergency room, labor, delivery, emergent medicine, and outpatient surgery services would not be provided at the Project site. As a consequence, the north Stockton area would continue to be an

underserved from a medical services perspective. Under the No Project Alternative, a high percentage of patients and health care workers residing in the north Stockton area would continue to travel to the Sacramento area and the greater Bay area, where there is a higher number of high-quality medical facilities and personnel as well as a greater number of specialists and medical related job opportunities.

6.2.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

This Alternative was selected because a reduced project would have a corresponding reduction in construction and operational related VMT, Greenhouse Gas (GHG) and noise impacts all identified as significant and unavoidable impacts in this draft EIR.

Alternative 2 would involve construction of Phase 1 improvements only on 12.5 acres of the western most 42.4-acre Project site (an approximately 30 percent reduction in site development). Improvements would be limited to the smaller single story 12-bed hospital, circulation and landscaping, and those onsite water, wastewater and storm water facilities necessary to serve Phase 1. Medical services offered under Alternative 2 would include emergency room, labor, delivery, emergent medicine, and outpatient surgery services. This alternative would also eliminate the potential for a Phase 2 helistop which is evaluated in this draft EIR but would only be proposed should the Phase 2 Project seek a future trauma designation.

6.2.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

This Alternative was selected because connection with City of Stockton public water, wastewater and storm water utilities would allow a corresponding reduction in the development footprint (an approximately 3.7 acre, or 8.7 percent reduction compared to the proposed Project) with related reduction in construction GHG emissions, a significant unavoidable impact identified in the draft EIR.

Under Alternative 3, the Project would connect to City of Stockton for water, wastewater and storm water utilities and proposed onsite utilities would not be constructed. Connections to these City utilities would be accomplished as described below. Alternative 3 could be implemented for full Project buildout, or it could be implemented for Phase 2 development only. Should Alternative 3 be applied at the Phase 2 stage, Phase 1 would either continue receiving service from onsite utilities or could be combined with Phase 2 and served by City utility extensions. The physical improvements required to implement Alternative 3 are described below[1].

6.2.3.1 Water

The Project site is not served by a potable public water system. Alternative 3 would establish an out-of-agency water service agreement for the Project with the City of Stockton. There are two options to connect to existing City water main lines.

[1] After the County filed the NOP but prior to completion of this DEIR, the City of Stockton Approved and annexed the Tra Vigne mixed use project which will bring the City's boundaries and Utilities to the intersection of Eight Mile Road and West Lane. However, because that infrastructure has not yet been installed, this alternatives analysis assumes the Utilities located in West Lane terminate at their current location.

1. Connect to existing 24-inch water main line on West Lane approximately 1-mile (5,500+/- feet) south of the Project site.
2. Connect to existing 12-inch water main line on Eight Mile Road approximately 1.2-miles (6,000+/- feet) west of the Project site.

As shown in Figure 6-1. *Existing Offsite Utilities*, the nearest public water mains are located approximately one mile to the south in the City of Stockton. Connection to the 24-inch main is the most viable as it is a transmission main and likely has the pressure and flow capacity to serve the site. Connection to both the above mains may be necessary if a looped system is required.

To provide service to the Project site, the existing underground mains would be extended along the above-named roads to the Project site and dedicated to the City.

6.2.3.2 Wastewater

The Project site is not served by a public wastewater system. As shown in Figure 6-1, an existing 36-inch public sewer line is located approximately 1.5-miles (+/- 8,000-ft) south of the Project site. This line runs east-west at the intersection of West Lane and Morada Lane.

Connecting to this sewer line is feasible, however the main is part of a sewer system dedicated to other parts of the City of Stockton. The City has in recent years determined that the assumed water generation rates used in the 1980's, 1990, and into the 2000's are not materializing, and waste generation is lower than previously assumed. This allows for this project to prepare a study and meet with the City to determine if capacity exists.

To convey wastewater from the Project to the main, either a gravity system or a sewer force main with pump station would be required. These facilities would extend along the above-named roads to the Project site and would be dedicated to the City. Additional topographic data is necessary to make any further supporting infrastructure determinations (such as lift stations).

6.2.3.3 Storm Water

The closest existing storm water mainline is a 12-inch line that runs in a north-south direction on West Lane approximately 1-mile (5,500+/- feet) south of the Project site. To provide Project service, the existing underground mains would be extended along West Lane to the Project site.

6.2.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

This Alternative was selected to determine if project impacts would be substantially reduced by implementing the project at an alternative location. A project site located closer to I-5 would presumably reduce VMT and related greenhouse gas (GHG) emissions, both identified as significant unavoidable impacts in this draft EIR.

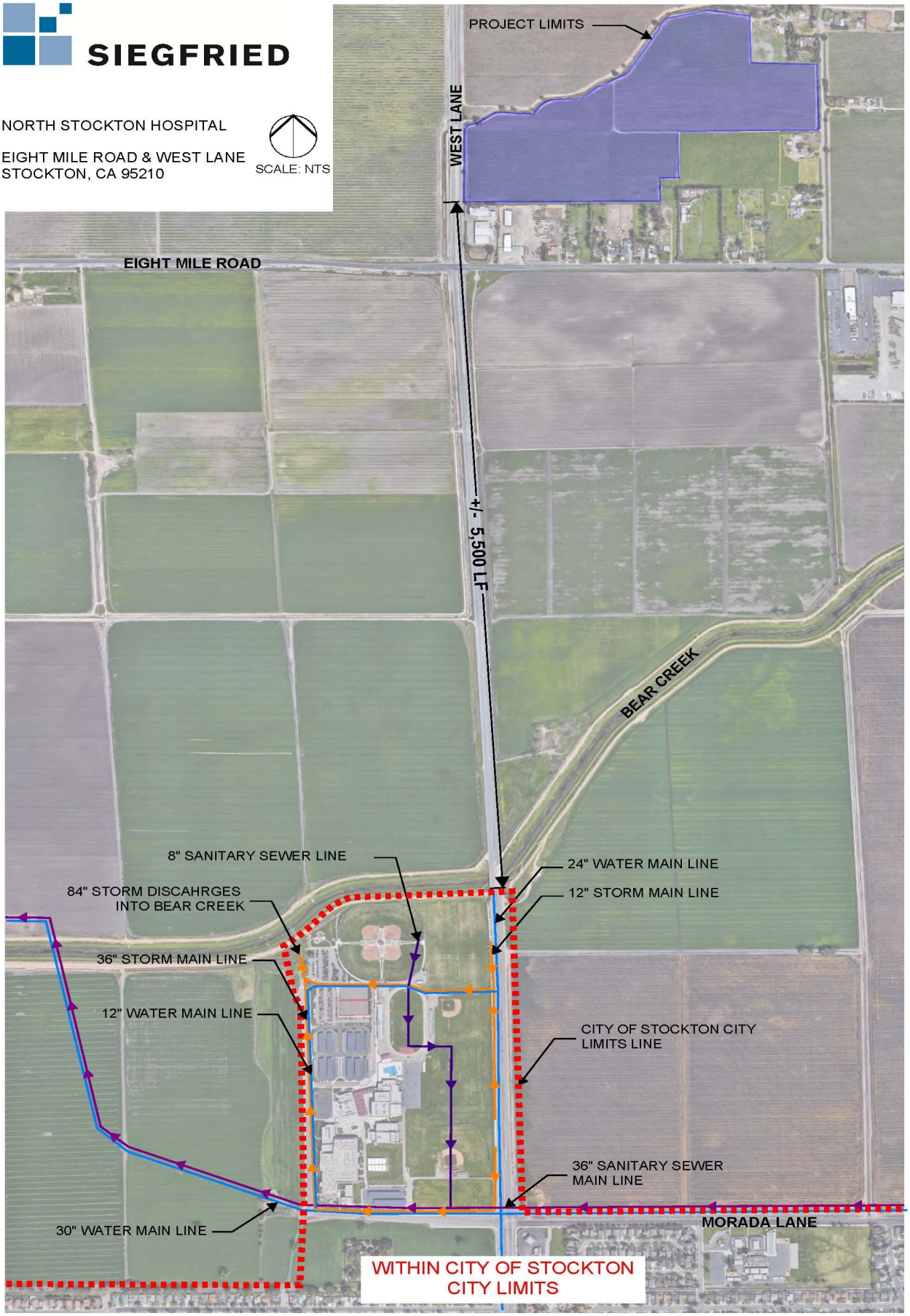

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Figure 6-1. Existing Offsite Utilities

2020-053 Gill Medical Center

Alternative 4 would relocate the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone, an approximately 3,000-acre area established by the Envision Stockton 2040 General Plan and located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2. Alternative Site Location*. Existing conditions at the alternative site location are similar to the Project site in that it is mostly level and currently in agricultural production with scattered rural residences. Surrounding lands to the north, east and west are also similarly in agricultural production with scattered residences. However, lands to the south of the Enterprise Zone (south of Eight Mile Road) are mostly developed with residential, commercial and other urban land uses. According to the Envision Stockton 2040 General Plan (City of Stockton 2018a.), the Economic and Education Enterprise Zone is envisioned for development intended to support the City's economic development goals by attracting new businesses, industries, and/or educational institutions that provide high-quality jobs to the local workforce. Appropriate development within the Economic and Education Enterprise Zone supports the City's Economic Development Strategic Plan and State Executive Orders regarding greenhouse gas (GHG) reduction.

6.3 Comparative Analysis of Project Alternatives

6.3.1 Introduction

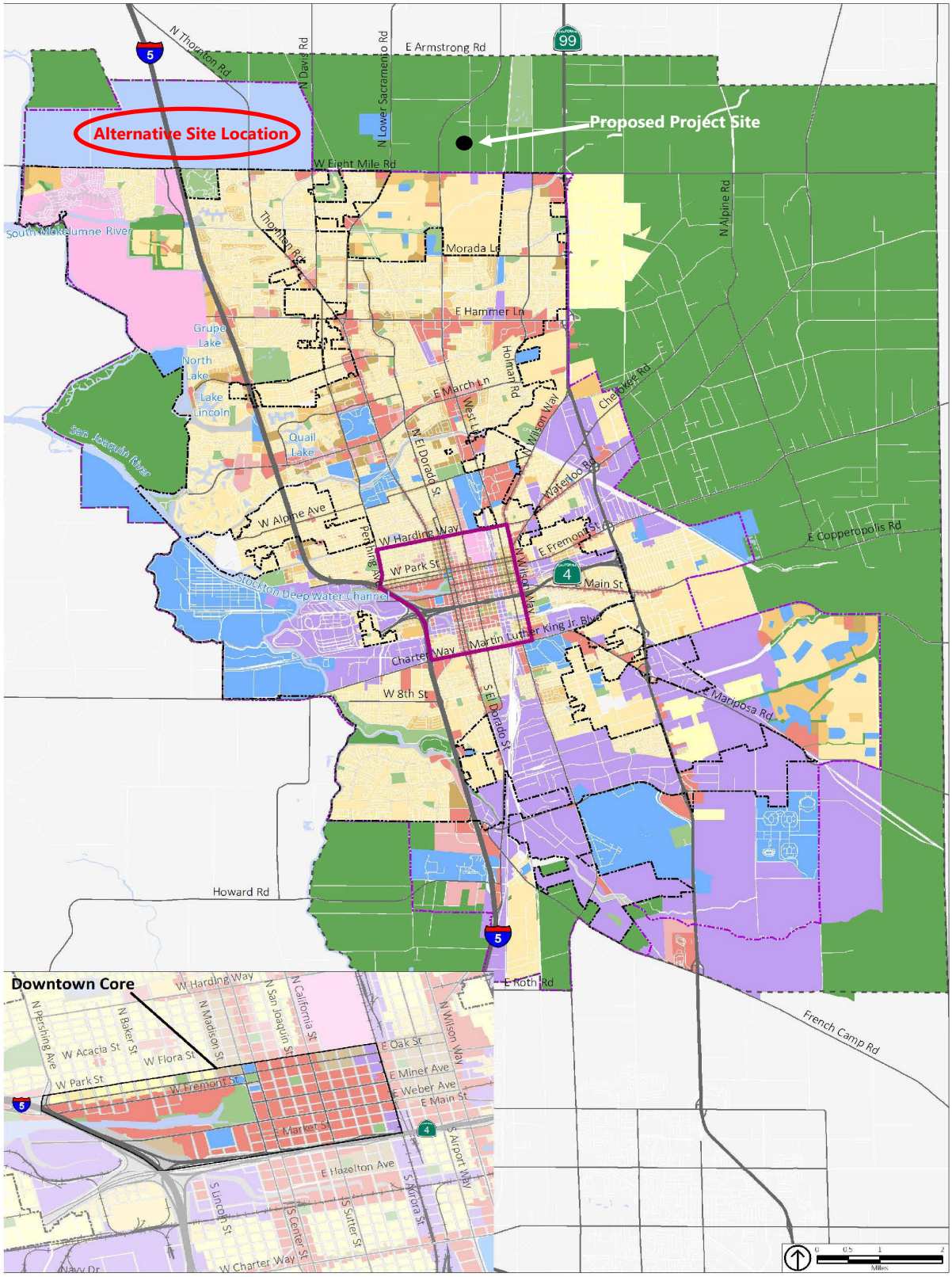
This section examines the potential environmental impacts associated with each alternative relative to the Project. Through comparison of these alternatives to the Project, the relative environmental advantages and disadvantages of each alternative are evaluated. The comparative analysis is first presented for the following significant and unavoidable impacts identified in this draft EIR: Vehicle Miles Traveled (VMT), Greenhouse Gas Emissions (GHG), and Noise. Due to their relationship, the comparison of Project alternative VMT and GHG emissions to those of the proposed Project is combined in the discussion below. This is followed by comparison of other draft EIR Chapter 4.0 issue areas where impacts were found to be less than significant with mitigation incorporated and includes the following: Agriculture and Forestry, Air Quality, Biological Resources, Cultural and Tribal Resources, Geology and Soils, Hazards and Hazardous Materials, and Hydrology and Water Quality. Project impacts to issue areas found to be less than significant in this draft EIR would similarly be less than significant under the alternatives. These issue areas are briefly addressed below in section 6.4.5 Environmentally Superior Alternative Determination and in Table 6-1. Following the impact comparisons, the environmentally superior alternative is identified.

6.3.2 Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) Emissions

6.3.2.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the proposed hospital and medical office buildings, onsite circulation, parking, water, wastewater and storm drain improvements would not be constructed and the proposed medical services would not be offered at the Project site.

General Plan Land Use Map



Source: City of Stockton, 2017; PlaceWorks, 2017.

City Limit
Sphere of Influence
General Plan Planning Area
Greater Downtown Boundary
Residential Estate
Low Density Residential
Medium Density Residential
High Density Residential
Mixed Use
Commercial
Administrative Professional
Industrial
Economic and Education Enterprise
Institutional
Parks and Recreation
Open Space/Agriculture

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Figure 6-2. Alternative Site Location

2020-053 Gill Medical Center

When compared to the proposed Project, the No Project Alternative would have no VMT impact nor would it produce direct construction or operational air emissions, including GHG emissions, eliminating these significant and unavoidable impacts of the proposed Project. However, without more strategically located medical facilities, patients and medical workers in the medically underserved north Stockton area would continue to travel to existing hospitals in the greater Sacramento and Bay Areas, contributing to ongoing area wide VMT and greenhouse gas emissions.

In summary, while implementation of Alternative 1 would eliminate Project generated significant and unavoidable VMT and GHG impacts identified in this draft EIR, regional VMT and GHG emissions associated with medical patient and worker vehicle trips in the north Stockton area would remain mostly unchanged.

6.3.2.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

Under the Reduced Project Alternative, VMT and GHG impacts would be limited to construction and operation of Phase 1 Project components only. When compared to full buildout, Alternative 2 would result in a corresponding reduction to offsite and area-wide impacts related to VMT and GHG emissions, both identified as significant and unavoidable impacts in this draft EIR. Medical services offered under Alternative 2 at the Phase 1 hospital would include emergency room, labor, delivery, emergent medicine, and outpatient surgery services. Alternative 2 would improve the near-term availability of these services in the currently medically underserved north Stockton area, although not to the degree that would occur under full buildout with Phase 2 facilities. As a result, over the long term until additional medical facilities are developed in the area, patients and health care workers residing in the north Stockton area would continue to travel to the Sacramento area and the greater Bay area, where there is a higher number of high-quality medical facilities and personnel as well as a greater number of specialists and medical related job opportunities. Thus, Alternative 2 would likely reduce region wide VMT in the short term only.

Table 6-1 identifies the approximate amount of GHG emissions generated under the Reduced Project Alternative, as derived from Appendix D, compared with the emissions generated under the Proposed Project.

Table 6-1: Alternative 2 Reduced Project Emissions Comparison

Emissions Source	Proposed Project CO_2e (Metric Tons/Year)	Alternative 2 CO_2e (Metric Tons/Year)	Difference
Area Source Emissions	0	0	0
Energy Source Emissions	978	182	-796
Mobile (automotive)	7,099	1,824	-5,275
Mobile (helicopter operation)	152	0	-152
Solid Waste Emissions	1,282	246	-1,036
Water/Wastewater Emissions	58	11	-47
Total Emissions	**9,569**	2,263	-7,306

As shown, compared to the Proposed Project, the Reduced Project Alternative would result in 7,306 less metric tons per year of CO_2e, a 76 percent reduction. However, unless other more strategically located hospitals are constructed in the north Stockton area, as discussed above, over the long-term Alternative 2 would have effects similar to the No Project Alternative because medical patients and workers in the medically underserved north Stockton area would be forced to continue to travel to existing hospitals and job opportunities in the greater Sacramento and Bay Areas.

In summary, compared to proposed Project buildout, this Alternative would reduce VMT and GHG emissions compared to the proposed Project in the short term, however medical patient and worker VMT and related GHG emissions in the north Stockton area would remain mostly unchanged in the long term under Alternative 2 compared to existing conditions.

6.3.2.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Under Alternative 3, the Project would connect to City of Stockton for water, wastewater and storm water utilities and onsite utilities would not be constructed as proposed. This would result in a reduced onsite construction footprint and new offsite utility construction.

While elimination of planned onsite water, wastewater and storm water facilities would reduce site development by approximately 3.7 acres, connection to City services would require trenching and installation of approximately one mile of pipeline under West Lane and 1.2 miles under Eight Mile Road, resulting in substantial construction related VMT, construction GHG emissions, and GHG emissions from increased idling and delays that would be experienced by regular traffic using these roads. Since the pipeline facilities would be placed under existing roads, these roadways would need to be trenched and the demolished asphalt and excess soil material hauled offsite. Once the pipelines were installed, West Lane would need to be repaved. Since under the proposed Project water, wastewater and storm water utilities would be constructed onsite and thus not require such intensive construction activities, the GHG emissions and VMT produced under Alternative 3 during construction would be greater than the Proposed Project. Depending on implementation timing, there could be a corresponding reduction in VMT and GHG emissions under Alternative 3 if any portion of Utility infrastructure associated with the Tra Vigne project has been constructed thereby shortening the required connection length and related VMT and GHG emission impacts.

Following buildout operational VMT would be similar between this alternative and the proposed Project, however, the Project proposal to construct water, wastewater and storm water utilities onsite would require less electricity for pumping, and thus less operational GHG emissions.

In summary, while connection to public utilities would reduce onsite construction related GHG emissions, this reduction is expected to be more than offset by GHG emissions generated due to pipeline extensions necessary to serve the site. Additionally, due to the length of required pipeline construction, related VMT would also increase compared to the proposed Project. Finally, long-term operational GHG emissions would increase under Alternative 3 compared to the proposed Project due to greater pumping requirements for offsite wastewater transmission/treatment. Long-term operational VMT would be similar to the proposed project.

6.3.2.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 involves relocating the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone, an approximately 3,000-acre area located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*.

According to the Envision Stockton 2040 General Plan (City of Stockton 2018a), development in this Enterprise Zone is intended to support the City's economic development goals by attracting new businesses, industries, and/or educational institutions that provide high-quality jobs to the local workforce. By bringing major job-generators to Stockton, this designation supports the City's Economic Development Strategic Plan and State Executive Orders regarding GHG reduction, Senate Bill (SB) 32, and the San Joaquin Sustainable Communities Strategy. It is not the intent of this policy to discourage development in other areas of the city. The Economic and Education Enterprise designation is specifically intended to accommodate exceptional job-producing developments and only permit housing and other facilities that are supportive to the job-producing effort.

Businesses envisioned for this designation include those that provide a significant number of jobs offering wages averaging above Area Median Income, as supported by a comprehensive economic impact analysis, and that cannot be reasonably accommodated elsewhere within the city limit. This specifically includes healthcare and medical facilities.

In support of a major job-generator, this designation promotes:

- Linked transportation and housing options so that future employees can live close to their jobs and commute using transportation modes that support the City's vehicle miles traveled (VMT) reduction goals;
- Businesses that reduce VMT by providing vanpool programs, car share services, and active transportation alternatives;
- Proximate housing stock that supports the job generator, including single-family, multi-family, and/or mixed-use dwellings at various levels of affordability, with housing costs that generally correspond to the income levels of the jobs generated by the project.

The eastern boundary of the Alternative Site is located approximately 2.1 miles west of the Project site via Eight Mile Road. According to the Traffic Impact Study prepared for the Project (KD Anderson and Associates 2021), the current VMT per Service Population in the County General Plan Planning Area is 24.16 VMT per Service Population and the Proposed Project is expected to result in 102.15 VMT per Service Population. Vehicular VMT and related GHG emissions are both expected to remain significant and unavoidable under Alternative 4.

In summary, it is unlikely that relocating the Project a few miles west of its proposed location would significantly reduce the Project's contribution to local VMT and associated GHG emissions. Thus, Alternative 4 would have VMT and GHG impacts similar to those of the proposed Project.

6.3.3 Noise

6.3.3.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the proposed hospital and medical office buildings, onsite circulation, parking, water, wastewater and storm drain improvements would not be constructed and the proposed medical services would not be offered at the Project site. Thus, the No Project Alternative would eliminate the significant unavoidable noise impact associated with Phase 2 Helistop operations under a scenario where a Trauma designation is proposed and approved. Under a scenario where no Trauma designation is proposed, the No Project Alternative would be similar to the proposed Project (which does not currently propose a Trauma designation). Thus, noise impacts due to Helistop operations under the No Project Alternative would be either less than, or similar to, those of the proposed Project.

6.3.3.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

Under the Reduced Project Alternative, noise impacts would be limited to construction and operation of Phase 1 Project components only. When compared to full buildout of the proposed Project, this alternative eliminates the significant unavoidable noise impact associated helistop operations should the Project propose and receive Phase 2 Trauma designation approval. Thus Alternative 2 would be considered superior to the proposed Project from an operational noise perspective.

6.3.3.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Under Alternative 3, the Project would connect to City of Stockton for water, wastewater and storm water utilities and onsite utilities would not be constructed as proposed. While this Alternative would result in a reduced onsite construction footprint, it would not reduce Helistop operational noise should the Project propose and receive a Phase 2 Trauma designation and operate the helistop. Therefore, Alternative 3 would result in noise impacts similar to that of the proposed Project.

6.3.3.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 involves relocating the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone, an approximately 3,000-acre area located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*. The Enterprise Zone existing setting is similar to the Project area in that land use is primarily agricultural with scattered rural residences. One primary difference is residential subdivisions and supporting urban development currently exists south of the Enterprise Zone and Eight Mile Road within the City of Stockton which increases the population potentially exposed to Helistop operational noise compared to the proposed Project site.

Because the setting within the Enterprise Zone is similar to the Project area (and residential subdivisions are existing to the south within the City of Stockton), should the Phase 2 Project propose and receive a Trauma designation, use of the Helistop is expected to result in noise impacts similar to that of the proposed Project.

6.3.4 Agriculture and Forestry

6.3.4.1 Alternative 1: No Project Alternative

The draft EIR finds that with implementation of Project as proposed which includes preservation of agricultural land at a 1:1 ratio consistent with the intent of the County's Agricultural Mitigation Ordinance, Project impacts to active agriculture would be less than significant. Implementation of Alternative 1 would result in no Project development and therefore no impact to active agricultural land. Therefore Alternative 1 is superior to the proposed Project for the issue of loss of active agricultural land.

6.3.4.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

The proposed Phase 1 development area comprises 12.5 acres of primarily active agriculture. Therefore, the Reduced Project Alternative would result in an approximately 71 percent decrease in loss of active agricultural land compared to the proposed Project and is superior for the issue of loss of active agricultural land.

6.3.4.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Under this alternative, the onsite areas reserved for water, wastewater and storm water utility construction would no longer be required and the Project development footprint could be reduced accordingly, benefiting active agriculture. As shown on *Figure 6-1*, all pipeline extensions required to connect the Project site with the nearest available water, wastewater and storm water utilities would occur within existing road right-of-way and would have no direct impact on active agriculture. Therefore, Alternative 3 would decrease the loss of active agricultural land compared to the proposed Project and is superior for this issue.

6.3.4.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 would relocate the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*.

Existing conditions at the alternative site location are similar to the Project site in that it is mostly level and currently in agricultural production. Thus, Project development at the alternative site would be subject to similar agricultural land preservation as the proposed Project, although related mitigation would be guided by city rather than county policy. Because the alternative site is located within the City, the Project would be required to connect to City of Stockton utilities. This would reduce the construction footprint compared to the proposed Project, resulting in a slight reduction in impacts to active agriculture. Therefore, Alternative 4 would slightly decrease the loss of active agricultural land compared to the proposed Project and is superior for this issue.

6.3.5 Air Quality

6.3.5.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the proposed hospitals and medical office buildings, onsite circulation, parking, water, wastewater and storm drain improvements would not be constructed and the proposed Project medical services would not be offered at the Project site. As such, when compared to the proposed Project, the No Project Alternative would have no air quality impact thereby eliminating construction and operational emissions of the proposed Project. Thus, the No Project Alternative is considered superior for the issue of air quality.

6.3.5.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

As shown in draft EIR Chapter 4.0, Tables 4.5-4 and 4.5-6, proposed Project construction and operation would not generate emissions that would exceed SJVAPCD significance thresholds. Furthermore, the Project would reduce construction-generated emissions below what is required in Rule 9510 and would similarly reduce operational-generated emissions or offset the emissions with payment of a fee, which is then used to fund clean-air projects within the air basin. As a result, the draft EIR finds proposed Project air quality impacts are less than significant with mitigation incorporated.

Alternative 2 would limit the Project to the Phase 1 Hospital and related supporting infrastructure and would be subject to the same air quality mitigation measures as the proposed Project. Given that impacts to air quality from full buildout of the proposed Project was found to be less than significant with mitigation incorporated, a reduced project that only includes Phase 1 improvements would also be less than significant with mitigation incorporated. However, Alternative 2 would also decrease the amount of emissions generated compared to the proposed Project and is superior for this issue.

6.3.5.3 Alternative 3: Connect to Public Utilities - Water, Wastewater, and Storm Water

Under Alternative 3, the Project would connect to City of Stockton for water, wastewater, and storm water utilities and onsite utilities would not be constructed as proposed. This results in reduced onsite construction and a reduced construction footprint and new offsite utility construction as discussed below.

Elimination of planned onsite water, wastewater and storm water facilities would reduce site development by approximately 3.7 acres, or an 8.7 percent overall site reduction. However, connection to City services would require trenching and installation of 5,500 linear feet of pipeline facilities under West Lane, resulting in substantial construction related air emissions and increased idling and delays by regular traffic using West Lane. Since the pipeline facilities would be placed under West Lane, this roadway would need to be trenched and the demolished asphalt and excess soil material hauled offsite. Once the pipelines were installed, West Lane would need to be repaved. Proposed Project water, wastewater and storm water utilities would be constructed onsite and thus not require such intensive construction activities. As a result, construction related air emissions under Alternative 3 would be greater than the Proposed Project. Additionally, the Project proposal to construct water, wastewater and storm water utilities onsite would require less electricity for pumping, and thus less overall air emissions. It should be noted that depending

on implementation timing, there could be a corresponding GHG emissions reduction under Alternative 3 if any portion of Utility infrastructure associated with the Tra Vigne project has been constructed thereby shortening the required connection length and related GHG emission impacts.

In summary, while connection to public utilities would reduce onsite construction related emissions, this reduction is expected to be more than offset by emissions generated due to pipeline extensions necessary to serve the site. Therefore, the proposed Project would be superior to Alternative 3 for the issue of air quality.

6.3.5.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 involves relocating the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*. For additional background on this Enterprise Zone, refer to Section 6.3.2.4 above.

Alternative 4 construction emissions would be the same as those reported for the proposed Project. Alternative 4 operational emissions would be only slightly different due to the Alternative Site being located approximately 2.1 miles west of the proposed Project site via Eight Mile Road. Thus, Alternative 4 operational emissions are expected to also similarly be less than significant with mitigation incorporated.

In summary, it is unlikely that locating the Project a few miles west of its currently proposed location would significantly reduce the Project's air quality impacts. The air quality impact for Alternative 4 would be similar to that of the proposed Project.

6.3.6 *Biological Resources*

6.3.6.1 Alternative 1: No Project Alternative

The draft EIR finds that with implementation of Mitigation Measures 4.6-1a through 4.6-1h, Project impacts to biological resources would be less than significant with mitigation incorporated. Under the No Project Alternative, none of the proposed Project impacts that require the above mitigation would occur. Therefore Alternative 1 is superior to the proposed Project for the issue of potential impacts to special-status plant and wildlife species and/or their habitats.

6.3.6.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

The proposed Phase 1 development area comprises 12.5 acres of the 42.4-acre Project site. Therefore, the Reduced Project Alternative would result in an approximately 71 percent decrease in land development compared to the proposed Project with a corresponding reduction in the potential for impacts to special status species. Thus, Alternative 2 is superior for the issue of potential impacts to special-status plant and wildlife species and/or their habitats.

6.3.6.3 Alternative 3: Connect to Public Utilities - Water, Wastewater, and Storm Water

Under this alternative, the onsite areas reserved for water, wastewater, and storm water utility construction would no longer be required and the Project development footprint could be reduced accordingly, potentially benefiting special status species. As shown on *Figure 6-1*, all pipeline extensions required to connect the Project site with the nearest available water, wastewater and storm water utilities would occur within existing road right-of-way and would have no direct impact on biological resources/special status species. Therefore, Alternative 3 would decrease potential impacts to biological resources including special status species compared to the proposed Project and is marginally superior for this issue.

6.3.6.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 would relocate the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*.

Existing conditions at the alternative site location are similar to the Project site in that it is mostly level and currently in agricultural production. Therefore, Project development at the alternative site is expected to be subject to similar biological resource mitigation as the proposed Project.

Because the alternative site is located within the City, development at the alternative site would include connection to City of Stockton utilities which would reduce the required construction footprint compared to the proposed Project. While this would result in a slight reduction for potential impacts to biological resources, because both sites have similar existing conditions, the same sensitive species mitigation measure are expected to apply at the alternative site.

In summary, the only expected biological advantage of development at the alternative site would be the slight reduction in construction footprint resulting from elimination of onsite utilities. Therefore, Alternative 4 would only have a slight decrease in biological impact compared to the proposed Project.

6.3.7 Cultural Resources

6.3.7.1 Alternative 1: No Project Alternative

According to the draft EIR, no Historic or Cultural Resources were identified within or immediately adjacent to the Project site, however ground disturbing activities could result in the unanticipated discovery of historic resources or prehistoric archaeological sites. The draft EIR finds that with implementation of Mitigation Measures 4-1a and 4.7-3a, Project impacts to unknown historic and/or cultural resources would be less than significant with mitigation incorporated.

Under the No Project Alternative, none of the proposed Project construction impacts that require the above mitigation would occur. Therefore Alternative 1 is superior to the proposed Project for the issue of potential impacts to unknown historic and cultural resources.

6.3.7.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

The proposed Phase 1 development area comprises 12.5 acres of the 42.4-acre Project site. This equates to an approximately 62 percent decrease in land development compared to the proposed Project with a corresponding reduction in potential impacts to unknown historic and cultural resources. Therefore Alternative 2 is moderately superior to the proposed Project for the issue of potential impacts to unknown historic and cultural resources.

6.3.7.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Under this alternative, the onsite areas reserved for water, wastewater and storm water utility construction would no longer be required and the Project development footprint could be reduced accordingly, benefiting potential impacts to unknown historic and cultural resources. As shown on *Figure 6-1*, all pipeline extensions required to connect the Project site with the nearest available water, wastewater and storm water utilities would occur within existing road right-of-way. Because trenching for pipeline extension could extend below previous grading conducted for road base construction, implementation of Alternative 3 would result in a moderate increase in potential impacts to unknown historic and cultural resources. While implementation of Cultural Resources Mitigation Measures 4.7-1a and 4.7-3a could be applied during offsite utility construction, due to the length (and potentially depth for wastewater pipelines) of required trenching, a slight increase in potential for impacts to buried historic and/or cultural resources can be expected. Therefore, Alternative 3 would result in a slight increase in potential impacts to unknown historic and cultural resources and the proposed Project is considered superior for this issue. It should be noted that depending on implementation timing, there could be a corresponding reduction to potential cultural resource impacts under Alternative 3 if any portion of Utility infrastructure associated with the Tra Vigne project has been constructed thereby shortening the required connection length and related potential cultural resource impacts.

6.3.7.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 would relocate the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*.

Existing conditions at the alternative site location are similar to the Project site in that it is mostly level and currently in agricultural production. The only way to confirm the presence of cultural resources is to conduct pre-construction surveys and/or train construction workers to recognize these resources during earth moving construction. Therefore, Project development at the alternative site is expected to be subject to cultural resource mitigation similar to that of the proposed Project.

Because the alternative site is located within the City, development at the alternative site would include connection to City of Stockton utilities which would reduce the required construction footprint compared to the proposed Project. While this would result in a slight reduction for potential impacts to unknown

tribal cultural resources, both sites have similar existing conditions and uses, and therefore similar cultural resource mitigation is expected to apply at the alternative site.

In summary, the only expected cultural resource advantage of development at the alternative site would be the slight reduction in construction footprint resulting from elimination of onsite utilities. Therefore, Alternative 4 is considered slightly superior to the proposed Project from a cultural resources perspective.

6.3.8 Geology and Soils

6.3.8.1 Alternative 1: No Project Alternative

The draft EIR finds that with implementation of Mitigation Measures 4.9-5a and b, Project impacts to geology and soils would be less than significant with mitigation incorporated. Under the No Project Alternative, none of the proposed Project impacts that require the above mitigation would occur. Therefore Alternative 1 is superior to the proposed Project for the issue of potential impacts to paleontological resources.

6.3.8.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

The proposed Phase 1 development area comprises 12.5 acres of the 42.4-acre Project site. This equates to an approximately 71 percent decrease in land development compared to the proposed Project with a corresponding reduction in potential impact to paleontological resources. Therefore Alternative 2 is moderately superior to the proposed Project for this issue.

6.3.8.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Under this alternative, the onsite areas reserved for water, wastewater and storm water utility construction would no longer be required and the Project development footprint could be reduced accordingly, potentially benefiting paleontological resources. As shown on *Figure 6-1*, all pipeline extensions required to connect the Project site with the nearest available water, wastewater and storm water utilities would occur within existing road right-of-way. Because trenching for pipeline extension could extend below previous grading conducted for road base construction, implementation of Alternative 3 would result in a moderate increase in potential impacts to paleontological resources. While implementation of Geology and Soils mitigation measures 4.9-5a and b could be applied during offsite utility construction, due to the length (and potentially depth for wastewater pipelines) of required trenching, a slight increase in potential for impacts to buried paleontological resources is expected. Therefore, Alternative 3 would result in a slight increase in potential impacts to paleontological resources and the proposed Project is considered superior for this issue. It should be noted that depending on implementation timing, there could be a corresponding reduction to potential paleontological resource impacts under Alternative 3 if any portion of Utility infrastructure associated with the Tra Vigne project has been constructed thereby shortening the required connection length and related potential paleontological resource impacts.

6.3.8.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 would relocate the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*.

Existing conditions at the alternative site location are similar to the Project site in that it is mostly level and currently in agricultural production. Therefore, Project development at the alternative site is expected to be subject to geology and soils mitigation similar to that of the proposed Project.

Because the alternative site is located within the City, development at the alternative site would include connection to City of Stockton utilities which would reduce the required construction footprint compared to the proposed Project. While this would result in a slight reduction for potential impacts to paleontological resources, both sites have similar geologic and soil conditions, and therefore the same paleontological mitigation measures are expected to apply at the alternative site.

In summary, the only expected geology and soils advantage of development at the alternative site would be the slight reduction in construction footprint resulting from elimination of onsite utilities. Therefore, Alternative 4 is considered slightly superior to the proposed Project for paleontological resources.

6.3.9 *Hazards and Hazardous Materials*

6.3.9.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the proposed hospitals and medical office buildings, onsite circulation, parking, water, wastewater and storm drain improvements would not be constructed and the proposed Project medical services would not be offered at the Project site.

Proposed Project Impacts related to the routine transport, use, disposal, or accidental release of hazardous materials during construction were found to be potentially significant. However, with implementation of Mitigation Measure 4.11-1a, this impact would be reduced to less than significant with mitigation incorporated. In addition, a former gas well was found to be located within the footprint of the Phase 2 Main Hospital building. This well was found to be a significant hazard to the public and/or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials. With implementation of Mitigation Measure 4.11-2a, this impact would be reduced to less than significant with mitigation incorporated.

Under the No Project Alternative, none of the above impacts that require mitigation would occur. Therefore Alternative 1 is superior to the proposed Project for the issue of potential hazard and hazardous material impacts.

6.3.9.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

Draft EIR findings related to proposed Project hazards and hazardous materials are summarized immediately above.

Under the Reduced Project Alternative, only Phase 1 facilities would be constructed. The proposed Phase 1 development area comprises 12.5 acres of the western portion of the 42.4-acre Project site. The Phase 1 development area does not include the former gas well discussed immediately above, which exists within the Phase 2 development area approximately 250 feet east of the Phase 1 boundary. This separation would ensure that should any upset condition resulting a release of hazardous materials from the former gas well occur, appropriate remedial action could be implemented, up to and including "rig access" to the well site should such equipment be required for remediation and/or well closure activities. Thus, the existing former gas well would not present a hazards constraint under Alternative 2 and Alternative 2 is superior to the proposed Project for the issue of potential impacts to hazards and hazardous materials.

6.3.9.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Draft EIR findings for the proposed Project related to hazards and hazardous materials are summarized above in section 6.3.8.1.

Under this Alternative 3, the onsite areas reserved for water, wastewater and storm water utility construction would no longer be required and the Project development footprint could be reduced accordingly. As shown on *Figure 6-1*, all pipeline extensions required to connect the Project site with the nearest available utilities would occur within existing West Lane right-of-way. Because trenching for pipeline extensions could extend below previous grading conducted for road base construction, implementation of Alternative 3 would result in a moderate increase in potential to encounter unknown underground hazardous materials. Thus, due to the length and depth of required trenching, a slight increase in potential for hazard and hazardous materials impacts is expected. Therefore, the proposed Project is superior to Alternative 3 for the issue of hazards and hazardous materials. It should be noted that depending on implementation timing, there could be a corresponding reduction to potential hazardous material impacts under Alternative 3 if any portion of Utility infrastructure associated with the Tra Vigne project has been constructed thereby shortening the required connection length and related impacts.

6.3.9.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Draft EIR findings for the proposed Project related to hazards and hazardous materials are summarized above in section 6.3.7.1

Existing conditions at the alternative site location are similar to the Project site in that it is mostly level and currently in agricultural production. Thus, Project development at the alternative site is expected to have potential hazard and hazardous materials issues similar to that of the proposed Project (with the exception of the former gas well at the Project site). Should a gas well or other significant environmental hazard be identified at the alternative site, the site is large enough that avoidance could be implemented while accommodating the project. Therefore, Alternative 4 is superior to the proposed Project for the issue of hazards and hazardous materials.

6.3.10 Hydrology and Water Quality

6.3.10.1 Alternative 1: No Project Alternative

The draft EIR finds that with implementation of draft EIR recommended mitigation measures Project impacts to hydrology and water quality would be less than significant with mitigation incorporated. Under the No Project Alternative, none of the proposed Project impacts that require the above mitigation would occur. Therefore Alternative 1 is superior to the proposed Project for the issues of hydrology and water quality.

6.3.10.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

Alternative 2 would limit Project development to the Phase 1 Hospital and related supporting circulation and parking as well as onsite water, wastewater and storm water infrastructure. As a reduced project, Alternative 2 would be subject to the same hydrology and water quality mitigation measures as the proposed Project (discussed immediately above).

From a hydrology and water quality perspective, the primary difference of Alternative 2 compared to the proposed Project would be reduced demand for, and therefore reduced onsite construction and operation of, potable water, wastewater treatment and storm water retention utilities. Given that hydrology and water quality impacts from full Project buildout was found to be less than significant with mitigation incorporated, a reduced project that only includes Phase 1 improvements is also expected to be less than significant with mitigation incorporated. Thus, due to the reduced need for the construction and operation of onsite utilities, Alternative 2 is superior for the issue of hydrology and water quality.

6.3.10.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Draft EIR proposed Project findings related to hydrology and water quality are summarized above in section 6.3.9.1.

Under Alternative 3, the onsite areas reserved for water, wastewater and storm water utility construction would no longer be required and the Project development footprint could be reduced accordingly. This would amount to an approximately 3.7 acre, or 8.7 percent reduction, in site development compared to the proposed Project with proportional reduction in potential construction generated hydrology and water quality impacts.

As shown on *Figure 6-1*, all pipeline extensions required to connect the Project site with the nearest available utilities would occur within existing West Lane and Eight Mile Road right-of-way. Several miles of trenching and pipeline construction would be required to make the required connections with existing utilities. Even without the need for onsite utility construction, due to the length of required pipeline extensions (over four miles combined), Alternative 3 would substantially increase potential construction related erosion and siltation water quality impacts. However, as discussed in draft EIR Section 4.12 Hydrology and Water Quality, the Project, and Alternative 3, would be subject to a construction SWPPP which requires implementation of construction erosion control and water quality best management

practices that would ensure protection of water quality during construction consistent with state requirements.

In summary, due to the substantial length of required trenching under Alternative 3, a slight increase in potential for construction related siltation and water quality impacts is expected. Therefore, the proposed Project is superior to Alternative 3 for the issue of hydrology and water quality. It should be noted that depending on implementation timing, there could be a corresponding reduction to water quality impacts under Alternative 3 if any portion of Utility infrastructure associated with the Tra Vigne project has been constructed thereby shortening the required connection length and related impacts.

6.3.10.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Draft EIR findings for the proposed Project related to hydrology and water quality are summarized above in section 6.3.9.1.

Under Alternative 4, the Project would be located 2.1 miles west of the proposed Project site within the City of Stockton Economic and Education Enterprise Zone located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*. Existing conditions at the Alternative Site location are similar to the Project site; mostly level and currently in agricultural production.

The Alternative Site is not located within the current City of Stockton city limit, but is located within the City's Sphere of Influence. According to the Envision Stockton 2040 General Plan Update and Utility Master Pan Supplements draft EIR (City of Stockton 2018b), sufficient water supply, wastewater treatment and storm water collection and conveyance is available to serve General Plan buildout. However, utility demands and related hydrology and water quality impacts due to future development within the Enterprise Zone have not yet been evaluated under CEQA. Therefore, it is unknown if the Alternative Site could be adequately served by existing City water, wastewater and storm water utilities, or if these existing utilities would need to be expanded to accommodate future Enterprise Zone development. Alternatively, under Alternative 4 these utilities could be developed onsite similar to the proposed Project. However additional studies would be required to understand if onsite utility development and operation would result in significant hydrology and water quality impacts. As noted for Alternative 3 above, should Alternative 4 be served by City utilities, onsite areas reserved for water, wastewater and storm water utilities would no longer be required and development footprint could be reduced accordingly. As discussed above, this would amount to an approximately 3.7 acre, or 8.7 percent reduction, in site development compared to the proposed Project, with a corresponding reduction in construction and operation related hydrology and water quality impacts.

In summary, hydrology and water quality impacts from implementation of Alternative 4 are expected to be similar to that of the proposed Project, although with greater uncertainty (until additional studies can be conducted). Thus, the proposed Project is considered slightly superior to Alternative 4 from a hydrology and water quality perspective.

6.3.11 Tribal Cultural Resources

6.3.11.1 Alternative 1: No Project Alternative

According to the draft EIR, no Tribal Cultural Resources (TCRs) were identified within or immediately adjacent to the Project site, however ground disturbing activities could result in the unanticipated discovery of TCRs and prehistoric archaeological sites which may be considered TCRs. The draft EIR finds that with implementation of Mitigation Measures 4.20-1a, Project impacts to unknown tribal cultural resources would be less than significant with mitigation incorporated.

Under the No Project Alternative, none of the proposed Project construction that require the above mitigation would occur. Therefore Alternative 1 is superior to the proposed Project for the issue of potential impacts to tribal cultural resources.

6.3.11.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

The proposed Phase 1 development area comprises 12.5 acres of the 42.4-acre Project site. This equates to an approximately 71 percent decrease in land development compared to the proposed Project with a corresponding reduction in potential impacts to unknown tribal cultural resources. Therefore Alternative 2 is moderately superior to the proposed Project for the issue of potential impacts to tribal cultural resources.

6.3.11.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Under this alternative, the onsite areas reserved for water, wastewater and storm water utility construction would no longer be required and the Project development footprint could be reduced accordingly, benefiting potential impacts to unknown tribal cultural resources. As shown on *Figure 6-1* all pipeline extensions required to connect the Project site with the nearest available water, wastewater and storm water utilities would occur within existing road right-of-way. Because trenching for pipeline extension could extend below previous grading conducted for road base construction, implementation of Alternative 3 would result in a moderate increase in potential impacts to tribal cultural resources. While implementation of Tribal Cultural Resources Mitigation Measures 4.20-1a could be applied during offsite utility construction, due to the length (and potentially depth for wastewater pipelines) of required trenching, a slight increase in potential for impacts to buried tribal resources can be expected. Therefore, Alternative 3 would result in a slight increase in potential impacts to tribal cultural resources and the proposed Project and is considered superior for this issue. It should be noted that depending on implementation timing, there could be a corresponding reduction to potential tribal cultural resource impacts under Alternative 3 if any portion of Utility infrastructure associated with the Tra Vigne project has been constructed thereby shortening the required connection length and related potential tribal cultural resource impacts.

6.3.11.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 would relocate the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*.

Existing conditions at the alternative site location are similar to the Project site in that it is mostly level and currently in agricultural production. The only way to confirm the presence of tribal cultural resources is to consult with native American tribes that have requested consultation. Therefore, Project development at the alternative site is expected to be subject to tribal cultural resource mitigation similar to that of the proposed Project.

Because the alternative site is located within the City, development at the alternative site would include connection to City of Stockton utilities which would reduce the required construction footprint compared to the proposed Project. While this would result in a slight reduction for potential impacts to unknown tribal cultural resources, both sites have similar existing conditions and uses, and therefore similar tribal cultural resource mitigation is expected to apply at the alternative site.

In summary, the only expected tribal cultural resource advantage of development at the alternative site would be the slight reduction in construction footprint resulting from elimination of onsite utilities. Therefore, Alternative 4 is considered slightly superior to the proposed Project from a tribal cultural resources perspective.

6.4 CEQA Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 provides that an EIR should identify the "environmentally superior" alternative. "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." The following sections summarize information and the comparative impact analyses presented above and identifies the environmentally superior alternative in keeping with CEQA requirements.

6.4.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the proposed hospitals and medical office building, onsite circulation, parking, water, wastewater and storm drain improvements would not be constructed. Furthermore, the proposed medical services would not be offered at the Project site and the Project objectives would not be met.

The No Project Alternative would generate no noise impact, VMT impact, nor would it produce direct construction or operational air emissions, including GHG emissions, thereby eliminating proposed Project noise, VMT and GHG significant and unavoidable impacts. The No Project Alternative would also eliminate the following potentially significant but mitigable impacts of the proposed Project:

- Conversion of 33.11 acres of active agricultural land.
- Construction equipment and operational traffic NOx emissions.

- Potential impacts to four sensitive plant and animal species as well as migratory birds and raptors.
- Potential impacts to paleontological resources.
- Potential impacts due to the routine transport, use, disposal, or accidental release of hazardous materials during Project construction and operation.
- Potential impacts to unknown cultural and tribal resources.

It should be noted that without development of new strategically located medical facilities, under the No Project Alternative patients and medical workers in the medically underserved north Stockton area would continue to travel to existing hospitals in the greater Sacramento and Bay Areas, contributing to area wide noise, VMT, and transportation related air and GHG emissions.

The No Project Alternative has the overall effect of eliminating proposed Project significant and unavoidable noise, VMT and GHG impacts, as well as the above significant but mitigable impacts. The tradeoff for this impact reduction is that the No Project Alternative does not address the need for new or expanded medical facilities and services within the underserved north Stockton area. This existing condition would prolong regional VMT and GHG impacts associated with the north Stockton medical services sector.

6.4.2 Alternative 2: Reduced Project – Phase 1 Hospital Only

Under Alternative 2, only proposed Phase 1 improvements would be constructed including the smaller single story 12-bed hospital, circulation, landscaping, and onsite water, wastewater and storm water facilities necessary to serve Phase 1. As shown on Figure 3-5, construction disturbance would be limited to the Phase 1 area only, or 12.5 acres of the western most proposed 42.4-acre Project site (an approximate 71 percent reduction in site development). Medical services offered under Alternative 2 would include emergency room, labor, delivery, emergent medicine, and outpatient surgery services, although not at the scale that would be provided under full buildout of the proposed Project.

The Reduced Project Alternative would generate less VMT and related construction and operational air emissions, including less GHG emissions, compared to the proposed Project. However, while GHG emissions would be reduced under Alternative 2, they would not be reduced below the applicable threshold and would remain significant and unavoidable. Further, while reduced VMT and GHG impacts would be realized in the near term under Alternative 2, without development of additional new strategically located medical facilities in the medically underserved north Stockton area, in the long term patients and medical workers would continue to travel to other existing hospitals in the greater Sacramento and Bay Areas. Compared to the proposed Project, this would contribute to greater medical service sector area wide VMT, and transportation related noise, air and GHG emission impacts over the long term. Thus, the Reduced Project Alternative would result in a short-term reduction to this existing regional impact. Finally, because it's located in the Phase 2 development area approximately 250 feet east of the Phase 1 boundary, Alternative 2 would also eliminate significant and unavoidable operational impacts related to helistop operations and significant but mitigable impacts associated with the former onsite gas well.

Because it results in an approximately 71 percent reduction in the construction footprint, Alternative 2 would also result in proportional reductions to the following potentially significant but mitigable impacts of the proposed Project:

- Reduced conversion of active agricultural land from 42.4 acres (proposed Project) to approximately 12.5 acres (Alternative 2), an approximately 71 percent reduction.
- Reduced construction equipment and operational traffic NOx emissions.
- Reduced potential impacts to four sensitive plant and animal species as well as migratory birds and raptors.
- Reduced potential impacts to paleontological resources.
- Reduced potential impacts due to the routine transport, use, disposal, or accidental release of hazardous materials during Project construction and operation; and,
- Reduced potential impacts to unknown cultural and tribal resources.

The Reduced Project Alternative has the overall effect of reducing significant and unavoidable VMT and GHG impacts compared to the proposed Project, although not to a less than significant level. It also has the effect of eliminating significant and unavoidable operational noise impacts due to Helistop operations should the proposed Project include a future Phase 2 trauma designated. As a tradeoff, the Reduced Project Alternative does not address the long term need for new or expanded medical facilities and services within the underserved north Stockton area. As a result, related regional VMT and GHG impacts associated with medical services industry patient and worker vehicle trips would continue to be substantial in the long term.

6.4.3 Alternative 3: Connect to Public Utilities - Water, Wastewater and Storm Water

Under Alternative 3, the onsite areas reserved for water, wastewater and storm water utility construction would no longer be required and the Project development footprint could be reduced by approximately 3.7 acres, or 8.7 percent.

While connection to public utilities would reduce onsite utility construction related GHG emissions, this reduction is expected to be more than offset by increased NOx and GHG emissions generated due to pipeline extensions necessary to serve the Project. Additionally, due to the length of required connecting pipelines, construction related VMT would also increase compared to the proposed Project. Long-term operational GHG emissions would increase under Alternative 3 compared to the proposed Project due to greater pumping requirements for offsite wastewater transmission and treatment. Finally, long-term operational VMT would be similar to the proposed project.

Because it results in only an approximately 8.7 percent reduction in the construction footprint, Alternative 3 would also achieve smaller (compared to Alternative 2) proportional reductions to the following potentially significant but mitigable impacts identified for the proposed Project.

- Reduced conversion of active agricultural land from 42.4 acres (proposed Project) to approximately 12.5 acres (Alternative 2).

- Reduced potential impacts to four sensitive plant and animal species as well as migratory birds and raptors.
- Reduced potential impacts due to the routine transport, use, disposal, or accidental release of hazardous materials during Project construction and operation; and,
- Reduced potential impacts to unknown cultural and tribal resources.

Alternative 3 has the overall effect of slightly reducing the onsite Project footprint by connecting to City of Stockton water, wastewater and storm water utilities. While this would result in a minor reduction in the potentially significant but mitigatable impacts of Alternative 3, as a tradeoff it is expected to result in equal or greater construction related VMT, air quality, and GHG emissions compared to those associated with onsite utilities under the proposed Project. It should be noted that depending on implementation timing, there could be a corresponding reduction to VMT and GHG impacts under Alternative 3 if any portion of Utility infrastructure associated with the Tra Vigne project has been constructed thereby shortening the required connection length and related impacts.

6.4.4 Alternative 4: Alternative Site Location – Stockton Economic and Education Enterprise Zone (Eight Mile Road at I-5)

Alternative 4 would relocate the Project site to a suitable location within the City of Stockton Economic and Education Enterprise Zone located north of Eight Mile Road and east and west of I-5 as shown in *Figure 6-2*.

Relocating the Project 2.1 miles west of its proposed location would not significantly reduce the Project's significant and unavoidable contribution to Helistop operational noise, local VMT, and associated GHG emissions. It is expected that noise, VMT and GHG impacts would remain significant and unavoidable under Alternative 4.

Because the alternative site is located adjacent to the City of Stockton and within its Sphere of Influence, consistent with City policy, Alternative 4 would likely require annexation and connection to City of Stockton utilities. As discussed for Alternative 3 above, this would reduce the construction footprint by approximately 3.7 acres or 8.7 percent. Thus, Alterative 4 would achieve similar proportional reductions to those potentially significant but mitigable impacts presented above in the Section 6.4.3 Alternative 3 bullet list. One exception is Alternative 4 would eliminate potentially significant but mitigable hazardous material risk of upset conditions associated with the former gas well located on the proposed Project site.

Alternative 4 has the overall effect of slightly reducing the Project footprint by connecting to City of Stockton water, wastewater and storm water utilities with a corresponding reduction in proposed Project potentially significant but mitigable impacts, including elimination of potential hazard impacts associated with the former onsite gas well. While Alternative 4 would achieve minor impact reductions, similar to Alternative 3, Alternative 4 is expected to result in approximately equal VMT and GHG operational emissions compared to those associated with the proposed Project.

It should be noted that a Project objective is to utilize land currently owned by the applicant as the development site for the Project. Because the Gill Family owns the Project site, it can invest capital into the

infrastructure necessary for a project of this magnitude, rather than having to divert capital into land acquisition. Finally, while the Alternative 4 site is located within the City of Stockton's adopted sphere of influence, the site remains outside the current City limit. Consequently, a substantial comprehensive planning and annexation process is still required to ready the Alternative 4 site for development and it's not expected to be available within a time frame consistent with the Project schedule. Thus, the alternative site is inconsistent with Project objectives and may be infeasible.

In summary, it is unlikely that relocating the Project site as proposed under Alternative 4 would significantly reduce the Project's contribution to local operational noise, VMT and associated GHG emissions. Furthermore, relocation to an alternative site is inconsistent with the Project objective to utilize land owned by the applicant to ensure project feasibility and schedule.

6.4.5 Environmentally Superior Alternative Determination

Table 6-2 provides a comparison of anticipated impacts of the alternatives with the proposed Project. For reasons presented above and summarized in Table 6-2, the No Project Alternative is considered the environmentally superior alternative. CEQA Guidelines Section 15126.6(e)(2) states in relevant part that, "If the environmentally superior alternative is identified as the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Among the remaining alternatives, Alternative 2: Reduced Project is considered the environmentally superior alternative. Compared to the proposed Project, the Reduced Project Alternative eliminates the significant and unavoidable noise impact associated with Phase 2 helistop operations (should the Phase 2 Project receive a Trauma designation) and results in 7,306 tons per year less CO_2e, a 76 percent reduction in VMT and related GHG emissions compared to the proposed Project. Thus, Alternative 2 reduces VMT and GHG significant unavoidable impacts of the proposed Project (although not to a less than significant level). The Reduced Project Alternative also has the effect of eliminating the Project's potentially significant and unavoidable Phase 2 Helistop operational noise impact should the Project propose and receive approval of a Phase 2 Trauma designation.

As shown in Table 6-2, due to its reduced development footprint, Alternative 2 also further reduces all significant but mitigable impacts of the proposed Project and is either similar to or further reduces draft EIR identified less than significant impacts.

The primary drawback to Alternative 2 is that as a reduced project it doesn't address the long term need for medical services in the north Stockton Area. Without development of additional new strategically located medical facilities in the medically underserved north Stockton area, in the long term patients and medical workers would continue to travel to other existing hospitals in the greater Sacramento and Bay Areas. Compared to the proposed Project, this would contribute to greater medical service sector area wide VMT, and transportation related air and GHG emission impacts over the long term.

Alternative 2 is considered superior to Alternative 3 because connection to City of Stockton utilities would result in greater construction related VMT and GHG impacts than that of the proposed Project. This is primarily due to the length of pipeline construction (approximately 4 miles total) required to connect the project site with the nearest existing utilities. Furthermore, in August 2020 the Project applicant formerly

requested water, wastewater and storm water service from the City of Stockton but was denied service based on inconsistency with Stockton Council Policy No. 900-1 and because the City of Stockton Community Development Department determined the proposed use does not conform to the City of Stockton's General Plan (See Appendix K for the City's response letter).

Alternative 2 is considered superior to Alternative 4 because Alternative 4 still requires a substantial comprehensive planning and annexation process to ready the site for development and thus it's not expected to be available within a time frame consistent with the Project schedule. Finally, Alternative 4 is inconsistent with the stated Project objective to utilize land owned by the applicant to ensure project feasibility.

Table 6-2. Comparison of Impacts for Alternatives with Proposed Project Category

Category	Alt 1: No Project	Alt 2: Reduced Project	Alt 3: Connect to Public Utilities	Alt 4: Alternative Location
Comparison to Proposed Project Significant Unavoidable Impacts				
Transportation/VMT	–	–	■	■
Greenhouse Gas	–	–	✚	■
Noise	–/□	–	■	■
Comparison to Proposed Project Significant but Mitigable Impacts				
Agriculture and Forestry	–	–	–	–
Air Quality	–	–	✚	■
Biological Resources	–	–	–	–
Cultural Resources	–	–	✚	–
Geology and Soils	–	–	✚	–
Hazards and Hazardous Materials	–	–	✚	–
Hydrology and Water Quality	–	–	✚	✚
Tribal Cultural Resources	–	–	✚	–
Comparison to Proposed Project Less Than Significant Impacts				
Aesthetics	■	■	■	■
Energy	–	–	✚	■
Land Use and Planning	■	■	✚	✚
Mineral Resources	■	■	■	■
Population and Housing	–	–	■	■
Public Services	–	–	■	■
Recreation	■	–	■	■
Utilities and Service Systems	–	–	■	■
Wildfire	–	–	■	■

Notes:
✚ = Impacts would be greater than the Proposed Project
■ = Impacts would be similar to the Proposed Project
– = Impacts would be less than the Proposed Project

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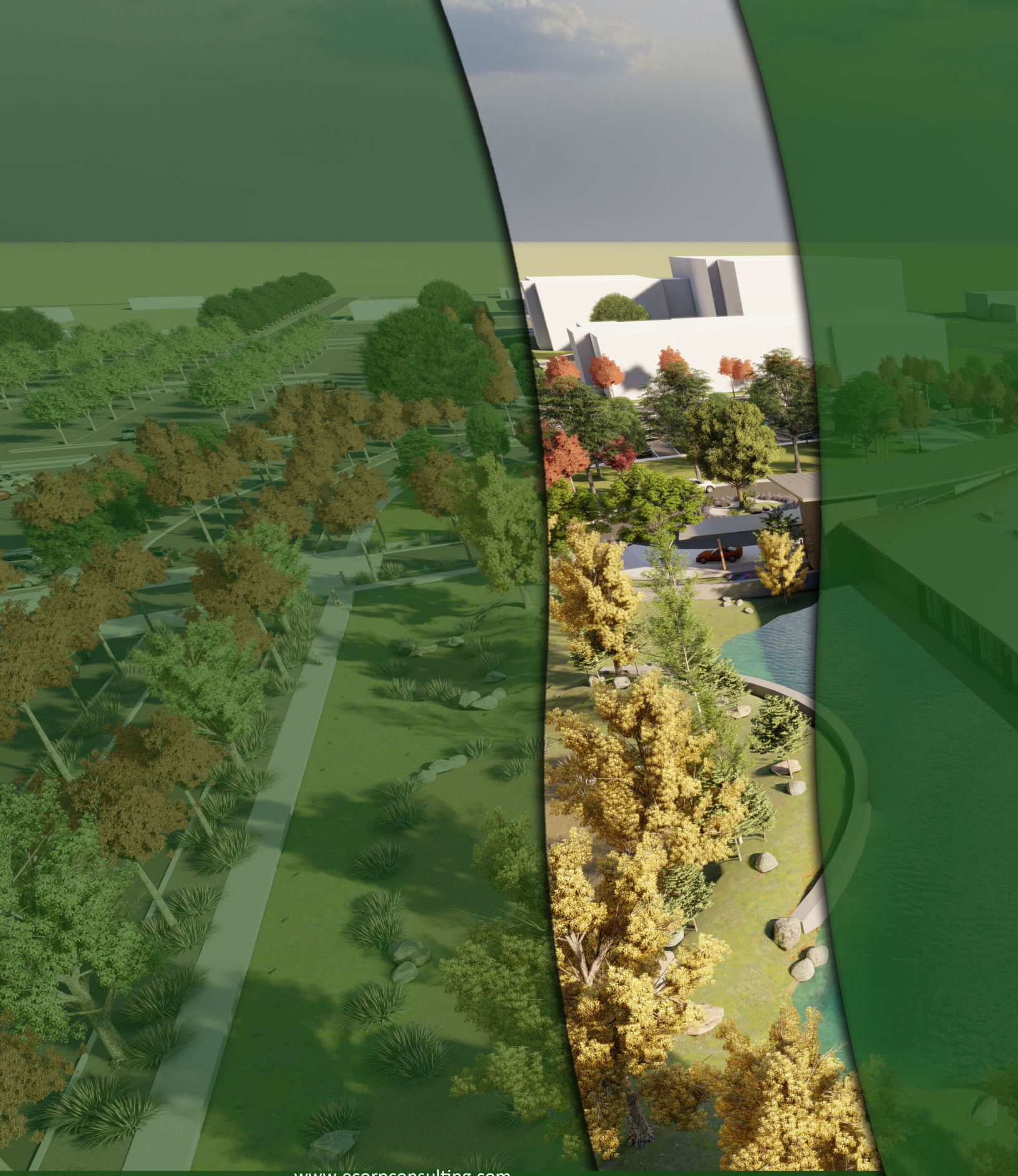

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