PUBLIC REVIEW DRAFT

ENVIRONMENTAL IMPACT REPORT

FOR THE

MARIPOSA INDUSTRIAL PARK

State Clearinghouse Number: 2020120283
Stockton, CA

August 24, 2021

Prepared for:

City of Stockton
Department of Community Development
345 N. El Dorado Street
Stockton, CA 95202

Prepared by:

BaseCamp Environmental, Inc.
802 W. Lodi Avenue
Lodi, CA 95240

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ACRONYMS AND ABBREVIATIONS USED IN THIS DOCUMENT

AB	Assembly Bill
ALUCP	Airport Land Use Compatibility Plan
APN	Assessor's Parcel Number
ARB	California Air Resources Board
BMP	Best Management Practice
BNSF	Burlington Northern Santa Fe
BTU	British Thermal Unit
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
Cal Fire	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
Corps	U.S. Army Corps of Engineers
CUPA	Certified Unified Program Agency
dB	decibel
dBA	A-weighted decibel
DTSC	California Department of Toxic Substances Control
DUC	Disadvantaged Unincorporated Community
DWR	California Department of Water Resources
DWSP	Delta Water Supply Project
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
EPAP	Existing Plus Approved Projects
ESFR	Early Suppression Fast Response
ETRIP	Employer Trip Reduction Implementation Plan
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GPEIR	Envision Stockton 2040 General Plan EIR

ITMM	Incidental Take Minimization Measure
kV	kilovolt
kWh	kilowatt-hour
LAFCo	Local Agency Formation Commission
L_{dn}	Day-Night Average Noise Level
L_{eq}	Equivalent Noise Level
LOS	Level of Service
mgd	million gallons per day
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
NAHC	Native American Heritage Commission
NO_x	nitrogen oxide
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
OPR	Governor's Office of Planning and Research
PG&E	Pacific Gas and Electric Company
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
PM_{10}	particulate matter less than 10 micrometers in diameter
RCMP	Regional Congestion Management Plan
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SEWD	Stockton East Water District
SGMA	Sustainable Groundwater Management Act
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJRTD	San Joaquin Regional Transit District
SJVAPCD	San Joaquin Valley Air Pollution Control District
SR	State Route
STAA	Surface Transportation Assistance Act
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
USFWS	U.S. Fish and Wildlife Service
VERA	Voluntary Emission Reduction Agreement

VMT	vehicle miles traveled
WSA	Water Supply Assessment

1.0 INTRODUCTION

1.1 PROJECT AND EIR OVERVIEW

This document is an Environmental Impact Report (EIR) that analyzes the potential environmental impacts of the proposed Mariposa Industrial Park, hereinafter referred to as the "project." Greenlaw Partners, LLC is the project applicant. This EIR was prepared in accordance with the California Environmental Quality Act (CEQA) and addresses all the issues, and generally follows the analysis sequence, of the latest Environmental Checklist in the State CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3). The City of Stockton is the primary approval agency and therefore the CEQA Lead Agency for this project.

The EIR evaluates the potential environmental effects of the proposed annexation and industrial development of the project site, which consists of nine parcels of land totaling 203.48 acres. The site is currently in the unincorporated area of San Joaquin County adjacent to the southeastern Stockton city limits (Figures 1-1 through 1-5). Conceptual plans for site development involve seven "high-cube" warehouses with a total floor area of 3,616,870 square feet, along with parking stalls, associated utility infrastructure, and vehicular access from Mariposa Road. The project would require discretionary approvals from the City of Stockton consisting of pre-zoning, tentative subdivision map, development agreement, site plan review and design review, along with authorization to apply to the San Joaquin Local Agency Formation Commission (LAFCo) for annexation to the City. LAFCo will be responsible for consideration and approval of the annexation.

1.2 PROJECT BACKGROUND

The project site is presently within the land use jurisdiction of San Joaquin County. North Littlejohns Creek forms the approximate southern boundary of the project site, and Mariposa Road forms the approximate northeastern boundary. A walnut orchard occupies the approximate northern half of the project site. The southern half contains agricultural fields with hay and fallow fields, along with empty ponds previously used for aquaculture and a few home sites. Two residences are located along the eastern boundary of the project site near its center; however, neither is within the proposed project site. Dirt roads used for agricultural and rural residential access are located throughout the project site. To the west, Clark Road and Marfargoa Road, both County-maintained public roads, terminate at the western boundary of the project site.

The project site is located southeast of the City of Stockton, in an area that has been envisioned for and undergoing industrial development since at least 1990. The project site is north of a 495-acre area known initially as the Arch Road Industrial Park, which was subject to environmental review in a 1988 EIR. More recently, Arch Road LP

received City approval of a subdivision of approximately 325 vacant acres of Arch Road Industrial Park, including an approximately 50-acre property adjacent to Arch Road, and an approximately 275-acre property adjacent to Mariposa Road and southeast of the project site. This property comprises the Norcal Logistics Center project, which was the subject of an updated EIR certified by the City in 2015. The project site is immediately north of the Norcal Logistics Center, separated from it by North Littlejohns Creek.

Substantial industrial and transportation-related development has occurred on these and many other surrounding lands (Figure 1-6), including the Burlington Northern Santa Fe (BNSF) Intermodal Facility east of Austin Road, a 425-acre railroad logistics facility. There also have been substantial recent improvements to the transportation infrastructure serving the area, including the Arch-Airport Road extension that provides a connection between Interstate 5 and State Route (SR) 99, and the widening and improvement of SR 99. Other more localized transportation improvements are being made in conjunction with individual industrial development projects.

1.3 EIR REQUIREMENTS AND INTENDED USES

CEQA, enacted in 1970, requires that public agencies document and consider the potential environmental effects of the agency's actions that meet CEQA's definition of a "project." Briefly summarized, a "project" is an action that has the potential to result in direct or indirect physical changes in the environment. A project includes the agency's direct activities as well as related activities that involve public agency approvals or funding. The proposed project, including the annexation, pre-zoning, tentative subdivision map, site approvals, and development, is considered a "project" as defined by CEQA and thus requires environmental review.

This EIR has been prepared in accordance with the requirements of CEQA and the State CEQA Guidelines. The CEQA Guidelines contain advisory and mandatory requirements for the application of CEQA to development projects. CEQA requires the designation of a "Lead Agency" for a project. As defined in the CEQA Guidelines, the Lead Agency is the public agency that has the principal responsibility for carrying out or approving a project. Since the City has the primary approval authority over the project, it is the Lead Agency for CEQA purposes.

A "Responsible Agency" under CEQA is a public agency, other than a Lead Agency, that has discretionary approval authority over a project. Under CEQA Guidelines Section 15096, a Responsible Agency complies with CEQA by considering the CEQA document prepared by the Lead Agency and by reaching its own conclusions on whether and how to approve the project involved. The project would request annexation to the City, for which the San Joaquin LAFCo has approval authority. Therefore, the San Joaquin LAFCo would be a Responsible Agency that would consider the information in this EIR in its review of the proposed annexation. The California Department of Fish and Wildlife (CDFW) and the Central Valley Regional Water Quality Control Board (RWQCB) may also want to use the EIR in conjunction with review of project-related permits from these agencies. Under CEQA Guidelines Section 15041, a Responsible Agency may require

changes in a project, but only to lessen or avoid the effects of that part of a project which the agency will be called on to carry out or approve. CEQA Guidelines Section 15140 states that a Responsible Agency has more limited authority than a Lead Agency in requiring changes to a project.

An EIR is intended to inform decision-makers and the public about the potentially significant adverse environmental effects of a project and to describe any feasible mitigation measures that would substantially reduce or avoid these effects. The EIR also evaluates cumulative impacts, growth-inducing impacts, irreversible environmental effects, and alternatives to the proposed project. This EIR generally follows the analysis sequence of the latest Environmental Checklist in CEQA Guidelines Appendix G, as revised in 2019.

1.4 TIERING AND ENVISION STOCKTON 2040 GENERAL PLAN EIR

Tiering is a CEQA streamlining tool that allows Lead Agencies to use previous analyses of larger-scale environmental issues, when these issues are addressed in previously certified EIRs. CEQA strongly encourages the tiering of EIRs, which "shall be tiered whenever feasible, as determined by the lead agency." CEQA Guidelines Section 15152, which describes tiering, provides that lead agencies should limit the EIR on the later project to effects that 1) were not examined as significant effects on the environment in the prior EIR; or 2) are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means. Those previously certified EIRs are typically programmatic documents such as General Plan EIRs, Program EIRs or Master EIRs. The previous document or analysis is incorporated into the project-level CEQA document by reference.

The City of Stockton's 2019 Envision Stockton 2040 General Plan EIR (GPEIR) considered the anticipated growth and build-out of the City as a whole, including the project site and vicinity, both of which are designated "Industrial" in the General Plan. The proposed project is consistent with this land use designation and project's proposed pre-zoning. The GPEIR found that impacts of planned 2040 development would result in significant and unavoidable impacts on agricultural land conversion, air quality, greenhouse gas emissions, traffic noise, employment growth, and traffic. In each of these cases, a Statement of Overriding Considerations was adopted where mitigation was not available or was not sufficient to reduce impacts to a level that would be less than significant.

This EIR is tiered to the GPEIR with respect to previous analyses of these significant and unavoidable environmental impacts as well as other impacts where applicable. The certified GPEIR and the adopted Statement of Overriding Considerations, listed below, are hereby incorporated into this EIR by reference. These documents can be reviewed at the City of Stockton Community Development Department office at 345 N El Dorado Street, Stockton, California.

- City of Stockton 2018. Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements, Final EIR and Mitigation Monitoring and Reporting Program. October 10, 2018. Certified by the Stockton City Council December 4, 2018.

- City of Stockton 2018. Findings of Fact and Statement of Overriding Considerations, Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Final EIR. Adopted by the Stockton City Council December 4, 2018.

CEQA Guidelines Section 15183 provides that projects which are consistent with the development density established by existing zoning, community plan, or general plan for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. The proposed project qualifies for consideration under Section 15183 in that proposed industrial development is consistent in type and intensity with the General Plan's Industrial designation, and the GPEIR was certified by the Stockton City Council.

1.5 CEQA PROCEDURES FOR THE EIR

On Thursday December 10, 2020, the City circulated a Notice of Preparation (NOP) inviting comments from interested agencies and the public as to environmental concerns that should be considered in the EIR. The 30-day comment period closed on Friday January 8, 2021. A scoping meeting for the EIR was held on January 5, 2021. This meeting was a virtual meeting due to COVID-19 concerns. The meeting was attended by City staff, representatives of the project applicant, and five members of the general public. Appendix A contains the Notice of Preparation, NOP comments submitted to the City, and brief discussion of topics discussed at the scoping meeting. Comments from agencies and the public received during the NOP review period and the EIR location(s) where the commenter's issues and concerns are addressed are summarized in Table 1-1.

With the release of this Public Review Draft EIR and accompanying Notice of Availability, regulatory agencies and members of the public can comment on the adequacy of the environmental review during a 45-day review period extending from July 26, 2021 to the close of the review period on September 8, 2021. After the close of the public review period, and before the project is considered by City decision-makers, the City is obligated to provide written responses to the comments received. These responses, along with any necessary changes to the EIR, will be published in a Final EIR.

TABLE 1-1
SUMMARY OF NOP COMMENT LETTERS

#	Date	Commenter	Concern	Where Comment Addressed in EIR
1	12/17/2020	Native American Heritage Commission	Discusses AB 52 and SB 18 consultation procedures	Chap. 5.0, Cultural Resources and Trial Cultural Resources
2	1/5/2021	John Lott (scoping meeting)	Access to own property and traffic on Marfargoa Road.	Chap. 13.0, Land Use; Chapter 16.0, Transportation
3	1/7/2021	San Joaquin Valley Air Pollution Control District	Impacts of project construction and operational emissions, potential health risks of project emissions.	Chap. 6.0, Air Quality; Chap. 10.0, Greenhouse Gas Emissions
4	1/12/2021	California Department of Conservation	Agricultural land conversion.	Chap. 5.0, Agricultural Resources
5	1/8/2021	Central Valley Regional Water Quality Control Board	Water quality planning and regulatory requirements. No project-specific concerns.	Chap. 12.0, Hydrology and Water Quality
6	1/12/2021	San Joaquin Council of Governments – Habitat Program	Advises the City of the applicability of the HCP to the project.	Chap. 7.0, Biological Resources
7	1/12/2021 (electronic mail)	Tolentino family	Potential contamination of groundwater, privacy concerns.	Chap. 12.0, Hydrology and Water Quality; Chap. 13.0, Land Use

The Final EIR must be considered by City decision-makers before deciding on the project. Before the City can approve the project, it must first certify that the Final EIR complies with the provisions of CEQA, that the City has reviewed and considered the information in the Final EIR, and that the Final EIR reflects the independent judgment of the City on the environmental impacts of the project. The City is also required to make specific findings related to each of the significant effects identified in the EIR. If the project involves any significant and unavoidable environmental effects, the CEQA findings will need to include a Statement of Overriding Considerations. Mitigation measures described in the Final EIR will be identified in a Mitigation Monitoring and Reporting Program that will be adopted by the City to ensure the mitigation measures are implemented.

In accordance with CEQA Guidelines Section 15163(c), this EIR is available for public review and comment on the dates specified in the EIR Notice of Availability, located inside of the cover of this document. Any comments or questions regarding this EIR

should be submitted to the City at the following address before the close of the public review period:

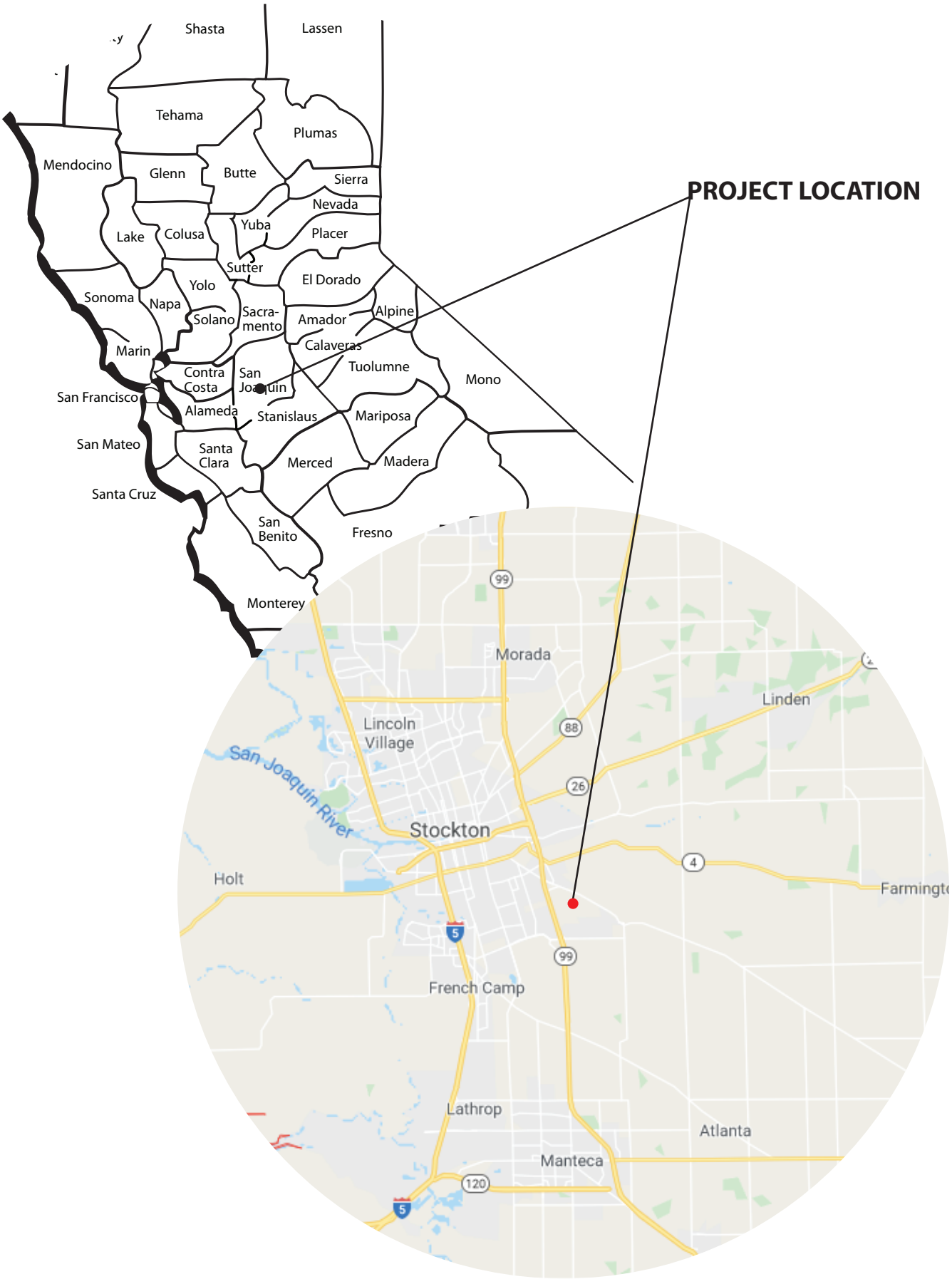
City of Stockton
Community Development Department
Attention: Nicole Moore, Senior Planner
345 N. El Dorado Street
Stockton, CA 95202
E-mail: Nicole.Moore@stocktonca.gov

1.6 RELATED PROJECTS

In addition to the Norcal Logistics Center discussed above, other industrial projects in the general vicinity have received approval from the City and LAFCo.

The Archtown Industrial Project (P09-148) has been approved on a property totaling 79 acres at the southwest corner of the intersection of Arch Road and Newcastle Road. The project consists of an approved annexation and pre-zone to establish industrial warehouse space, along with detention basins and other supporting infrastructure. An Initial Study/Mitigated Negative Declaration for the project was adopted by the City in 2011, concurrently with City approval of the project. LAFCo recently approved the City's application to annex the property. Applications for site and design review as well as storm drainage improvements are currently being developed.

In June 2020, the City certified an EIR and approved the Sanchez-Hoggan Annexation Project southeast of the project. The project, which proposes light industrial/warehouse development, consists of two properties. The Sanchez property is an approximately 149-acre parcel at the northwest corner of the intersection of Arch Road and Austin Road. The Hoggan property, approximately 21 acres, is located north of existing development on Gold River Lane and immediately southwest of the project site. Annexation of the properties was approved by LAFCo in August 2020. Construction work is underway in the northern portion of the Sanchez property; no work is currently occurring on the Hoggan property.

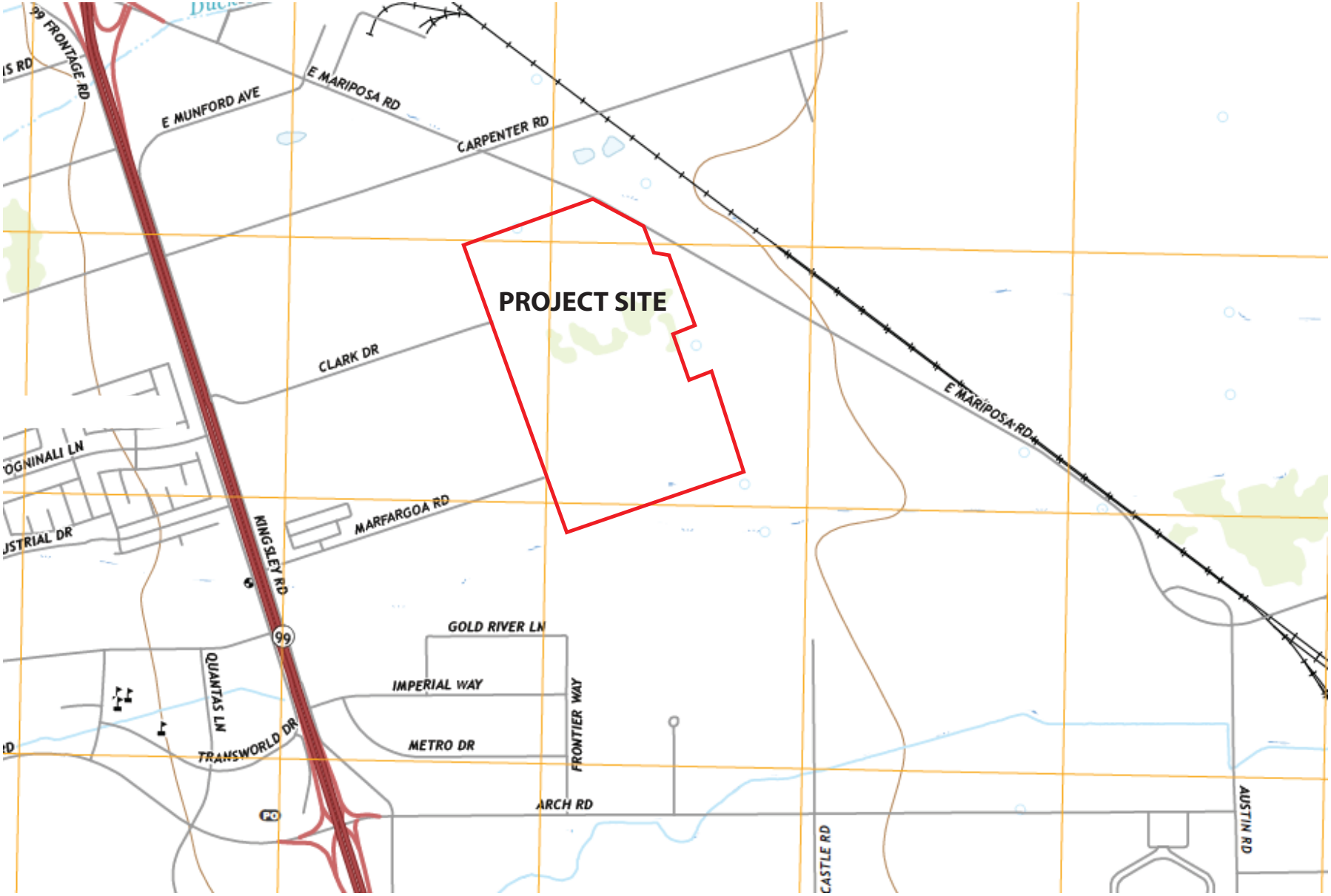


BaseCamp Environmental

Figure 1-1
REGIONAL LOCATION MAP

SOURCE: Google Maps

Figure 1-2
STREET MAP

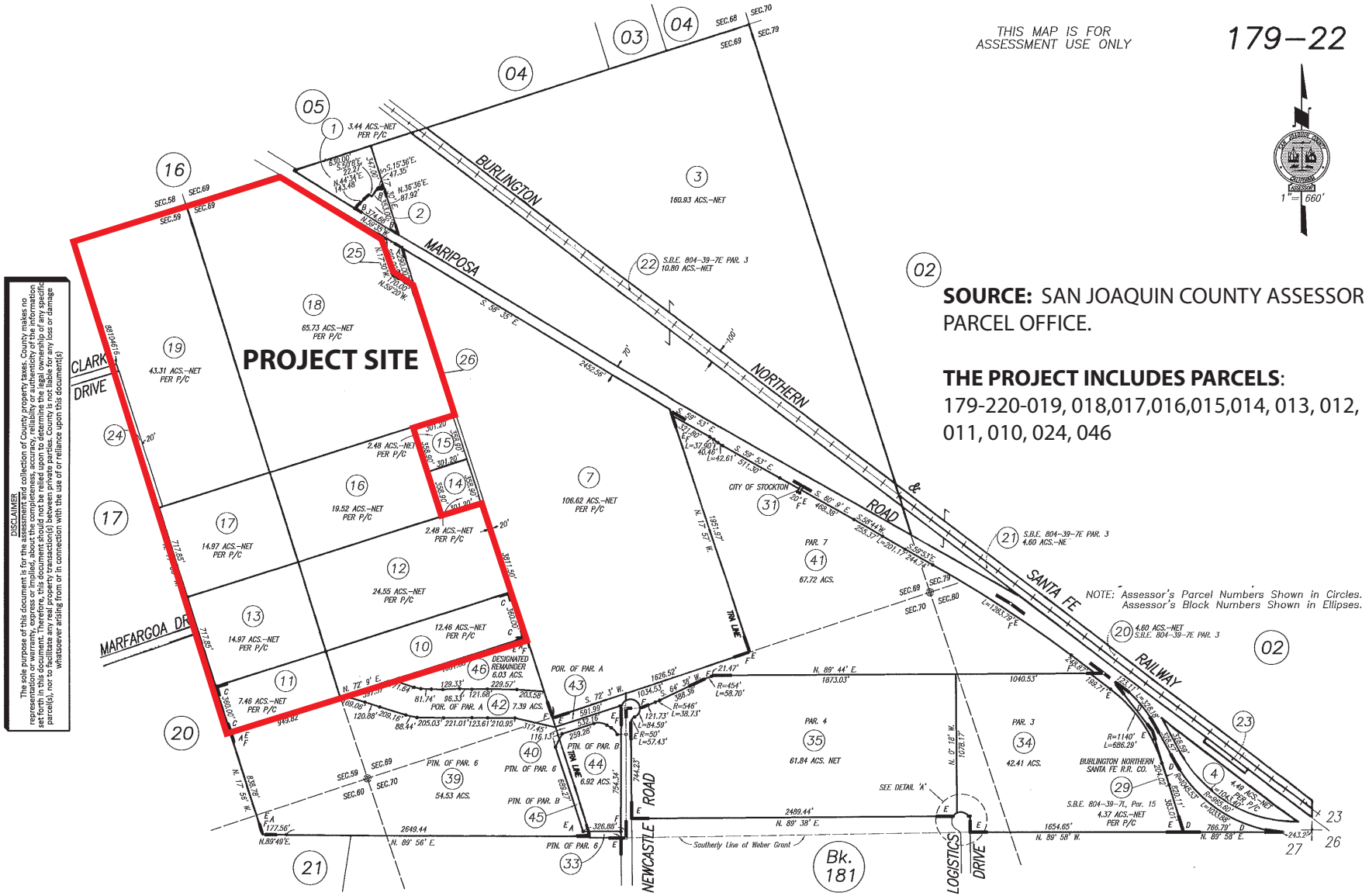


BaseCamp Environmental

SOURCE: USGS Quadrangle Map, Stockton East, 2018. The project site is located in Township 1 N, Range 7 East and Sections 59 and 69 of the USGS Map.

Figure 1-3
USGS MAP

SOURCE: Google Maps



SOURCE: SAN JOAQUIN COUNTY ASSESSOR PARCEL OFFICE.

THE PROJECT INCLUDES PARCELS:
179-220-019, 018,017,016,015,014, 013, 012, 011, 010, 024, 046

Figure 1-5
ASSESSOR PARCEL MAP

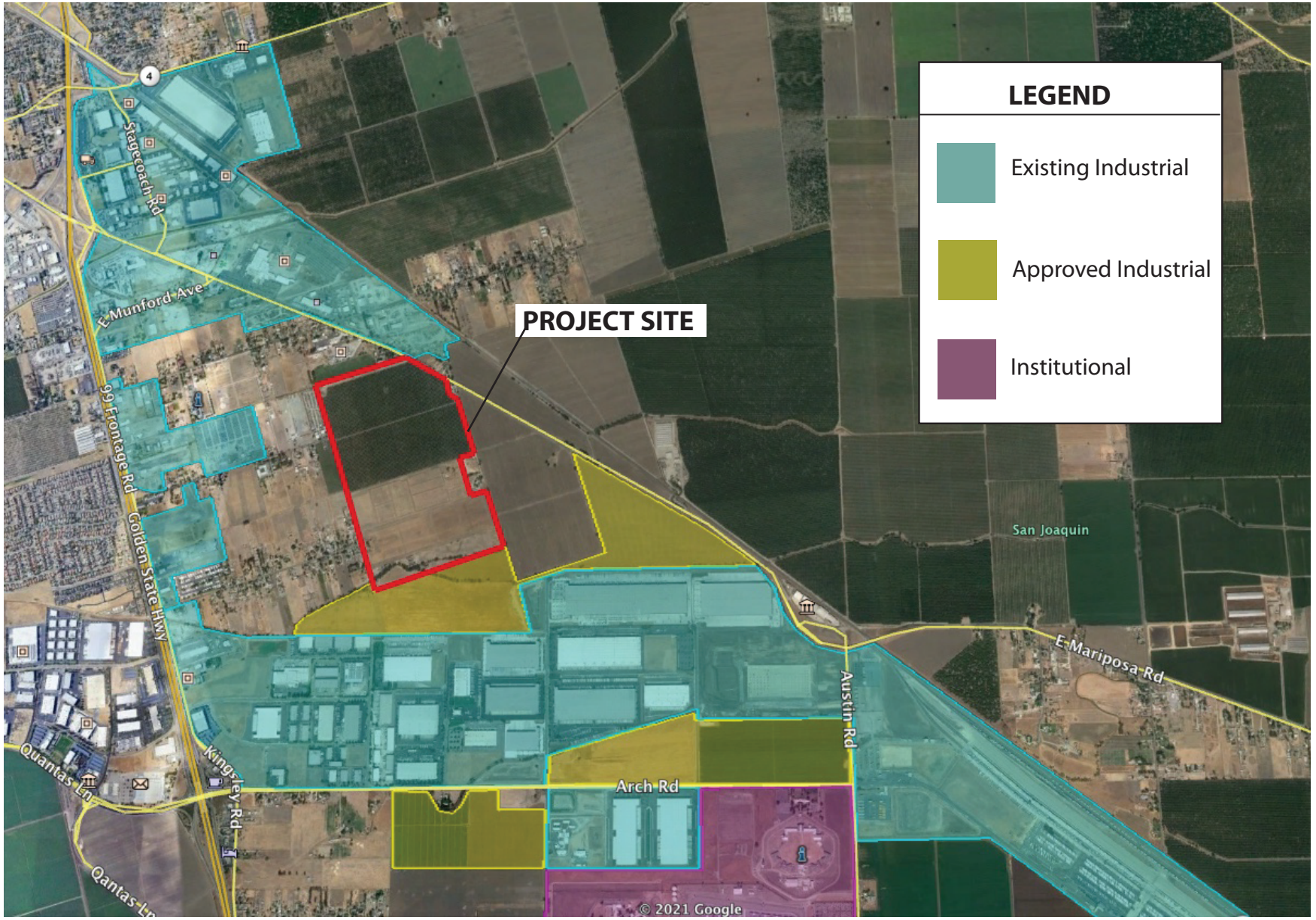


Figure 1-6
PROJECT AREA INDUSTRIAL DEVELOPMENT

2.0 SUMMARY

2.1 PROJECT DESCRIPTION

The Mariposa Industrial Park project proposes to develop a site consisting of nine parcels totaling 203.48 acres for light industrial land uses; as conceptually defined, the land uses would consist of "high-cube" warehouses. A "high-cube warehouse" typically has at least 200,000 gross square feet of floor area and has a ceiling height of approximately 24 feet or more; the warehouses are used primarily for the storage and/or consolidation of manufactured goods, and in some cases raw materials, prior to their distribution to retail locations or other warehouses. The conceptual site plan for the project site proposes the construction of seven buildings with a maximum height of 36 feet and floor area totaling 3,616,870 square feet of mostly warehouse space with some ancillary office space. Based on conceptual plans, an estimated total of 2,938 parking stalls would be provided throughout the project site, of which 1,831 stalls would be for automobiles and 1,107 stalls would be for trucks and trailers.

The project site may also accommodate uses that reflect ongoing developments in the warehousing and distribution industry and that vary from the conceptually defined project shown on Figure 3-2. Although the nature and configuration of such proposed uses may be different, the overall size, building square footage and traffic generation can be expected to fall within the range of those defined for the proposed project. Potential differences in environmental effect between the proposed project and variations on the project are identified and discussed in the affected chapters of the EIR.

Access to the proposed project would be from two driveways off Mariposa Road in the northeastern portion of the project site. The southernmost of the two driveways would provide the main access to the project site, leading to most of the proposed buildings. The northernmost driveway would provide access to the two northernmost buildings proposed on the site. The project would include restriping the Mariposa Road frontage to accommodate turn pockets and acceleration/deceleration lanes. Utility service for the project site, including sewer and water would be provided by the City of Stockton from existing trunk lines adjacent to the site. The project would have an onsite storm drainage system, including collection lines and a detention basin in the southernmost portion of the project site. Runoff collected in the detention basin would be metered into North Littlejohns Creek when capacity is available in the creek. Regulated electrical, gas, and communication utilities would be extended to the project site from existing facilities in the area.

The project proposes a reorganization that would include annexation of the project site into the City of Stockton and detachment of the site from the Montezuma Fire District. For the proposed annexation, the City would pre-zone the entire project site Industrial, Limited (IL). The proposed pre-zoning is consistent with the current Industrial

designation of the parcels in the Stockton General Plan. In addition to annexation and pre-zoning, the project would require City approval of a tentative subdivision map as well as site plan and design review. The San Joaquin LAFCo would be the agency with approval authority for the proposed annexation.

2.2 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The potentially environmental effects of the project are summarized in Table 2-1 at the end of this chapter, along with feasible mitigation measures proposed to minimize these effects. Table 2-1 provides an indication of the significance of impacts, both before and after application of mitigation measures. The project would contribute to several of the significant and unavoidable environmental effects identified in the Final GPEIR and accepted in the City's Statement of Overriding Considerations. As documented herein, with implementation of the proposed mitigation measures, nearly all the other potential environmental effects of the project would be reduced to a level that is less than significant. The project would involve any new significant and unavoidable environmental impacts, that is, impacts not adequately addressed in the certified GPEIR. While project avoidance and minimization measures would be implemented for the identified significant and unavoidable impacts, it is unknown if these measures would reduce the project's impacts to a level that would be less than significant.

2.3 NOP COMMENTS AND CONCERNS

CEQA Guidelines Section 15123(b)(2) states that an EIR summary shall identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public. The most common method of identifying potential areas of controversy is through the issuance of a NOP, as the purpose of the NOP is to solicit guidance as to the scope and content of the environmental information to be included in the EIR. A NOP for this EIR was issued with a request for comment from agencies and the public. Table 1-1 lists the seven comment letters received in response to the NOP. Issues brought up in the comment letters included the following:

- AB 52 consultation procedures with tribes
- Project impacts on access to other properties in vicinity
- Traffic on Marfargoa Road
- Project construction and operational emissions and their potential health impacts
- Agricultural land conversion
- Applicability of local habitat conservation plan
- Potential groundwater contamination

- Privacy concerns

2.4 SUMMARY OF ALTERNATIVES

Chapter 19.0, Alternatives, identifies and discusses a range of reasonable alternatives to the project, including the "no project" alternative. The alternatives addressed in detail include:

- No Project
- Alternative Light Industrial Development
- Reduced Development

The No Project alternative is defined as the continuation of existing conditions on the project site, which means the site would not be annexed to the City and would remain undeveloped. This alternative would involve no action on the part of the City of Stockton, LAFCo, or other agencies. The site would remain in the unincorporated area, and future land use would be controlled by the existing County zoning for Agriculture. Selection of this alternative would eliminate all the significant environmental effects of the project. However, the continuation of the undeveloped state of the project site does not fulfill any of the basic objectives of the proposed project, and it would be inconsistent with the land use designations of the City of Stockton and San Joaquin County General Plans, both of which anticipate urban development. Also, this alternative may have potentially significant impacts resulting from use of agricultural chemicals, agricultural waste disposal, and dust from agricultural operations.

The Alternative Industrial Development alternative proposes development of the project site with an industrial use other than the high-cube warehousing proposed by the project. For this alternative, it is assumed that the City would annex the project site and pre-zone it as IL. Development under this alternative would generally have similar impacts to the proposed project. However, this alternative would not meet the objectives of the proposed project related to warehouse development. Depending on the type of industrial activity, this alternative may have new or more severe impacts than the proposed project on issues such as hazardous materials and aesthetics.

The Reduced Development alternative would have the project site annexed to the City of Stockton and pre-zoned as under the proposed project. Proposed development would be like the proposed project; however, proposed development would be reduced to two buildings. This alternative would be partially consistent with the objectives of the proposed project while reducing its significant environmental effects on traffic, air quality, and noise, among others. Footprint effects of the project on biological, cultural, soil, and water resources may or may not be reduced. Effects on other issues would be the same as the proposed project and would likely require mitigation to reduce impacts.

Since the No Project Alternative would eliminate or avoid all potential environmental effects associated with the proposed project, it would be considered the environmentally

superior alternative. CEQA Guidelines Section 15126.6(e)(2) requires that, if a No Project Alternative is identified as the environmentally superior alternative, then an EIR shall identify an environmentally superior alternative from the other alternatives. In accordance with this section, the Reduced Development Alternative would be considered the environmentally superior alternative after the No Project Alternative.

2.5 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

CEQA Guidelines Section 15126.2(b) states that an EIR shall discuss significant environmental effects that cannot be avoided if a proposed project is implemented. This includes significant impacts that can be mitigated but not reduce to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, the implications of these impacts, and the reasons why the project is being proposed notwithstanding their effects, should be described.

Table 2-1 of this EIR identifies all the potentially significant environmental effects of the project and the mitigation measures needed to address these effects. For most of these effects, the proposed mitigation measures would be effective in reducing the potentially significant environmental impacts of the project to levels that would be less than significant. The one exception is air quality impacts from project operations, which were determined to exceed thresholds for one pollutant (NOx) established to determine if project emissions would be a potentially significant impact. Avoidance and minimization measures to reduce pollutant emissions are proposed as part of the project. However, it is not known if these measures would reduce NOx emissions from project operations below the significance threshold, thereby making impacts less than significant.

2.6 SUMMARY OF OTHER CEQA ISSUES

CEQA Guidelines Section 15126.2(b) states that an EIR shall discuss significant environmental effects that cannot be avoided if a proposed project is implemented. This includes significant impacts that can be mitigated but not reduce to a level of insignificance. Table 2-1 of this EIR identifies all the potentially significant environmental effects of the project and the mitigation measures recommended to address these effects. In all but one case, the proposed mitigation measures would be effective in reducing potential environmental effects to levels that would be less than significant.

Irreversible environmental commitments include energy consumption for project construction and operations and the use of non-renewable building materials for construction of buildings, parking spaces, and supporting infrastructure. Also, the project would involve an essentially irreversible loss of open space and the biological resource values associated with it.

The EIR analyzed the potential growth-inducing impacts of the project. Project impacts on population and housing would be less than significant, as the project is unlikely to induce population growth unplanned for in the Stockton General Plan; employees would

likely be drawn from the existing Stockton metropolitan area population. Infrastructure already exists in the vicinity to which future development on the project site can connect; no major utility lines would be extended that may induce growth on nearby lands. Because of this, the project would not have a notable growth-inducing impact.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.0 AESTHETICS AND VISUAL RESOURCES			
Impact AES-1: Scenic Vistas. Views of scenic vistas already limited; project would not substantially interfere with views.	LS	None required.	-
Impact AES-2: Scenic Resources. There are no significant scenic resources on the project site. Potential riparian area along North Littlejohns Creek would only be minimally affected. No other scenic resources or scenic highways are in the area.	LS	None required.	-
Impact AES-3: Visual Character and Quality. Urban development would replace existing open space areas. New structures, site improvements, and landscaping would be designed and constructed to meet the aesthetic standards of the City of Stockton. Compliance with these standards would minimize project impacts on public views.	LS	None required.	-
Impact AES-4: Light and Glare. Lighting would be installed on properties that currently have none. Compliance with Stockton Municipal Code Sections 16.36.060(B) and 16.32.070 would minimize light and glare impacts.	LS	None required.	-
5.0 AGRICULTURAL RESOURCES			
Impact AG-1: Conversion of Farmland. The southern portion of the project site is classified as Farmland of Local Importance, which is not Farmland as defined by the CEQA Guidelines. However, the northern portion is classified as Farmland of Statewide Importance, which is Farmland. The City's Agricultural Lands Mitigation Program and participation in SJMSCP would compensate for impacts on Farmland but not avoid conversion. [This issue was analyzed in the Stockton General Plan 2040 EIR and was determined to be significant and unavoidable even with mitigating General Plan policies.]	S	None feasible.	SU
Impact AG-2: Agricultural Zoning and Williamson Act. The project site is zoned AG-40 (General Agriculture), which	LS	None required.	-

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TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
holds land for future urban development. None of the parcels within the project site are under a Williamson Act contract.			
Impact AG-3: Indirect Conversion of Agricultural Lands. The project is in an area designated for urban development, and such development has occurred nearby. The project would not involve any activity that would indirectly convert other agricultural land to non-agricultural uses beyond land designated Industrial by the Stockton General Plan.	LS	None required.	-
6.0 AIR QUALITY			
Impact AIR-1: Air Quality Plans and Standards – Construction Emissions. Project construction emissions would not exceed SJVAPCD significance thresholds, thereby being consistent with adopted air quality plans. Dust emissions would be reduced through the required implementation of SJVAPCD Regulation VIII and the Indirect Source Rule.	LS	None required.	-
Impact AIR-2: Air Quality Plans and Standards – Operational Emissions. Project operational emissions would not exceed SJVAPCD significance thresholds, except for NO_x. Compliance with SJVAPCD Rule 9510 and Additional Air Quality Improvement Measures (Appendix B) would reduce NO_x emission impacts. However, it cannot be determined if reduction through these measures would make project impacts less than significant. [This issue was analyzed in the Stockton General Plan 2040 EIR and was determined to be significant and unavoidable even with mitigating General Plan policies and EIR measures.]	S	None feasible.	SU
Impact AIR-3: Exposure of Sensitive Receptors to Criteria Pollutants. Rural residences are unlikely to be exposed to high pollutant concentrations. CO concentrations at one street intersection can be reduced through mitigation. NO_x emissions within an area designated a disadvantaged community would be reduced by SJVAPCD rules and Additional Air Quality Improvement Measures (Appendix B). However, it cannot be determined if this reduction would have an impact on the disadvantaged community that is less	S	AIR-1: The project applicant, to reduce carbon monoxide concentrations to an acceptable level, shall contribute fair-share costs to an improvement on the Mariposa Road and Carpenter Road intersection that would widen the northeast-bound Carpenter Road approach to include an exclusive northeast-bound-to northwest-bound left-turn lane, and a combined through/right-turn lane.	SU

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Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
than significant. [This issue was analyzed in the Stockton General Plan 2040 EIR and was determined to be significant and unavoidable even with mitigating General Plan policies and EIR measures.]			
Impact AIR-4: Exposure of Sensitive Receptors to Toxic Air Contaminants. Diesel PM generated by project operations. Health Risk Assessment conducted for project indicates diesel PM emissions would not adversely affect nearby residences.	LS	None required.	-
Impact AIR-5: Odors and Other Emissions. Main odor source would be vehicle emissions, which would be localized and would dissipate rapidly.	LS	None required.	-
7.0 BIOLOGICAL RESOURCES			
Impact BIO-1: Special-Status Species and Habitats. Project development would involve the potential for impacts on foraging habitat for Swainson's hawk and burrowing owl and some potential for nesting impacts. Seasonal wetlands may support vernal pool fairy shrimp.	PS	BIO-1: The developer shall apply to the San Joaquin Council of Governments (SJCOG) for coverage under the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP). The project site shall be inspected by the SJMSCP biologist, who will recommend which Incidental Take Minimization Measures (ITMMs) set forth in the SJMSCP should be implemented. The project applicant shall pay the required SJMSCP fee, if any, and be responsible for the implementation of the specified ITMMs.	LS
Impact BIO-2: Riparian and Other Sensitive Habitats. Riparian corridor along North Littlejohns Creek would be minimally affected by installation of an outfall. No other sensitive habitats would be affected.	LS	None required	-
Impact BIO-3: State and Federally Protected Wetlands. North Littlejohns Creek, a ditch, and five seasonal wetlands have been identified as potential Waters of the U.S or State wetlands.	PS	BIO-2: Prior to the start of construction work in the area where seasonal wetlands have been identified, the project developer shall conduct a wetland delineation identifying jurisdictional Waters of the U.S. and wetlands. The delineation shall be verified by the U.S. Army Corps of Engineers (Corps). The delineation shall be used to determine if any project work will encroach upon any jurisdictional water, thereby necessitating an appropriate permit. For any development work that may affect a delineated jurisdictional Water, the project developer shall obtain any necessary permits from the	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		U.S. Army Corps of Engineers prior to the start of development work within these locations. Depending on the Corps permit issued, the project applicant shall also apply for a Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board. If the seasonal wetlands are avoided, , or if phased development occurs in areas where no wetlands have been identified, then this mitigation measure does not apply. BIO-3: Prior to the start of construction work in North Littlejohns Creek, the project developer shall obtain any necessary permits from the California Department of Fish and Wildlife and the Central Valley Flood Protection Board. The project developer shall comply with all conditions attached to any required permit. BIO-4: Prior to the start of construction work in the area where seasonal wetlands have been identified, the project developer shall obtain any necessary Waste Discharge Requirements from the Central Valley Regional Water Quality Control Board. Pursuant to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, the filling of seasonal wetlands containing vernal pool invertebrates shall be delayed until the wetlands are dry and SJCOG biologists can collect the surface soils from the wetlands, to store them for future use on off-site seasonal wetland creation on SJOCG preserve lands. If the seasonal wetlands are avoided, then this mitigation measure does not apply.	
Impact BIO-4: Migratory Fish and Wildlife Habitats. Several trees in the project vicinity that are suitable for nesting raptors and other protected bird species, including migratory species.	PS	Implementation of Mitigation Measure BIO-1.	LS
Impact BIO-5: Local Biological Requirements. Valley oak, a species protected by City's Heritage Tree Ordinance, was identified along North Littlejohns Creek.	PS	BIO-5: If removal of any oak tree on the project site is required, a certified arborist shall survey the oak trees proposed for removal to determine if they are Heritage Trees as defined in Stockton Municipal Code Chapter 16.130. The arborist report with its findings shall be submitted to the City's Community Development Department. If Heritage Trees are determined to exist on the property, removal of any such tree shall require a permit to be issued by the City in accordance with Stockton Municipal Code Chapter 16.130. The permittee shall comply with all permit	LS

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Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		conditions, including tree replacement at specified ratios.	
Impact BIO-6: Habitat Conservation Plans. Project would participate in the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan	PS	Implement Mitigation Measure BIO-1.	LS
8.0 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES			
Impact CULT-1: Historical Resources. No historical resources have been recorded on the project site.	NI	None required.	-
Impact CULT-2: Archaeological and Tribal Cultural Resources. No archaeological or tribal cultural resources were identified on the project site. However, a Sacred Land has been recorded nearby, and it is possible that unknown cultural resources may be uncovered during project construction.	PS	CULT-1: If any subsurface archaeological resources, including human burials and associated funerary objects, are encountered during construction, all construction activities within a 50-foot radius of the encounter shall be immediately halted until a qualified archaeologist can examine these materials and evaluate their significance. The City shall be immediately notified in the event of a discovery. If burial resources or tribal cultural resources are discovered, the City shall notify the appropriate tribal representative, who may examine the materials with the archaeologist and advise the City as to their significance. The archaeologist, in consultation with the tribal representative if contacted, shall recommend mitigation measures needed to reduce potential cultural resource effects to a level that is less than significant in a written report to the City, with a copy to the tribal representative. The City shall be responsible for implementing the report recommendations. Avoidance is the preferred means of disposition of tribal cultural resources. The contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in written reports to the City.	LS
Impact CULT-3: Human Burials. The Yokuts representative indicated that Native American burials have occurred in the project vicinity. CEQA Guidelines Section 15064.5(e) and the	PS	CULT-2: If project construction encounters evidence of human burial or scattered human remains, the contractor shall immediately notify the County Coroner and the City, which shall in turn notify	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Stockton Municipal Code describe procedures to be followed when human remains are uncovered in a location outside a dedicated cemetery. Additional mitigation is prescribed for treatment of Native American remains.		the appropriate tribal representative. The City shall notify other federal and State agencies as required. The City will be responsible for compliance with the requirements of California Health and Safety Code Section 7050.5 and with any direction provided by the County Coroner. If the human remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission, which will notify and appoint a Most Likely Descendant. The Most Likely Descendant will work with the archaeologist to decide the proper treatment of the human remains and any associated funerary objects in accordance with California Public Resources Code Sections 5097.98 and 5097.991. Avoidance is the preferred means of disposition of the burial resources.	
9.0 GEOLOGY, SOILS, AND MINERAL RESOURCES			
Impact GEO-1: Faulting and Seismicity. There are no active or potentially active faults within or near the project site. The project site would be exposed to seismic shaking, but compliance with the adopted California Building Code would minimize seismic hazards.	LS	None required.	-
Impact GEO-2: Other Geologic Hazards. The project site is not prone to landslide hazards or subsidence. Liquefaction and other soil instability on the project site are considered unlikely, but no information specific to the site is available.	LS	None required.	-
Impact GEO-3: Soil Erosion. Project construction activities would loosen the soil, leaving it exposed to potential water and wind erosion. Project would be required to obtain a Construction General Permit, which has conditions that would reduce soil erosion impact, as would the City's Storm Water Management Program, the Stockton Municipal Code, and SJVAPCD Regulation VIII.	LS	None required.	-
Impact GEO-4: Expansive Soils. Project site soils have high shrink-swell potential.	LS	None required.	-

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Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact GEO-5: Paleontological Resources and Unique Geological Features. The project site does not contain unique geological features or any known paleontological resources; however, project construction could unearth previously unknown paleontological materials of significance.	PS	GEO-2: If any subsurface paleontological resources are encountered during construction, all construction activities within a 50-foot radius of the encounter shall be immediately halted until a qualified paleontologist can examine these materials, initially evaluate their significance and, if potentially significant, recommend measures on the disposition of the resource. The City shall be immediately notified in the event of a discovery. The contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in written reports to the City.	LS
Impact GEO-6: Access to Mineral Resources. There are no identified mineral resource areas on the project site.	NI	None required.	-
10.0 GREENHOUSE GAS EMISSIONS			
Impact GHG-1: Project GHG Construction Emissions and Consistency with Applicable Plans and Policies. Unmitigated construction GHG emissions would be reduced by Additional Air Quality Improvement Measures (Appendix B), compliance with applicable State and SJVAPCD rules and regulations, and additional mitigation. However, since these measures cannot be precisely quantified, and no quantified thresholds applicable to GHG construction emissions are available, it cannot be stated with certainty that GHG emissions would be reduced to a level that is considered less than significant. [GHG construction emissions were not specifically analyzed in the Stockton General Plan 2040 EIR.]	PS	GHG-1: The project shall implement the Off-Road Vehicles Best Management Practices specified in the Stockton Climate Action Plan. At least three (3) percent of the construction vehicle and equipment fleet shall be powered by electricity. Construction equipment and vehicles shall not idle their engines for longer than three (3) minutes.	SU
Impact GHG-2: Project GHG Operational Emissions and Consistency with Applicable Plans and Policies. Unmitigated operational GHG emissions would be reduced by project features, compliance with regulations consistent with Stockton Climate Action Plan and with State and SJVAPCD plans, and Additional Air Quality Improvement Measures (Appendix B).	LS	None required.	-

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
11.0 HAZARDS AND HAZARDOUS MATERIALS			
Impact HAZ-1: Hazardous Material Transportation and Storage. Proposed warehouses may store finished goods or raw materials considered hazardous. Compliance with applicable local, state, and federal regulations would minimize impacts.	LS	None required.	-
Impact HAZ-2: Hazardous Material Releases. Project construction and operations create a potential for hazardous material releases. The required SWPPP and other typical contractor practices shall minimize construction impacts. Compliance with applicable local, state, and federal regulations would minimize operational impacts. No schools are located within one-quarter mile of the project site.	LS	None required.	-
Impact HAZ-3: Hazardous Material Sites. No active hazardous material sites were identified on or adjacent to project site. Soil sampling as part of a Phase II Environmental Site Assessment did not indicate soil contamination on the project site.	LS	None required.	-
Impact HAZ-4: Airport Hazards. The project site is within Compatibility Zone 7b as established by the Stockton Metropolitan Airport ALUCP. Proposed development would be consistent with allowable land uses in this zone.	LS	None required.	-
Impact HAZ-5: Interference with Emergency Vehicle Access and Evacuations. Neither project construction nor operations would require closure or any major restriction on use of adjacent roads. Once construction work is completed, project development would not obstruct any roads.	LS	None required.	-
Impact HAZ-6: Wildfire Hazards. Project is in an urbanizing area and has not been designated a fire hazard area by Cal Fire.	LS	None required.	-

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
12.0 HYDROLOGY AND WATER QUALITY			
Impact HYDRO-1: Surface Water Resources and Quality. Construction activities could loosen soils that could eventually enter nearby surface waters, as well as debris and deposits from project operations. Compliance with applicable water quality plans, permits, and regulations would minimize impacts. Project development will be required to submit storm water management plans for the project that shall include construction erosion and sedimentation controls as well as post-construction Best Management Practices.	LS	None required.	-
Impact HYDRO-2: Groundwater Resources and Quality. Project would be served by the City's water system, which relies in part on groundwater. Project can be accommodated from City's existing supplies without requiring additional groundwater. Project would be subject to Groundwater Sustainability Plan for basin, which include direct and in-lieu recharge projects.	LS	None required.	-
Impact HYDRO-3: Drainage Patterns and Runoff. Project would alter existing drainage patterns and runoff volumes, but project features would reduce impacts. Issues associated with water quality of runoff would be mitigated.	LS	None required.	-
Impact HYDRO-4: Release of Pollutants in Flood, Tsunami, and Seiche Zones. Only a small portion of the project site is within a FEMA-designated 100-year floodplain, and no buildings using or storing hazardous materials would be located there. The project site would not be subject to flooding from dam or levee failure or from seiches or tsunamis.	LS	None required.	-
Impact HYDRO-5: Consistency with Water Quality and Groundwater Management Plans. The project would comply with applicable water quality plans and be consistent with the Groundwater Sustainability Plan for the Eastern San Joaquin Subbasin.	LS	None required.	-

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Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
13.0 LAND USE, POPULATION, AND HOUSING			
Impact LUP-1: Division of Communities. The area surrounding the project site is a combination of vacant parcels, agricultural uses, and rural residential and commercial development. This does not constitute a community that could be divided by the project.	NI	None required.	-
Impact LUP-2: Conflict with Applicable Plans, Policies, and Regulations. The project would be consistent with the policies of the Stockton General Plan. Project may conflict with LAFCo policies preserving agricultural land, but project would be subject to the City's Agricultural Lands Mitigation Program. Project site is consistent with development standards for Compatibility Zone 7b of the Stockton Metropolitan Airport ALUCP.	LS	None required.	-
Impact LUP-3: Inducement of Population Growth. While the warehouse development would provide employment opportunities, these opportunities are expected to be filled mainly by existing residents. The project would not induce population growth beyond that anticipated in the Stockton General Plan.	LS	None required.	-
Impact LUP-4: Displacement of Housing and People. The project site has single-family residences that would be demolished. However, there is available housing in the Stockton area to accommodate any displaced persons.	LS	None required.	-
14.0 NOISE			
Impact NOISE-1: Increase in Noise Levels in Excess of Standards-Traffic. Traffic generated under Existing Plus Approved Projects Plus Project conditions would increase traffic noise levels along segments of Mariposa Road that would exceed City Noise Element standards. [This issue was analyzed in the Stockton General Plan 2040 EIR and was determined to be significant and unavoidable.]	PS	None available.	SU

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Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact NOISE-2: Increase in Noise Levels in Excess of Standards-Other Project Noise. Noise from trailer parking and truck loading/unloading could affect nearby sensitive land uses, mainly residences.	PS	NOISE-1: Sound walls 10 feet in height shall be required where existing residential uses or residentially zoned areas are located adjacent to the project site. Figure 3 of the project noise study (Figure 14-2 of this EIR) shows the locations of the recommended sound walls based on the proposed conceptual plan. Site plan modifications, and/or additional noise analysis by a qualified acoustical consultant may warrant changes to these requirements, assuming that compliance with City noise standards is maintained.	LS
Impact NOISE-3: Increase in Noise Levels in Excess of Standards-Construction. Construction activities may potentially increase ambient noise above City standards at nearby residences.	PS	NOISE-2: Construction activities associated with the project shall adhere to the requirements of the City of Stockton Municipal Code with respect to hours of operation. The applicant shall ordinarily limit construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No construction shall occur on Sundays or national holidays without a written permit from the City. All construction equipment shall be in good working order and shall be fitted with factory-equipped mufflers.	LS
Impact NOISE-4: Groundborne Vibrations. Earth-moving equipment may generate some groundborne vibrations, but not at levels distinctly perceptible by sensitive receptors or threatening to structures.	LS	None required.	-
Impact NOISE-5: Airport and Airstrip Noise. The project site is outside noise contours established by the Stockton Metropolitan Airport ALUCP. No private airstrips are in the vicinity.	NI	None required.	-
15.0 PUBLIC SERVICES AND RECREATION			
Impact PSR-1: Fire Protection Service. New or expanded facilities may be required in the future, but project would not trigger this requirement. Public Facility Fees will be paid, and future facilities would be subject to CEQA review. Recommended Fire Service Protection Improvement Measures discussed in the EIR include Early Suppression Fast Response sprinkler systems.	LS	None required.	-
Impact PSR-2: Police Protection Services. New or expanded facilities may be required in the future, but project would not	LS	None required.	-

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Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
trigger this requirement. Public Facility Fees will be paid, and future facilities would be subject to CEQA review.			
Impact PSR-3: Schools. The project involves industrial development, which does not directly generate new student load. New industrial development would be responsible for the payment of school impact fees.	LS	None required.	-
Impact PSR-4: Parks and Recreational Services. The project would not involve any direct effects on parks or recreational facilities, nor would it generate a demand for new or expanded recreational facilities or services.	LS	None required.	-
Impact PSR-5: Other Public Facilities. The project would not generate additional demand for library, hospital, and courthouse services, and therefore would not require new or expanded facilities.	LS	None required.	-
16.0 TRANSPORTATION			
Impact TRANS-1: Motor Vehicle Transportation Plans-Intersections. Under Existing Plus Approved Projects Plus Project conditions, only four intersections affected by the project would not operate at LOS above minimally acceptable City of Stockton standards. Recommended Intersection Improvement Measures would improve LOS at two intersections, while other two intersections would not require improvements. LOS is not a measure of CEQA impacts.	LS	* Recommended Improvement TRANS-1: The project applicant should contribute fair-share costs to an improvement on the Mariposa Road and 8th Street/Farmington Road intersection that would split the northeast-bound combined through/right-turn lane into an exclusive northeast-bound through lane and a "free" northeast-bound-to-southeast-bound right-turn lane. * Recommended Improvement TRANS-2: The project applicant should contribute fair-share costs to an improvement on the Mariposa Road and Carpenter Road intersection that would widen the northeast-bound Carpenter Road approach to include an exclusive northeast-bound-to northwest-bound left-turn lane, and a combined through/right-turn lane.	-
Impact TRANS-2: Motor Vehicle Transportation Plans-Roadway Segments. Under Existing Plus Approved Projects Plus Project conditions, only two roadway segments affected by the project would not operate at LOS above minimally acceptable City of Stockton standards. Recommended Roadway Segment Improvement Measure would improve	LS	* Recommended Improvement TRANS-3: The project applicant should contribute fair-share costs to an improvement on the segment of Mariposa Road from SR 99 to 8th Street/Farmington Road that would widen the portions of this roadway segment that are currently one lane in each direction to two lanes in each direction.	-

Notes: S = Significant, PS = Potentially Significant, LS = Less than Significant, NI = No Impact, SU = Significant and Unavoidable (SU impacts addressed in the Stockton General Plan EIR)

* Not mitigation measures, as they address issues not considered environmental impacts per CEQA Guidelines. Presented for informational purposes only.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
LOS at one segment, while other segment would not require improvements. LOS is not a measure of CEQA impacts.			
Impact TRANS-3: Motor Vehicle Transportation Plans-Ramp Junctions. Under Existing Plus Approved Projects Plus Project conditions, three ramp junctions affected by the project would not operate at LOS above minimally acceptable City of Stockton standards. However, these facilities would operate within standards of the City's Transportation Impact Guidelines. LOS is not a measure of CEQA impacts.	LS	None required.	-
Impact TRANS-4: Motor Vehicle Transportation Plans-Truck Routes. Project proposes STAA truck routes; however, this would not conflict significantly with motor vehicle transportation plans applicable to trucks.	LS	None required.	-
Impact TRANS-5: Conflicts with Non-Motor Vehicle Transportation Plans. The project would not conflict with non-motor vehicle transportation plans or their implementation.	LS	None required.	-
Impact TRANS-6: Consistency with CEQA Guidelines Section 15064.3(b). The project would generate increases in VMT. Mitigation is expected to reduce the amount of VMT generated, but it would not be reduced by a level indicated by Stockton General Plan standard. [This issue was not analyzed in the Stockton General Plan 2040 EIR.]	S	TRANS-1: The project shall provide "end-of-trip" facilities for bicycle riders to encourage the use of bicycling as a viable form of travel to destinations, especially to work. End-of-trip facilities shall include showers, secure bicycle lockers, and changing spaces. TRANS-2: The project shall implement an employer-sponsored vanpool or shuttle. A vanpool will usually service employees' commute to work, while a shuttle will service nearby transit stations and surrounding commercial centers. Employer-sponsored vanpool programs entail an employer purchasing or leasing vans for employee use, and often subsidizing the cost of at least program administration. Scheduling is within the employer's purview, and rider charges shall be set on the basis of vehicle and operating cost.	SU
Impact TRANS-7: Safety Hazards. The traffic impact study did not identify any traffic hazards that would result from the project. Project construction would involve routine but potential traffic hazards, but contractors will be required to provide traffic safety control as warranted.	LS	None required.	-

Notes: S = Significant, PS = Potentially Significant, LS = Less than Significant, NI = No Impact, SU = Significant and Unavoidable (SU impacts addressed in the Stockton General Plan EIR)

* Not mitigation measures, as they address issues not considered environmental impacts per CEQA Guidelines. Presented for informational purposes only.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Impact TRANS-8: Emergency Access. Adequate emergency access would be provided to the project site.	LS	None required.	-
17.0 UTILITIES AND ENERGY			
Impact UTIL-1: Wastewater Services and Facilities. City has adequate capacity at its treatment plant to accommodate project. Existing sewer lines are in vicinity.	LS	None required.	-
Impact UTIL-2: Water Services and Facilities. City has adequate water supplies for project. Existing water lines are in vicinity.	LS	None required.	-
Impact UTIL-3: Stormwater Services and Facilities. Project would not connect to City's drainage system, but would provide own system that would collect and discharge runoff to North Littlejohns Creek without causing downstream flooding or reduced water quality.	LS	None required.	-
Impact UTIL-4: Solid Waste. Existing landfills in the County would have adequate capacity to accommodate project solid waste. The project would comply with applicable federal, state, and local statutes and regulations related to solid waste.	LS	None required.	-
Impact UTIL-5: Energy and Telecommunications Facilities. Existing electrical, natural gas, and telephone lines are available near the project site.	LS	None required.	-
Impact UTIL-6: Project Energy Consumption. The project would not consume energy in a manner that is wasteful, inefficient, or unnecessary.	LS	None required.	-

Notes: S = Significant, PS = Potentially Significant, LS = Less than Significant, NI = No Impact, SU = Significant and Unavoidable (SU impacts addressed in the Stockton General Plan EIR)

* Not mitigation measures, as they address issues not considered environmental impacts per CEQA Guidelines. Presented for informational purposes only.

3.0 PROJECT DESCRIPTION

3.1 PROJECT LOCATION

The project site, consisting of nine parcels, is in the San Joaquin County unincorporated area, adjacent to the southeastern limits of the City of Stockton (Chapter 1.0, Figures 1-1 through 1-5). Table 3-1 identifies each of these parcels by its Assessor's Parcel Number (APN), street address, and acreage (Figure 1-5, Assessor's Parcel Map). The project site encompasses 203.48 acres.

TABLE 3-1
PROJECT SITE PARCELS AND ACREAGES

APN	Address	Acres
179-220-10	5290 E. Mariposa Road	12.46
179-220-11	4600 E. Marfargoa Drive	7.46
179-220-12	5280 E. Mariposa Road	24.55
179-220-13	4522 E. Marfargoa Drive	14.97
179-220-16	5100 E. Clark Drive	19.52
179-220-17	4500 E. Clark Drive	14.97
179-220-18	5150 E. Mariposa Road	65.73
179-220-19	5110 E. Mariposa Road	43.31
179-220-24	4490 E. Clark Drive	0.51
	TOTAL ACRES	**203.48**

The project site is shown on the Stockton East 7.5-minute quadrangle map within the C.M. Weber grant of Rancho Campo de los Franceses, Sections 59 and 69, Township 1 North, and Range 7 East, Mt. Diablo Baseline and Meridian. The approximate latitude of the project site is 37° 55′ 13″ North, and the approximate longitude is 121° 12′ 39″ West.

3.2 PROJECT OBJECTIVES

CEQA Guidelines Section 15124(b) requires that the project description contain a clearly written statement of project objectives, including the purpose of the project. The statement of project objectives is an important determinant for the lead agency when it develops a reasonable range of alternatives to evaluate in the EIR.

The primary private- and public-sector objectives for the proposed project include:

- Development of approximately 3.6 million square feet of industrial space for leasing to various potential tenants together with associated site and utility improvements.
- To provide for industrial development of the site as contemplated by the Stockton General Plan 2040. Stockton General Plan Policy LU-4.1 encourages large-scale development proposals in appropriate locations that include significant numbers of higher-wage jobs and local revenue generation.
- To take advantage of existing development-ready infrastructure and provide for project design flexibility in the allowable number and size of parcels and industrial structures, thereby maximizing the industrial development potential of the site.
- To comply with the natural resource management objectives of the Stockton General Plan 2040 by placing new industrial development in an area where potential impacts to sensitive natural resources are or can be reduced or avoided through site design, development phasing, and landscaping.

3.3 PROJECT DETAILS

The project proposes to develop the project site for light industrial land uses, primarily "high-cube" warehouses. The proposed project as described and analyzed in this EIR is based on a conceptual plan for industrial development of the project site submitted with the project application. The details of the proposed development are detailed in Section 3.3.4 below.

The Mariposa Industrial Park project proposes to develop the 203.48-acre site for light industrial land uses conceptually defined as "high-cube" warehouses. "High-cube warehouses" are typically 200,000 or more gross square feet of floor area and with a ceiling height of 24 feet or more. The warehouses are used primarily for the storage and/or organization of manufactured goods prior to their distribution to retail locations or other warehouses. The conceptual site plan for the project site (Figure 3-2) proposes the construction of seven buildings with a maximum height of 36 feet and floor area totaling 3,616,870 square feet of mostly warehouse space with ancillary office space. Based on conceptual plans, an estimated total of 2,938 parking stalls would be provided throughout the project site, of which 1,831 stalls would be for automobiles and 1,107 stalls would be for trucks and trailers.

The project site may also accommodate related industrial uses that reflect ongoing developments in the warehousing and distribution industry. The nature, size and organization of these uses may vary from the conceptually defined project shown on Figure 3-2. Although the proposed uses vary, the overall project size, building square footage and traffic generation associated with development are generally expected to fall within the range of parameters defined for the conceptual project. Potential differences in

environmental effects between the proposed project and potential variations on the project are identified and discussed in the affected chapters of the EIR.

The project applicant has identified one potential variation in development parameters as the need expressed by some potential tenants to construct buildings up to 100 feet in height, exceeding the 60-foot height limitation for the proposed IL zoning. Adoption of a development agreement between the project applicants and the City, or City approval of a Planned Development Permit, would increase the allowable building height in exchange for corresponding benefits to the City, as discussed in Sections 3.3.2 and 3.3.3 below. Potential impacts associated with an increase in allowable building height are discussed in this EIR, where applicable.

3.3.1 Reorganization and Pre-zoning

The project proposes a reorganization that would involve the annexation of the project site, currently under County jurisdiction, into the City of Stockton (Figure 3-1) and its detachment from the Montezuma Fire District, of which the project site is currently a part. After approving the pre-zoning and tentative subdivision map the City would submit an annexation application to the San Joaquin LAFCo, which would then be responsible for approval of the annexation and detachment. LAFCo's policies with respect to proposed reorganizations are specified in its Change of Organization Policies and Procedures, adopted in 2007 and subsequently amended. Key considerations of LAFCo in considering approval of an annexation include if the annexation would constitute a logical expansion of a city boundary and if the annexation area would be provided with public utilities and services in an efficient manner. Additional analysis and information on LAFCo requirements and findings are provided in Chapter 13.0, Land Use, Population, and Housing.

The project site is within the City of Stockton Sphere of Influence but is outside of the 2030 Planning Horizon Area defined in the City's adopted Municipal Service Review. LAFCo typically does not consider annexation requests that are outside near-term planning areas. In conjunction with the proposed annexation, the project applicant is requesting modification of the Municipal Service Review to include the project site in the 2030 Planning Horizon Area.

All the existing County parcels are currently zoned as AG-40 – General Agriculture with a 40-acre minimum parcel size. The project includes a request that the City Council pre-zone the entire project site Industrial, Limited (IL). The proposed pre-zoning would be consistent with the current Industrial designation of the properties under the Stockton General Plan and with the proposed project. Pre-zoning would require a recommendation for approval from the Stockton Planning Commission and final approval by the City Council. The pre-zoning would take effect upon recordation of the proposed annexation of the project site.

3.3.2 Development Agreement

The proposed project may include a request for approval of a Development Agreement (DA) between the City and project applicants. The DA, which must benefit both parties, would benefit the project by allowing exceedence of the height limit for the IL Zoning District of 60 feet, allowing building heights of up to 100 feet and providing the project the opportunity to accommodate a wider range of possible industrial tenants. The potential environmental effects of increasing the permissible height limit are addressed in this EIR, where applicable. The DA would also define how the project will provide corresponding benefits to the City; these potential benefits are under discussion. The DA may also establish other applicant/City agreements regarding project design, construction, and operation, subject to discussion and negotiation between the parties. The DA would require review and approval by the City Council.

3.3.3 Planned Development Permit

The project applicants may also request approval of a Planned Development Permit, as provided in Stockton Development Code Sections 16.144 and 16.68, which would be another means for permitting building heights of up to 100 feet. A Planned Development Permit can allow a project to vary from the strict setback, coverage, height limits and other requirements of the IL Zoning District. The purposes of Planned Development Permits are to promote quality design and innovative site planning by providing open space and other amenities as prescribed in the Code.

3.3.4 Tentative Subdivision Map

The proposed project includes a request for City Council approval of a Tentative Subdivision Map for the project site (Figure 3-3). The proposed Tentative Subdivision Map, which corresponds to the conceptual site plan shown on Figure 3-2, would divide the site into nine parcels, the same number as current but in different configurations. Six of the parcels would be utilized for the location of the proposed industrial development. One parcel would be used for the proposed detention basin near North Littlejohns Creek. One parcel would encompass an area adjacent to and north of North Littlejohns Creek. The remaining parcel, approximately 5.95 acres, is proposed as an alternate location of the detention basin or may be used as part of the development. The proposed tentative map may be subject to change as site tenants and their individual building and site improvement needs are identified.

The proposed Tentative Subdivision Map defines a 72-foot-wide private access road extending from Mariposa Road along the eastern portion of the project site to its endpoint near the proposed detention basin. It also defines a public utilities easement and emergency vehicle access, approximately 40 feet in width. The easements are dedicated along the approximate north, west, and south periphery of the project site. A stub easement is dedicated along the eastern boundary of the detention basin, available for connection to a future easement that would extend to Newcastle Road to the east.

3.3.5 Site Plan Review

A conceptual plan for industrial development of the project site is shown on Figure 3-2 and detailed in Section 3.3.5 below. Subsequent engineering and architectural design submittals that address site tenants and their individual building and site improvement needs will be required to obtain City review and approval of the building architecture and construction of onsite and offsite improvements

3.3.6 Project Development

As noted, the project proposes the development of 203.48 acres of land for industrial warehousing and distribution uses. The approximate percentage breakdown of proposed development as shown on the conceptual site plan is as follows (total acreage have been rounded up):

Structures – 40% (83 acres)
Detention Basin – 10% (20 acres)
Parking – 41% (84 acres)
Roads - 3% (6 acres)
Landscaping – 6% (12 acres)

Project Structures

Upon annexation, the project site is proposed to be developed with light industrial land uses, which are expected to be mainly high-cube warehouses. Figure 3-2 shows a conceptual site plan. A "high-cube warehouse" is a building that typically has at least 200,000 gross square feet of floor area, has a ceiling height of approximately 24 feet or more, and is used primarily for the storage and/or consolidation of manufactured goods (and, to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. A typical high-cube warehouse typically has a high level of on-site automation and logistics management, which enable highly efficient processing of goods through the warehouse. As defined by the Institute for Traffic Engineering, there are five types of high-cube warehouses (ITE 2016):

- Transload – usually pallet loads or larger handling products of manufacturers, wholesalers/distributors, or retailers with little or no storage durations.
- Short-Term Storage – products held on-site for a short time.
- Cold Storage – warehouse with permanent cold storage in at least part of the building.
- Fulfillment Center – storage and direct distribution of e-commerce products to end users (e.g., Amazon).
- Parcel Hub – transload function for a parcel delivery company.

Table 3-2 summarizes the proposed development of the project site as shown on the Conceptual Site Plan. Of the total 3,616,870 square feet proposed for development, approximately 180,844 square feet would be for ancillary office space (square footage within each building to be determined); the remainder would be for light industrial/warehouse use.

TABLE 3-2
PROPOSED PROJECT SITE BUILDING CONSTRUCTION

Building	**Building Footprint (square feet)**	**Clearance Height (feet)**
Building 1	670,320	36
Building 2	637,450	36
Building 3	1,021,440	36
Building 4	1,021,440	36
Building 5	64,260	32
Building 6	100,980	32
Building 7	100,980	32
Total	**3,616,870**	**--**

The number, configuration, and height of proposed buildings are subject to change as applications for site development from future tenants are submitted to and processed by the City. The proposed Development Agreement would include a provision for increasing the maximum height limit to 100 feet.

Parking and Landscaping

The Conceptual Site Plan indicates that approximately 2,940 parking stalls would be distributed throughout the project site as shown in Figure 3-2. Of that total, approximately 62 percent would be for automobiles, including stalls accessible to drivers with disabilities. The remaining stalls (38 percent) would be for trucks and trailers.

Landscaping would occupy the remaining area of the project site. Landscaping and irrigation systems would be installed at specific locations on the property, including at the main entrance at Mariposa Road. Landscape and irrigation plans would be subject to City review and approval as a part of the site plan review process. Landscaping would be required to be consistent with the standards set forth in Stockton Municipal Code Section 16.56.040, and the irrigation plans would be required to be consistent with Section 16.56.050.

Site Access

Access to the project site would be from two driveway entrances off Mariposa Road in the northeastern portion of the project site (Figures, 3-2 and 3-4). The south driveway would provide the main access to the project site, with an on-site access road extending south through the eastern portion of the site, with east-west internal roads leading to proposed buildings and associated parking and loading areas. The north driveway would provide access to the two northernmost buildings proposed on the site and their associated parking and loading areas; this road would be interconnected with other internal roads. The main access roads and entries/exits would be developed consistent with the tentative subdivision map, described above, or modified tentative maps subject to City review and approval.

In conjunction with the proposed driveways, the project would involve substantial changes along approximately 1,500-2,000 feet of Mariposa Road in the project vicinity to accommodate auto and large truck traffic associated with the project. The proposed improvement plan for this area is shown on Figure 3-4. Left turn pockets for both proposed driveways would be provided for northbound traffic – a 380-foot pocket for the south driveway and a 300-foot pocket for the north driveway. Two right-turn deceleration pockets would also be provided for southbound traffic – a 380-foot lane for the north driveway and a 550-foot lane for the south driveway. A 200-foot acceleration lane would be provided for traffic turning right onto Mariposa Road from the south driveway. The segment of Mariposa Road would be restriped to accommodate the turn pockets and acceleration/deceleration lanes. All changes would occur within the existing Mariposa Road right-of-way; no additional right-of-way would be acquired. Curb, gutter, sidewalk and storm drainage improvements would be installed along the project's existing undeveloped street frontage in accordance with City standards. No other transportation improvements are planned.

Access to the project site also would be made available from Marfargoa Road and Clark Road through gates that would permit access for emergency vehicles only.

Proposed industrial land uses would involve the use of large trucks, including Surface Transportation Assistance Act (STAA) design trucks. STAA trucks have relatively large turning radii and require adequate intersection and roadway design features that accommodate these turning radii. Circulation improvements within the project will be designed to accommodate anticipated truck traffic.

It is anticipated that off-site project truck traffic would follow routes to and from SR 99 that include Arch Road, Austin Road and Mariposa Road. STAA routes must be formally designated, which requires confirmation that designated routes can physically accommodate STAA trucks. Arch Road is currently designated an STAA route, but Austin Road and portions of Mariposa Road are not currently STAA-designated. A preliminary analysis of these routes by project engineer Kier and Wright indicates that STAA trucks can be accommodated along these routes and through the affected intersections without major off-site improvements, except for proposed improvements at the project driveways discussed above.

Utilities

Regulated electrical, gas, and communication utilities would be extended to the project site from existing facilities in the area. Water and sewer services would be provided by the City of Stockton and would be acquired from existing City of Stockton lines, including a 24-inch diameter water line along East Mariposa Road and a 24-inch diameter wastewater line near the east end of Marfargoa Road. Based on the Conceptual Site Plan, the project would install approximately 10,200 linear feet of water piping and approximately 8,200 linear feet of sewer piping on the project site in conjunction with other site improvements.

The project proposes an onsite storm drainage collection system with approximately 7,600 linear feet of piping and 14 catch basins. It would collect and convey stormwater runoff to a proposed detention basin located in the southern portion of the project site. The approximately 20-acre detention basin, with a capacity of approximately 72 acre-feet and 3:1 side slopes, would be adjacent to an existing ditch in the southern portion of the project site. Collected runoff would be filtered through these various features before it is discharged by a pump station directly into North Littlejohns Creek, downstream of where the ditch enters the creek. Discharges would be metered to avoid potential flooding downstream. As an option, the ditch may be filled as part of project development.

Proposed utilities will involve some variations from existing City sewer, water, and storm drainage master plans. These variations, as identified by the project engineer, are addressed in proposed modifications to City master plans, and include:

- Sewer requires additional calculation; no changes to the methodology service.
- Water requires a secondary point of connection, which will be from Newcastle Road, consistent with the City's Water Master Plan.
- Storm drainage requires additional correspondence. Storm drainage from nearby future development area may need to be allowed into the basin, which impacts basin sizing. Additionally, the location of the basin needs to be finalized, which will not happen until a final site plan has been provided, and more particularly until environmental constraints are thoroughly understood.

Revisions to these master plans will be considered as a part of the City's review of the project.

3.3.7 Project Construction

Proposed industrial development would involve mass grading and extensive excavation to accommodate the proposed new buildings and site improvements. The project would be graded and recompacted as required to establish desired subgrades for proposed aggregate base and pavement, which would be imported and placed on the site. Building, signage, and light standard foundations, the detention basin, and underground utility lines would be excavated where needed. Construction of buildings, site improvements, and landscaping would proceed as sequenced by the contractor, in accordance with plans and

specifications approved by the City. Project construction would generally be accomplished using conventional equipment.

Development would require removal of orchard and ornamental trees and a few native trees and shrubs. It also would require the eventual demolition and removal of the existing residences on the project site in conjunction with new industrial development. There is no existing plan for removal of these residences.

3.3.8 Air Quality Improvement Measures

The City of Stockton approved the annexation and industrial development of a 170-acre industrial project known as the Sanchez-Hoggan Annexation after preparing and certifying a Final EIR for the project. The Sanchez-Hoggan EIR, after detailed analysis, found that the air quality impacts of the project would be less than significant. However, in response to concerns from the California Air Resources Board, the San Joaquin Valley Air Pollution Control District, and the California Department of Justice, the City and the Sanchez-Hoggan project applicant agreed to more fully address the air quality concerns by preparing a list of additional air quality improvement measures, shown in Appendix B, that would further reduce the potential air quality impacts of the project. These measures, drafted in direct response to comments from the agencies, were required of the project by an adopted condition of project approval.

The City and the Mariposa Industrial Park project applicant agreed, early in the preparation of the Mariposa EIR, to pro-actively address the air quality concerns of the agencies by including the Sanchez-Hoggan Additional Air Quality Improvement Measures in the Mariposa EIR and requiring their implementation in the approval of the Mariposa Industrial Park project. These measures are shown in Appendix B and considered in the analysis of air quality impacts in the EIR.

3.4 PERMITS AND APPROVALS

The project would require discretionary approvals from the City of Stockton, including annexation, pre-zoning, a tentative subdivision map, site plan review and design review. The type of subdivision map, number and size of parcels, size, layout, and design of proposed buildings and site improvements and other required information will be defined as a part of ongoing project planning and design.

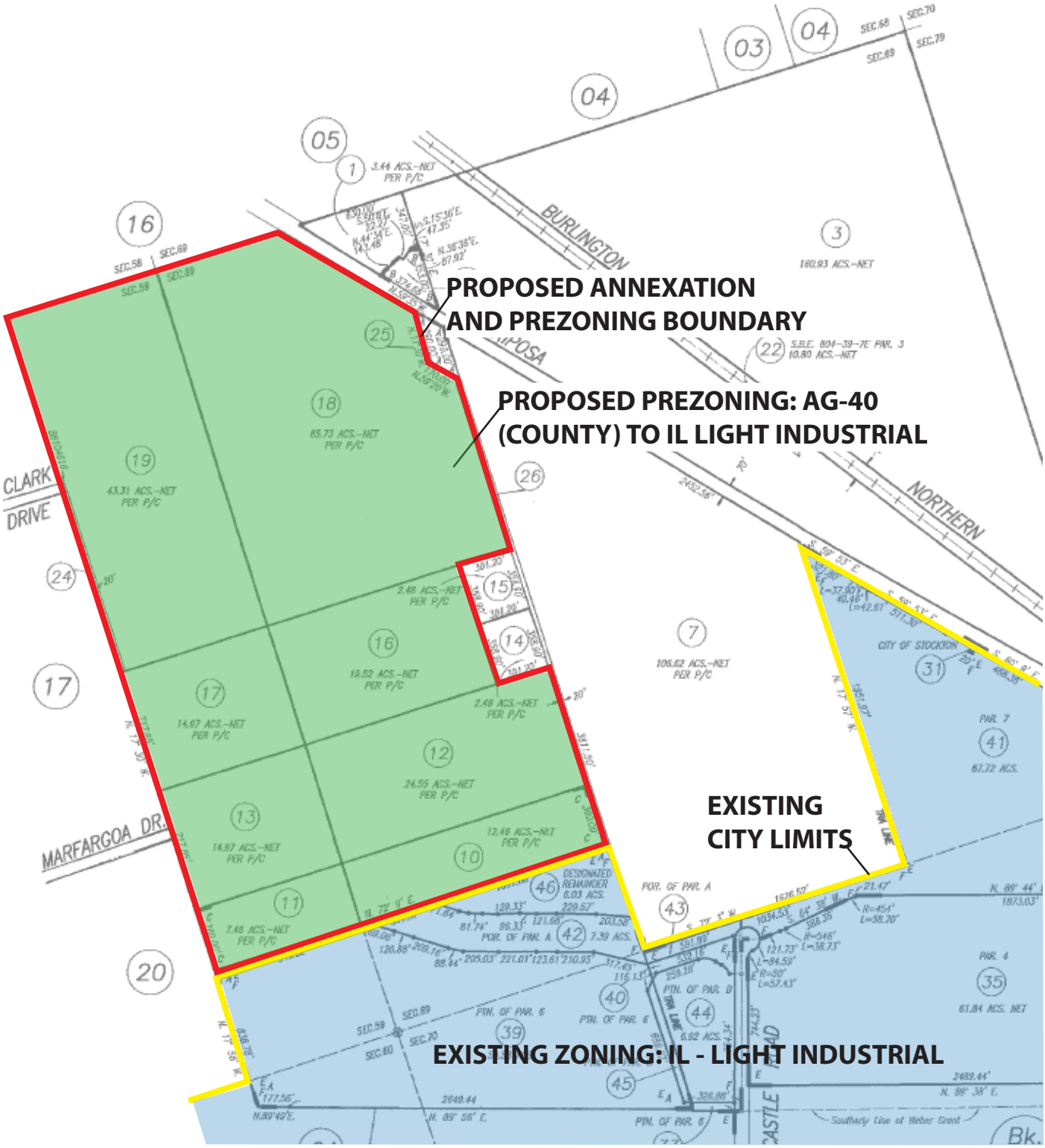
The annexation and detachment of the project site would require approval by the San Joaquin LAFCo. As part of the annexation application, LAFCo typically requires preparation of a City Services Plan that describes how various urban utilities and services will be provided to the proposed development. The City Services Plan also demonstrates the financial feasibility of providing city services to a proposed annexation area. Also typically required are written statements regarding agricultural land conversion and adequacy of water supplies.

Table 3-3 provides a summary of permits and approvals that would be required for the project from the City, LAFCo, and other agencies.

TABLE 3-3
REQUIRED PERMITS AND APPROVALS FOR PROJECT

Agency	Permit/Approval
City of Stockton, City Council	Certification of Final Environmental Impact Report, adoption of CEQA findings and mitigation monitoring program Approval of application for annexation, including pre-zoning of project site Approval of Development Agreement, if requested Approval of Planned Development Permit, if requested Modification of Municipal Service Review 30-Year Planning Horizon Areas Tentative Subdivision Map Water, Wastewater and Storm Drainage Master Plans
City of Stockton, Planning Commission	Recommendations to the City Council on all land use and development actions Planned Development Permit (if required) Land Development Permit approval for future development
City of Stockton, Community Development Department	Site Plan and Design Review approvals
City of Stockton, Public Works Department	Approval of site improvement plans Approval of storm drainage facilities
City of Stockton, Municipal Utilities Department	Compliance with City of Stockton construction and post-construction storm water quality

Agency	Permit/Approval
	requirements Connections to City's water, sewer, and storm drainage systems
San Joaquin Local Agency Formation Commission	Approval of annexation application, Approval of City Services Plan Approval of Agricultural Land Conversion Statement
San Joaquin County Department of Public Works	Encroachment permit for road work (County roads)
State Water Resources Control Board	Compliance with Construction General Permit and Industrial General Permit requirements through City MS4 permit requirements.
Regional Water Quality Control Board, Central Valley Region	Section 401 Water Quality certification in connection with U. S. Army Corps of Engineers Section 404 Permit
U. S. Army Corps of Engineers	Section 404 Permit for modification to North Littlejohns Creek and optional fill of ditch
California Department of Fish and Wildlife	Section 1600 (LSAA) Permit for modifications to North Littlejohns Creek



BaseCamp Environmental

Figure 2-1
PROPOSED ANNEXATION AND PREZONING

SOURCE: Ware Malcomb

Figure 3-2
CONCEPTUAL SITE PLAN

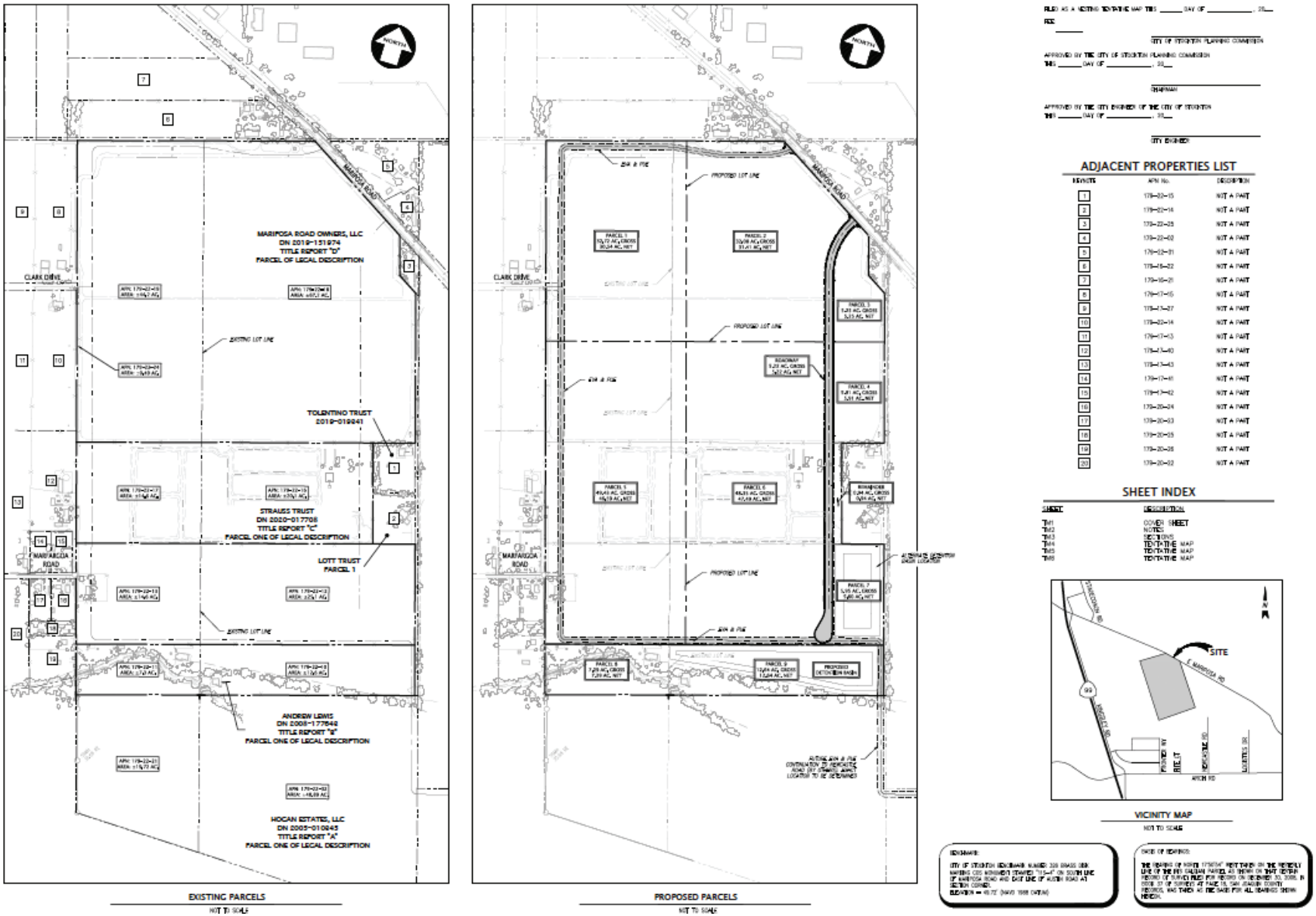
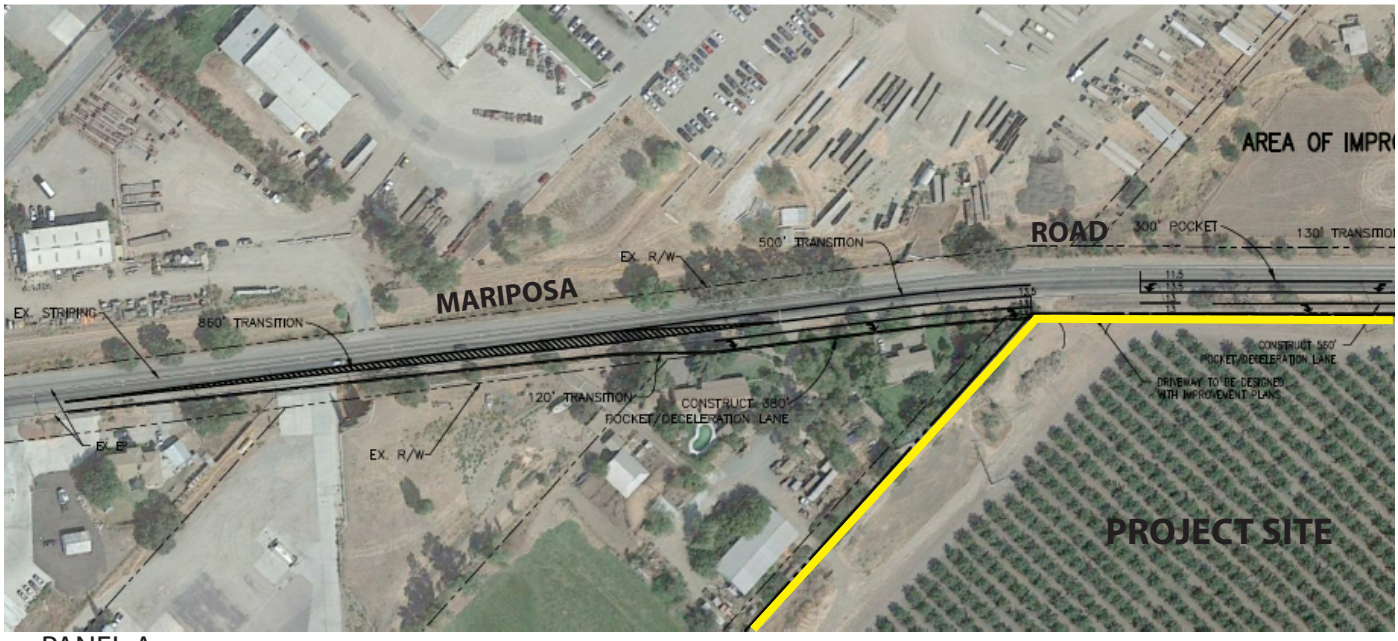
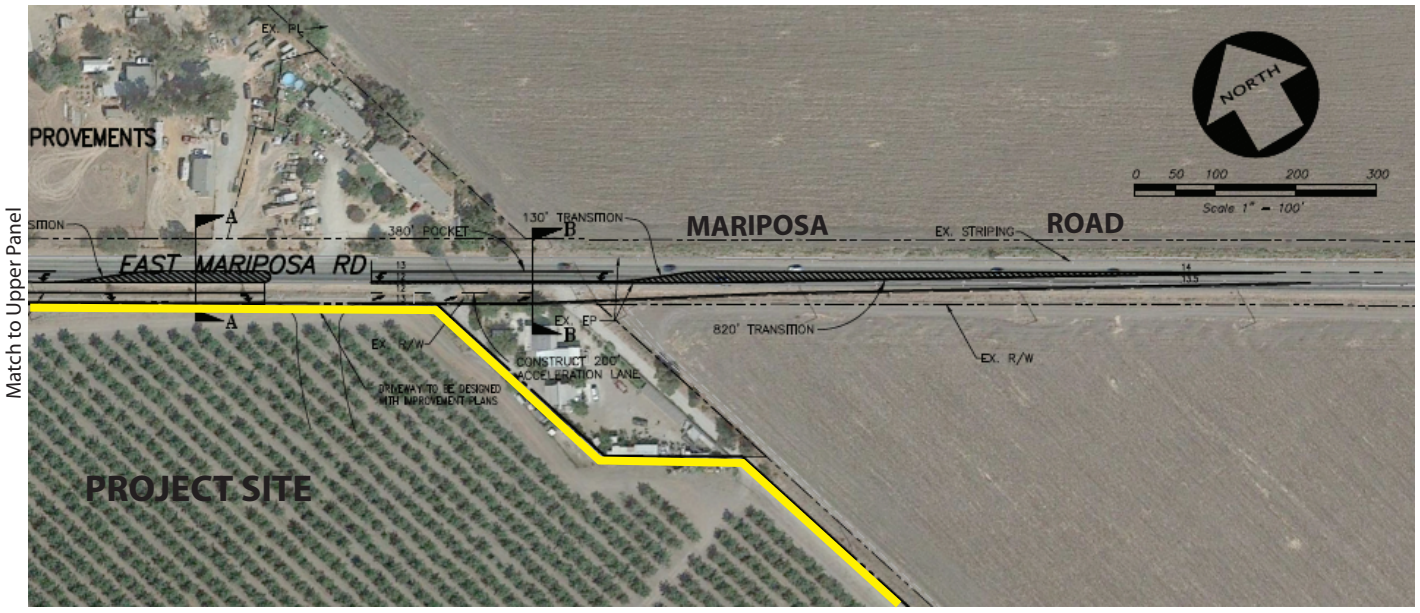


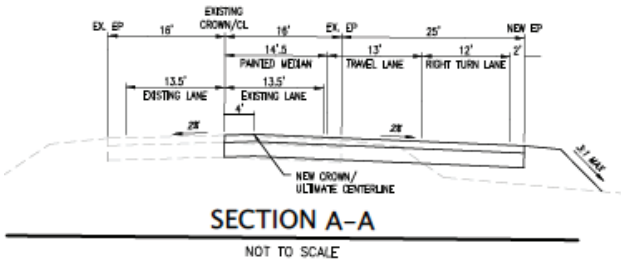
Figure 3-3
TENTATIVE SUBDIVISION MAP



PANEL A

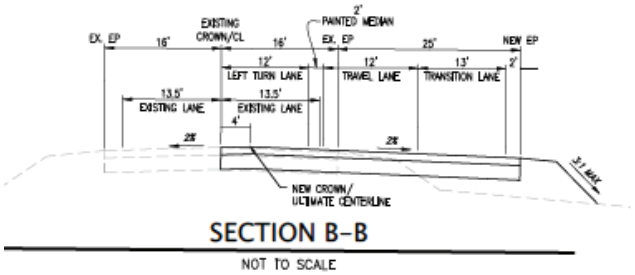


PANEL B



SECTION A–A

NOT TO SCALE



SECTION B–B

NOT TO SCALE

SOURCE: Kier and Wright

Figure 3-4
PROPOSED ENTRY IMPROVEMENTS ON MARIPOSA ROAD

4.0 AESTHETICS AND VISUAL RESOURCES

ENVIRONMENTAL SETTING

Aesthetics/Visual Resource Background

The aesthetic value assigned to a landscape or place varies significantly from person to person, depending on that person's ideas and perceptions. This makes aesthetic and visual resource impacts among the more complex environmental impacts to assess. Despite the inherent difficulties, quantitative methods for assessing aesthetic values have been developed. Although this analysis will not attempt a quantitative measurement of aesthetic values of the site and project impacts, it will provide an assessment of the key functions associated with aesthetics and visual resources.

In general, the value of visual resources of a geographic area is a function of the following:

- Landscape character or the character of the built environment
- Distance between the affected aesthetic resource and viewer
- Number and aesthetic sensitivity of viewers

Landscape character may be defined as distinctive, common, or minimal. “Distinctive” landscapes include those with unusual topography or vegetation, or for urban landscapes unique or aesthetically pleasing design or landscaping elements. “Common” landscapes, both natural and urban, have elements that are prevalent and relatively uniform in the analysis area. “Minimal” landscapes are areas of very repetitive or uninteresting elements, as well as areas that have been highly disturbed by land management and development activities.

The sensitivity of potential viewers may range from low to high, depending on the nature and expectations of users and the duration of use of the subject area. Areas of high sensitivity typically include recreation sites, public gathering venues and scenic routes. Areas of moderate sensitivity include residential areas and commercial of common character but potentially involving long viewer exposure times. Areas of low sensitivity include high-volume and/or high-speed travel corridors through urbanized areas.

A recent change to the Environmental Checklist in CEQA Guidelines Appendix G emphasizes aesthetic and visual resource impacts on public views in non-urbanized areas. As defined in Appendix G, “public views” are views that are experienced from publicly accessible vantage points. Although not specifically defined, “publicly accessible vantage points” are assumed to include, though not necessarily limited to, public roads, parks,

trails, and vista turnouts. For this project, publicly accessible vantage points would include County roads in the project vicinity such as Mariposa Road, Clark Road, and Marfargoa Road.

Aesthetic/Visual Resources on Project Site and in Vicinity

The project site is a mix of agricultural land, very dispersed rural residences, and fallow land. A walnut orchard occupies the northern portion of the project site. There are scattered single-family residences in the southern portion of the project site, including one with ornamental trees at the end of Marfargoa Road. A second residence is adjacent to North Littlejohns Creek, which forms the approximate southern boundary of the project site. In this area, the creek is lined with riparian trees and shrubs along its banks.

Land uses in this portion of San Joaquin County are primarily agricultural and rural residential, intermixed with open fallow grassland parcels. Lands immediately south of the project site have been developed for industrial use within the last several years (Moore Biological Consultants 2021). There are no significant natural landscapes in the project area, other than sparse riparian vegetation along North Littlejohns Creek and the creek way itself.

Public views of the project site are generally available from Mariposa Road near the site and from the east ends of Clark Road and Marfargoa Road. More visibility is available from Mariposa Road, particularly in the westbound direction in which travelers are afforded a more exposed and lengthy view.

Views from lands along the eastern end of Marfargoa Road are of the nearby rural residential lands, a mixture of homes, outbuildings, trees, shrubs, and lawns. Distance views in this area are somewhat confined by structures, trees, and shrubs. Views from the east end of the street are over the open space of the site, except for blockage contributed by tree growth at the on-site residence at the eastern end of the street.

The visual character at the east end of Clark Drive is more mixed. Views in this area are dominated by the auto dismantling yards that line the north side of the street. Land uses along the south side of the street are more rural residential/agricultural in nature, similar to uses along Marfargoa Road. Views to the east are of the maturing orchard on the project site, which also limit long range views.

Views from the project site are a mix of rural residences, auto salvage and charter bus businesses, and open agricultural space. Except in the orchard areas, views across the site are unobstructed. Views from the project site to the south are partially obscured by the vegetation along North Littlejohns Creek. The existing walnut orchard obscures views to the north from the southern portion of the site, and views onto the site from eastbound Mariposa Road.

As the project site is undeveloped, it contains no substantial existing sources of light or glare, other than minor security lighting from residences and businesses on or adjacent to the site. To a lesser extent, lighting comes from nighttime vehicle traffic on local roadways that reaches the site (ESA 2014).

REGULATORY FRAMEWORK

California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The State laws governing the Scenic Highway Program are in the California Streets and Highways Code, Section 260 *et seq*. A highway may be designated scenic based upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

The State Scenic Highway System includes a list of highways that are either designated as scenic highways or are eligible for designation. According to the California Department of Transportation (Caltrans) list of designated scenic highways under the California Scenic Highway Program, there are only two officially designated state scenic highways within San Joaquin County: Interstate 5 from the Stanislaus County Line to Interstate 580 (0.7 miles), and Interstate 580 from I-5 to the Alameda County Line (15.4 miles), both in southwestern San Joaquin County (Caltrans 2017).

CALGreen Lighting Standards

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), known as CALGreen, establishes standards for the design and construction of buildings that have a reduced negative or a positive environmental impact and that encourage sustainable construction practices. Section 5.106.8, Light Pollution Reduction, establishes mandatory requirements for outdoor lighting systems of nonresidential development that are designed to minimize the effects of light pollution. The City of Stockton has adopted all sections of CALGreen, as stated in Stockton Municipal Code Chapter 15.72, Green Building Standards.

San Joaquin County Scenic Routes

The San Joaquin County General Plan has designated several local scenic routes with the intention of protecting the visual character existing along these routes. Several criteria for scenic route designation by the County have been identified, among them providing a representative sampling of the scenic diversity of the County, exhibiting unusual natural or man-made features of interest, and providing opportunities to view activities outside the normal routine of most people (San Joaquin County 2016a). The closest County scenic route to the project site is Interstate 5 north of State Route 4, northwest of the project site.

Stockton Municipal Code

Title 16 of the Stockton Municipal Code, also referred to as the Development Code, implements the City's General Plan by classifying and regulating land uses and structural

development within Stockton; by protecting and promoting the public health, safety, and general welfare; and by preserving and enhancing the aesthetic quality of Stockton. The following provisions of the Development Code affect the aesthetic and visual impacts of new development projects.

Section 16.24.130, IL Zoning District Standards

This section specifies development standards in the IL (Limited Industrial) zoning district. Land uses within the IL zone shall be conducted entirely within an enclosed structure, except for those cases in which another type of roofed enclosure is approved by the Director or Commission for use at a particular location. Outside manufacturing, fabrication, processing, assembling, or repair is prohibited. The project must comply with applicable general development standards set forth in Stockton Municipal Code Chapters 16.32 and 16.36, along with standards specified in Stockton Municipal Code Section 16.80.170 (see below).

Section 16.32.070, Light and Glare

This section establishes standards to prevent spillover illumination or glare onto adjoining properties and to prohibit interference with the normal operation or enjoyment of adjacent property. Exterior lights shall be made up of a light source, reflector, and shielding devices so that, acting together, the light beam is controlled and not directed across a property line or upward into the sky. Bare bulbs are not allowed.

Chapter 16.36, General Development Standards

This chapter sets forth site planning and project design standards to ensure that all development produces an environment of stable and desirable character, harmonious with existing and future development, and to protect the use and enjoyment of neighboring properties, consistent with the General Plan. Section 16.36.060, Development Considerations, contains standards for all development projects intended to ensure high-quality site planning and architectural design. Section 16.36.090 establishes maximum height standards for development within the city. Section 16.36.060(B) requires exterior lighting to be energy-efficient, stationary, shielded, and directed away from adjoining properties and public rights-of-way in compliance with Section 16.32.070 (see above).

Section 16.80.170, Industrial Uses

This section applies to development located on two or more acres in both the Limited Industrial (IL) and General Industrial (IG) zones. A development plan is required for new construction or expansion of an industrial use. The development plan must include the location, size, configuration, and design of structures, circulation and parking, and landscaping and irrigation plans. Uses abutting a public street must be set back at least 20 feet and the setback must be landscaped. The number of parking spaces and parking areas must comply with the requirements of Stockton Municipal Code Chapter 16.64 (Off-Street Parking and Loading Standards).

Chapter 16.120, Design Review

This chapter establishes procedures for the City review of proposed residential, commercial, and industrial development. The chapter encourages development that is compatible and harmonious with the design and use of surrounding properties and with the city in general. The design review authority reviews project features such as building design, landscaping, site planning, and signage to ensure consistency with the Citywide Design Guidelines, discussed below. The design review authority varies with the type of project. Nondiscretionary projects are reviewed by the Planning Director, and discretionary projects can be reviewed by the City Council, Planning Commission, or Planning Director as assigned.

Citywide Design Guidelines

The Design Guidelines, adopted in 2004, serve as a reference point for the City's expectations for quality development and provide guidance for the designated review authority during the design review process. In general, the Design Guidelines are intended to ensure that new or modified development preserves or improves the positive characteristics of the city's image while avoiding negative impacts. The Design Guidelines are organized into seven chapters and includes objectives and design standards for each type of development project that is subject to design review. They provide minimum design criteria for the achievement of functional and attractive developments that fit within the context of their surroundings and do not clash with neighboring buildings (City of Stockton 2004).

Chapter 5 of the Design Guidelines sets forth standards for business park and industrial development. Section 5.02 provides guidelines specifically for industrial and warehouse development. The general design objectives for industrial and warehouse development are quality development, functional site arrangement, compatibility with surrounding uses, safe and convenient circulation and parking, architectural character, landscape emphasis, and safety. Subject matter includes site planning, architectural form/detail, materials and colors, accessory buildings, landscaping, parking and circulation, and public safety (City of Stockton 2004).

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on aesthetics and visual resources if it would:

- Have a substantial adverse effect on a scenic vista,
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway,

- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings; or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality, or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Impact AES-1: Scenic Vistas

Scenic vistas are views of distant landscapes considered to have scenic value. From the project site, possible scenic vistas include open views of the Sierra Nevada mountains to the east and the Coast Ranges to the west. Substantial obstruction of views could constitute a potentially significant aesthetic effect.

The 32 to 36 foot buildings described on the conceptual site plan may partially obstruct scenic vistas from areas outside the project site, depending on the distance between the view and the proposed buildings are viewed. From close range, proposed industrial buildings would be prominent in views from the east ends of Clark and Marfargoa Roads, from Mariposa Road adjacent to the site and from existing residences adjacent to the east line of the site. From at least one of these perspectives, blockage of distance views could be substantial, for example at the nearest point on Mariposa Road.

View blockage can be measured by the degree to which the building obscures views above the horizon as well as by the horizontal extent of the building. Along Mariposa Road adjacent to the site, proposed industrial buildings would block views to a point as much as 23 degrees above the horizon, accounting for setbacks shown on the conceptual site plan. The estimated angle of building view blockage at the following viewer locations, based on distance and proposed building height, is estimated as follows:

View Location	Vertical Blockage
East End of Clark, Marfargoa	13 degrees
Nearest Point on Mariposa Road	23 degrees
Corner of Unpaved Road and Mariposa Road	11 degrees
West Line of Existing Residences	9 degrees

However, views of the mountain ranges in the vicinity of the project site are already limited by their distance and by obstruction from existing development, agricultural orchards, and natural vegetation. Because of this, except in locations immediately adjacent to the site, the proposed structures would have minimal impact on obstructing distance views. Project impacts on scenic vistas would be less than significant.

The project application includes a development agreement that would permit buildings up to 100 feet in height for certain uses. Preliminary drawings provided by the applicant indicate that building setbacks for these potentially taller buildings would be substantially greater than for proposed buildings shown on the conceptual site plan (Figure 3-1). The greater setbacks would result in substantially less vertical view blockage from the same view locations than would occur with the proposed project.

View Location	Vert. Blockage Proposed Bldgs	Vert. Blockage Taller Bldgs
East End of Clark, Marfargoa	13 degrees	6 degrees
Nearest Point on Mariposa Road	23 degrees	6 degrees
Corner of Unpaved Road and Mariposa Road	11 degrees	3 degrees
West Line of Existing Residences	9 degrees	5 degrees

As a result, impacts on scenic vistas for proposed development as shown on the conceptual site, and for potentially taller buildings with increased setbacks, would remain less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact AES-2: Scenic Resources

The project site is a flat area currently or formerly used for agricultural production. The site contains no trees other than ornamental trees at the two onsite single-family residences and riparian vegetation along North Littlejohns Creek. There are no rock outcroppings or other scenic resources of outstanding value on or adjacent to the site. Trees and shrubs exist along North Littlejohns Creek and a ditch along the approximate southern boundary of the project site. Conceptual plans indicate a detention basin would be constructed in this area. It is expected that basin construction would involve minimal disturbance of the riparian area along North Littlejohns Creek with the construction of an outfall from the detention basin. The trees and shrubs along the ditch are more sparse than along North Littlejohns Creek and therefore have less scenic resource value.

As noted, there are no existing designated or eligible state or local scenic roads or highways in or near the project vicinity. Project impacts on scenic resources would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact AES-3: Visual Character and Quality

The project proposes warehouse development on the project site, which is presently designated for Industrial use by the Stockton General Plan and proposed to be pre-zoned Limited Industrial to allow such development. Proposed development of the site would replace the existing landscape of vacant and/or farmed land with warehouse buildings and other urban improvements.

Under the new significance threshold established in the Environmental Checklist in the CEQA Guidelines Appendix G, project site development could have impact on public views. Moreover, views to the east from residences along Clark Road and Marfargoa

Road could be affected by the project, which proposes to construct buildings that would be large and likely visible from these residences or their street frontage. Otherwise, however, the project site is a relatively isolated parcel with limited public visibility, except from the ends of these rural streets; only relatively greater visibility is available from Mariposa Road.

The project is in an area of southeast Stockton with a mix of agricultural and rural residential land uses that are being progressively displaced by new institutional, commercial, and light industrial/warehouse land uses. The resulting overall aesthetic emphasizes relatively large-scale and architecturally simple buildings associated with industrial and institutional development. The views resulting from the project would consist of large-scale urban industrial structures and associated site improvements rather than the existing agricultural open space views. The resulting views would contrast with existing agricultural and rural residential development in the area. Views of the project would, however, be consistent with the trend of development in the area, and with the prevailing designations in the Stockton General Plan.

The proposed large-scale industrial buildings would contrast with the low-density development and small residences and outbuildings that characterize the developed portions of the adjacent agricultural and rural residential development. Industrial structures would substantially exceed the typical height, horizontal dimensions and mass of nearby rural development. Along the west line of the site near Clark Drive, the adjoining auto dismantling yard use would be aesthetically unaffected by the project. Rural residential lands south of Clark Drive would be buffered by orchard lands that abut the site. Screening tree planting in the project landscaping area would over time provide screening for lands near the east end of Marfargoa Road, and buildings would be set back from the boundary by approximately 180 feet, or more in the case of potentially taller buildings permitted by the development agreement, reducing the building height contrast at the property line. The visibility of the potentially taller buildings would, as a result of longer setbacks, be less visually intrusive than the proposed buildings.

The proposed buildings on the project site would be generally consistent in height and mass with nearby existing warehouse buildings in the vicinity. Although the potentially taller buildings could exceed the prevailing building height, view blockage would not be increased, andproject development would be consistent with the prevailing light industrial character of most lands in the area. New structures, landscaping, and site improvements would be required to be designed and constructed to meet the aesthetic standards of the City of Stockton in accordance with the applicable sections of its Municipal Code and its Design Guidelines. As the City would use the Design Guidelines in its design review, the project would be required to comply with the guidance in Section 5.02, which would improve the visual quality of the project.

The project would be consistent with the prevailing visual landscape mix in the area, and the project would be required to meet aesthetic standards that would generally improve its visual quality, consistent with the Stockton General Plan designations for the area. Project impacts on visual character and quality are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact AES-4: Light and Glare

The project site has no substantial existing lighting features. Lighting is mainly associated with nearby residences and businesses, as well as existing residences on the project site. Future development would introduce interior building and exterior security and parking area lighting as well as lighting along proposed public streets. The additional lighting could result in noticeable indirect illumination, also referred to as "spill light," of rural residences in the project vicinity. An increase in indirect illumination could cause aesthetic effects as well as sleep disruption in these areas, which would be considered a potentially significant impact.

Development of the project site would be required to comply with the provisions of Stockton Municipal Code Sections 16.36.060(B) and 16.32.070, which require exterior lighting to be shielded and directed away from adjoining properties and public rights-of-way. Compliance with the lighting provisions of the Stockton Municipal Code would reduce potential indirect illumination, thereby reducing adverse effects to a less-than-significant level.

The Design Guidelines state that large expanses of highly reflective surfaces and mirror glass exterior walls are strongly discouraged for industrial and warehouse development, as the glare from such surfaces can create hazards for motorists and near-airport aviation. Any surface with reflective surfaces requires analysis and approval from the City prior to installation. Also, outdoor lighting must be designed to satisfy functional and decorative needs while complying with the applicable City standards.

Project design, including light and glare potential, will be subject to City review and approval with respect to the Stockton Design Guidelines in the Design Review process. Design review approval findings require that staff determine that the project will not be detrimental to public health and safety and confirm that potential glare would be shielded. Staff may require a light and/or glare analysis during this process, if needed. Compliance with these guidelines would further reduce potential light and glare impacts from development on the project site.

The project site is within Land Use Compatibility Zone 7b of the Stockton Metropolitan Airport. Chapter 11.0 Hazards and Hazardous Materials, describes airport compatibility zones in more detail. There appear to be no lighting requirements specific to Zone 7b; however, the Airport Land Use Compatibility Plan states that a project may be reviewed that has the potential to create electrical or visual hazards to aircraft in flight, including lighting which could be mistaken for airport lighting. The project site is more than two miles distant from the Stockton Metropolitan Airport; nevertheless, the project site is within the Airport Influence Area of the airport. Therefore, the project would be subject to review by the Airport Land Use Commission, which would assess the compatibility of the project with airport operations and conformance to the guidelines stipulated in the Airport Land Use Compatibility Plan.

Overall, the project would install lighting, but lighting would be consistent with City standards designed to reduce indirect illumination of nearby sensitive land uses. Project lighting is also not expected to present any aviation or other safety issues. Project impacts related to light and glare would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

5.0 AGRICULTURAL RESOURCES

ENVIRONMENTAL SETTING

Agriculture has been, and continues to be, an important part of the economy in San Joaquin County. Approximately 86.7% of the county's land area was in farms and pasture as of 2017 (U.S. Department of Agriculture 2019). The gross value of agricultural production in the county was $2,617,815,000 in 2019, which represented an increase in value of approximately 0.91% from 2018. The top five agricultural products in 2019 were almonds, milk, grapes, English walnuts, and eggs (San Joaquin County Agricultural Commissioner's Office 2020).

The project site and surrounding areas have been used for agriculture and aquaculture in the past, and some of these lands remain in agricultural production. Agricultural lands in the vicinity are located mainly east of Austin Road and north of Mariposa Road. The approximate northern half of the project site is currently planted with walnut orchard trees. Portions of the approximate southern half of the project site have also been used for agricultural production; lands immediately south of the walnut orchards were used into the early 2000s for aquaculture. The project biological assessment indicates the presence of recently harvested hay (Moore Biological Consultants 2021). In recent years, urban development has displaced much of the agricultural activity in the area, including nearby warehouse and light industrial development south of the project site (see Chapter 13.0, Land Use).

Important Farmland

The Important Farmland Maps, prepared by the California Department of Conservation as part of the Farmland Mapping and Monitoring Program, designate the viability of lands for farmland use, based on the physical and chemical properties of the soils. The maps categorize farmland, in decreasing order of soil quality, as "Prime Farmland," "Farmland of Statewide Importance," "Unique Farmland," and "Farmland of Local Importance." Collectively, these categories are referred to as "Important Farmland." There are also designations for grazing land and for urban/built-up areas, among others. The Important Farmland Maps are prepared for counties with a "modern" soil survey conducted by the U.S. Department of Agriculture (i.e., soil survey that addresses other soil issues besides suitability as cropland).

It should be noted that the definition of Farmland in CEQA Guidelines Appendix G is narrower than the definition of Important Farmland used by the Farmland Mapping and Monitoring Program, as Appendix G excludes Farmland of Local Importance. For the purposes of this CEQA analysis, the Appendix G definition of Farmland will be used.

As of 2018, the most recent year of available data, the total amount of Important Farmland in San Joaquin County was 615,785 acres – approximately 67.5% of the total acres inventoried in the county. The 2018 Important Farmland acreage represents an approximately 3.5% decline from the Important Farmland acreage in 1990 (California Department of Conservation 2018a). According to the 2018 Important Farmland Map of San Joaquin County (Figure 5-1), the northern portion of the project site consists of Farmland of Statewide Importance, which encompasses 106 acres. The southern portion consists of Farmland of Local Importance, which encompasses 60 acres. These portions are divided by a strip of land in the center, approximately 37 acres, designated as Vacant or Disturbed Land (California Department of Conservation 2018b).

LAFCo Prime Agricultural Lands

In processing applications for annexation, the San Joaquin LAFCo evaluates potential impacts on "prime agricultural land" as defined in the Cortese-Knox-Hertzberg Act, which sets forth procedures for annexations. One of the definitions of "prime agricultural land" is "Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible" (Government Code Section 56064(a)).

The Cortese-Knox-Hertzberg Act provides the following definitions of "prime agricultural land":

- Land that qualifies for rating 80 through 100 Storie Index Rating.
- Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
- Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars ($400) per acre.
- Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars ($400) per acre for three of the previous five calendar years.

As described in more detail in Chapter 9.0, Geology, the project site has two types of soil: Stockton clay and Jacktone clay (see Figure 9-1). Stockton clay is a Class II soil when irrigated (SCS 1992). Therefore, the northern portions of the project site that have this soil are considered to have prime agricultural land as defined by Government Code Section 56064(a).

The Jacktone clay soil is not a Class I or II soil, even when irrigated (SCS 1992). The Jacktone clay soil has a Storie Index rating of 25. The project site does not support livestock. The project site has most recently been planted with orchard trees, but these trees have not yet reached maturity, and the land had apparently been used in previous years for row crops, which have less agricultural value. By the definitions presented in this section, the Jacktone clay soil is not prime agricultural land. However, it should be noted that Jacktone clay underlies the area on the project site classified by the Farmland Mapping and Monitoring Program as Farmland of Statewide Importance.

For CEQA purposes, the land designated Farmland of Statewide Importance by the Farmland Mapping and Monitoring Program is the focus of impact analysis in this EIR, as set forth in CEQA Guidelines Appendix G. The Stockton clay soil would be the subject of further analysis in the annexation application to LAFCo.

REGULATORY FRAMEWORK

Williamson Act

The Land Conservation Act of 1965, commonly known as the Williamson Act, was enacted to help preserve farmland in California. Under the Williamson Act, a contract is executed between landowners and local governments to voluntarily restrict development on property in exchange for lower property tax assessments based on the existing agricultural land use. Contracts are entered for a 10-year period and can be terminated only by non-renewal or a cancellation process defined in the California Government Code. Additional features of the Williamson Act program include the requirement that contracted parcels be in designated "agricultural preserves" of at least 100 acres in size to encourage the concentration of enrolled land; the program provides for annual state payments ("subventions") to participating local governments as partial reimbursement for the loss of local property tax revenue.

A change in the Williamson Act in 1998 allows for the creation of a Farmland Security Zone. To create a Farmland Security Zone, a landowner enters a contract for a minimum of 20 years. In exchange, the landowner receives an assessment on the property based on 65% of either its Williamson Act valuation or its Proposition 13 valuation, whichever is lower.

In 2015, the most recent year for which county data are available, San Joaquin County had 298,455 acres of prime agricultural land and 140,943 acres of non-prime agricultural land under Williamson Act contract. In addition, there were 51,032 acres of prime agricultural land and 9,224 acres of non-prime agricultural land in a Farmland Security Zone. The acreage has been decreasing in recent years because of non-renewals; in 2014 and 2015, contracts were not renewed for a total of 6,806 acres (California Department of Conservation 2016). None of the parcels within the project site are under a Williamson Act contract or are within a Farmland Security Zone.

Right-to-Farm Ordinances

In urbanizing areas, urban development and farmlands can be in conflict. Residents of new urban areas, for example, may find noise, dust, pesticide overspray or residues objectionable, generating complaints; new urban populations can result in increased trespass, theft, and vandalism on farmlands.

Both the City of Stockton and San Joaquin County have adopted Right-to-Farm Ordinances. The ordinances require owners and builders to notify their buyers or successors-in-interest of the potential for conflicts with and effects of agricultural activities on urban development, and the ordinances specify that typical agricultural practices shall not be considered a nuisance. These ordinances serve to protect farmers from nuisance complaints, although trespass and vandalism may continue. The City has incorporated its Right-to-Farm ordinance within Stockton Municipal Code Section 16.36.040, Agriculture Preservation.

City of Stockton Agricultural Lands Mitigation Program

The City of Stockton adopted an Agricultural Lands Mitigation Program in 2007. The program applies to projects that would convert agricultural lands that are Prime Farmland, Farmland of Statewide Importance, and Unique Farmland, as defined on the most recent Important Farmland Maps published by the California Department of Conservation, to a non-agricultural use.

The mitigation program requires that projects provide "agricultural mitigation land" - land encumbered by an agricultural conservation easement - on a 1:1 basis for each acre of important agricultural land converted by the project. Agricultural mitigation easements will be dedicated to a qualifying management entity, such as the Central Valley Farmland Trust. Alternatively, projects may pay the City's established Agricultural Land Mitigation Fee, which is collected by the City, held in a dedicated account, and then used to acquire agricultural mitigation land or to pay for the monitoring and administrative costs of the program. The fees may also be transferred to a qualifying entity for the same purpose.

Other Agricultural Preservation Programs

San Joaquin County has adopted an Agricultural Mitigation Ordinance (San Joaquin County Code Chapter 9-1080) that applies to lands under County jurisdiction. The requirements and mechanisms of the County ordinance are similar to the City's Agricultural Land Mitigation Program.

Mitigation of agricultural land conversion losses has also been provided, to a degree, through the county-wide adoption of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) and its local adoption by the City of Stockton. The SJMSCP requires the payment of a per-acre fee for loss of wildlife habitat, which, is largely integral with agricultural use in central San Joaquin County. One important use of SJMSCP fees is the acquisition of conservation easements on agricultural land to maintain their biological habitat values, as well as to preserve the

agricultural use of these lands. Chapter 7.0, Biological Resources, describes the SJMSCP in more detail, along with its role in the conservation of biological resources.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on agricultural resources if it would:

- 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, to non-agricultural use,
- Conflict with existing zoning for agricultural use or a Williamson Act contract, or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

CEQA Guidelines Appendix G also contains questions regarding project impacts on forestry resources in the same checklist section as agricultural resources. There are no designated forest lands (i.e., National Forest lands, State forests, or lands zoned for timber production) on the project site. Therefore, impacts on forestry resources will not be analyzed in this EIR.

Impact AG-1: Conversion of Farmland

The southern and center portion of the project site are classified as Farmland of Local Importance or Vacant or Disturbed Land. Neither category falls within the definition of Farmland in CEQA Guidelines Appendix G. Therefore, conversion of this property to non-agricultural use is not considered significant by CEQA standards.

The northern portion of the project site contains 106 acres of Farmland of Statewide Importance. Development of this property would convert Farmland, as defined in CEQA Guidelines Appendix G, to a non-agricultural use. This would be a potentially significant impact. In addition, land in the southern portion of the site contains Stockton clay soils, which are considered prime agricultural land when irrigated, as defined by the Cortese-Knox-Hertzberg Act.

The conversion of agricultural land in conjunction with urban development as designated in the Stockton General Plan 2040, which includes the project site, was identified in the GPEIR as a significant and unavoidable adverse effect. The GPEIR anticipated that certain parcels adjacent to urban uses, including the project site, were subject to probable farmland conversion. Although the General Plan includes policies and actions that would reduce and partially offset the conversion of farmland, the GPEIR concluded that farmlands, and in particular farmlands designated for development, would be converted

to non-agricultural uses and that no mitigation that would reduce this impact to a level that would be less than significant was feasible. A Statement of Overriding Considerations for these impacts were adopted by the Stockton City Council in conjunction with adoption of the General Plan 2040. This Statement of Overriding Considerations remains operative.

The project would be subject to the City's Agricultural Lands Mitigation Program, requiring developers of the property to contribute agricultural mitigation land or to pay the Agricultural Land Mitigation Fee. Also, the project is expected to participate in the SJMSCP, which would require fee payments for conversion of the site to urban uses. Compliance with the Agricultural Lands Mitigation Program and the SJMSCP would partially compensate for the impact of Farmland conversion on the project site. However, the loss of Farmland would still occur, and participation in these programs would not result in any substantial reduction in the significant agricultural land conversion impact of the project. Therefore, this impact is considered significant and unavoidable.

Level of Significance: Significant

Mitigation Measures: None feasible

Significance after Mitigation: Significant and unavoidable

Impact AG-2: Agricultural Zoning and Williamson Act

All parcels within the project site are currently zoned by San Joaquin County as AG-40 - General Agriculture, 40-acre minimum parcel size (see Table 13-1 in Chapter 13.0, Land Use). The project proposes that the City of Stockton annex the County parcels and pre-zone them to IL - Limited Industrial. With the change in jurisdiction from the County to the City and with the application of the pre-zoning, the existing agricultural zoning would be eliminated.

The elimination of the existing County agricultural zoning would not, in and of itself, involve potentially significant environmental effects, apart from the potential environmental effects of site development as described in this EIR, including conversion of agricultural land. The existing County General Plan designation for the parcels within the project site is Agricultural-Urban Reserve, a designation applied generally to areas that are currently undeveloped or used for agricultural production but that are in the logical path of development in an urban fringe area. This designation may be applied if 1) the area identified is designated for urban development in a city general plan, and 2) the County determines that the area represents a reasonable expansion of a city. As noted, the project site has been designated for industrial use in the Stockton General Plan 2040, and therefore the project is consistent with the existing County zoning.

The GPEIR indicated that there are Williamson Act parcels within the city boundaries and identified 2,464 acres of lands with active Williamson Act contracts for non-agricultural uses. None of the parcels within the project site are under Williamson Act contracts, and the project would have no impact on Williamson Act lands. Project

impacts related to agricultural zoning or Williamson Act contracts are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact AG-3: Indirect Conversion of Agricultural Lands

As described in more detail in Chapter 13.0, Land Use, the project site is in an urban fringe area with a mix of agriculture and urban development. The 2018 Important Farmland Map of San Joaquin County indicates that the project site has Farmland of Statewide Importance and Farmland of Local Importance. However, the project site is in an area designated by the Stockton General Plan for urban development, and such development has occurred nearby, along with extensions of urban infrastructure. The project site is within the City's Sphere of Influence and its 10-year planning horizon, as set forth in the City's interim Municipal Service Review (City of Stockton 2019).

As noted, most agricultural land in the vicinity of the project site is east of Mariposa Road. However, there is approximately 105 acres of land currently in agricultural use adjacent to and east of the project site. It is possible that project development could lead to greater pressure to convert this agricultural land into non-agricultural use.

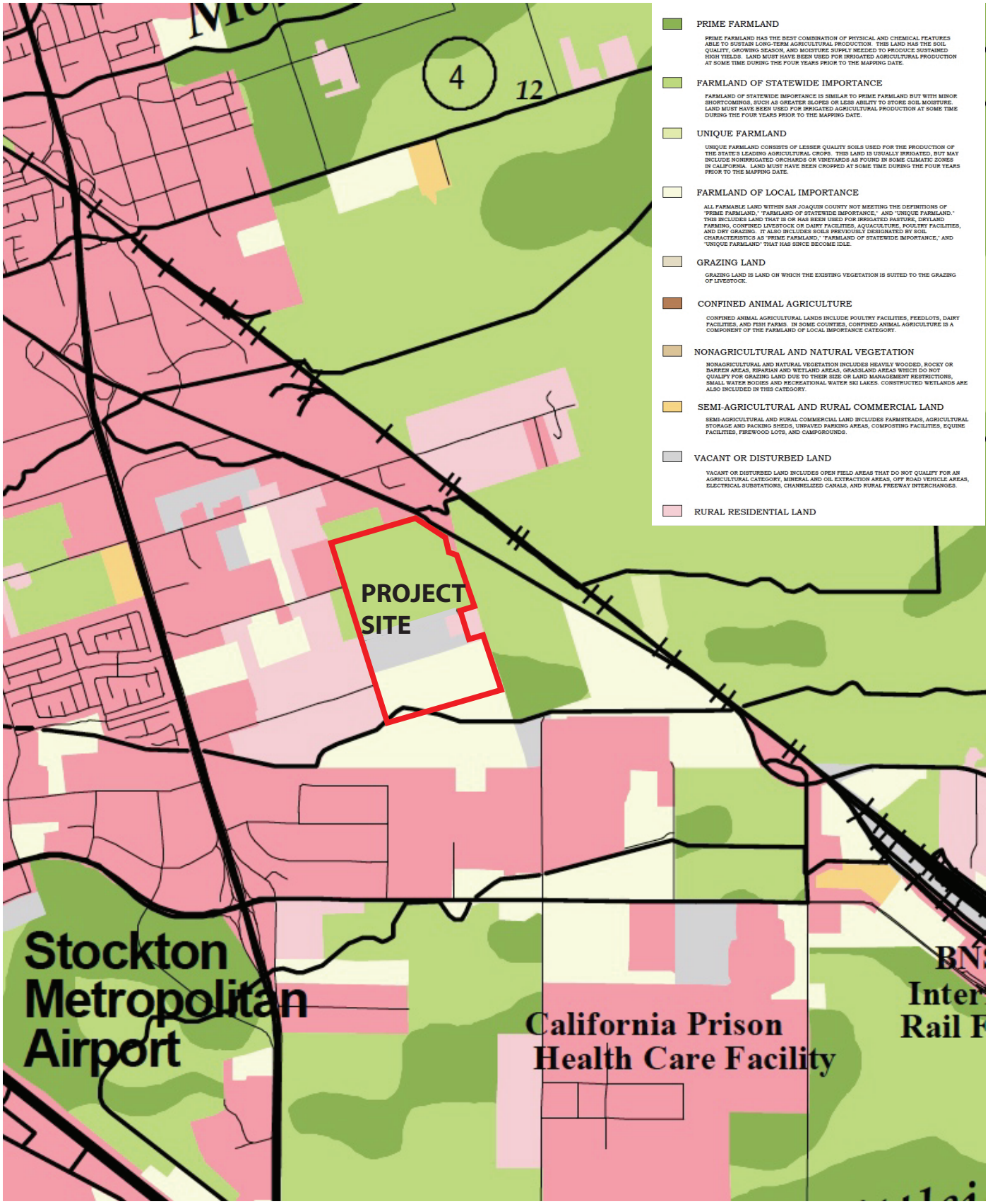
The GPEIR discussed the potential impacts of development in accordance with the recently adopted General Plan related to indirect farmland conversion. The land use map in the General Plan was generally developed to arrange new designations to place compatible uses adjacent to existing uses. Nevertheless, the General Plan would allow development that could result in potentially incompatible urban uses next to farms or ranches, creating circumstances that impair the productivity and profitability of agricultural operation, and could eventually lead farmers to take their land out of production.

However, the project site is in an area that is already substantially developed with commercial and rural residential land use. Moreover, there is existing infrastructure in the vicinity that would allow for urban development to occur in the area (see Chapter 17.0, Utilities and Energy). The project would only install infrastructure that would serve the proposed development. Also, the Stockton General Plan 2040 has designated the existing agricultural land to the east as Industrial, and the County General Plan designates it as Agricultural-Urban Reserve, so this land is already planned for urban use in the future.

In summary, the project would not involve any activity that would indirectly convert agricultural land beyond the designated Industrial lands to non-agricultural uses. Project impacts on indirect conversion of agricultural lands would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required



SOURCE: San Joaquin County District Viewer

Figure 5-1
IMPORTANT FARMLAND MAP

6.0. AIR QUALITY

This chapter analyzes impacts on air quality, specifically as they relate to pollutants regulated by federal and California Clean Air Acts. Greenhouse gases (GHGs), gases that trap heat generated by the sun, are regulated separately from other air pollutants. Chapter 10.0, Greenhouse Gas Emissions, discusses the potential environmental impacts of the project as they relate to GHG emissions.

ENVIRONMENTAL SETTING

The project site is located within the northern portion of the San Joaquin Valley Air Basin (Air Basin). The Air Basin is bounded generally by the Coast Ranges to the west and the Sierra Nevada and foothills to the east. The prevailing winds are from the west and north, a result of marine breezes that enter the Air Basin primarily through the Carquinez Strait but also through the Altamont Pass. Surrounding topography results in weak air flow, which makes the Air Basin highly susceptible to pollutant accumulation over time. Summers are hot and dry, and winters are cool. Most of the annual precipitation falls from November through April. The Stockton area enjoys more than 260 days of sunshine annually, but the amount of sunshine is reduced during the winter months. Inversions occur frequently during fall and early winter (SJVAPCD 2015a).

On some days, pollutants transported from the Bay Area impact the northern San Joaquin Valley, mixing with local emissions to contribute to State and federal violations at Stockton and Modesto. Under certain conditions, pollutants from the San Joaquin Valley can be transported to Sacramento, and the Delta breeze typically carries polluted air from the valley to the Sierra Nevada and eastern foothills. Air Basin pollution can also significantly affect the Great Basin, Mojave Desert, and central California coast areas (ARB 2001).

Air Pollutants

Pollutants of concern for development projects typically include ozone, particulate matter, and carbon monoxide. Pollutants of concern for industrial and warehouse projects also include what are called “toxic air contaminants” (TACs).

Ozone

Ozone is not directly produced; rather, it is the result of emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x) reacting in the presence of sunlight. ROG and NO_x are referred to as “ozone precursors.” Motor vehicle emissions represent the principal source of ozone precursors. To control ozone pollution, it is necessary to control emissions of ROG and NO_x.

High concentrations of ground-level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments. More specifically, ground-level ozone may:

- Make it more difficult to breathe deeply and vigorously.
- Cause shortness of breath, and pain when taking a deep breath.
- Cause coughing and sore or scratchy throat.
- Inflame and damage the airways.
- Aggravate lung diseases such as asthma, emphysema, and chronic bronchitis.
- Increase the frequency of asthma attacks.
- Make the lungs more susceptible to infection.
- Continue to damage the lungs even when the symptoms have disappeared.
- Cause chronic obstructive pulmonary disease.

People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers. In addition, people with certain genetic characteristics, and people with reduced intake of certain nutrients, such as vitamins C and E, are at greater risk from ozone exposure (EPA 2018a). Ozone also damages natural ecosystems such as forest and foothill communities, agricultural crops, and some man-made materials, such as rubber, paint, and plastics.

Particulate Matter

Particulate matter includes any solid matter suspended in air. Standards are applied to particulates 10 micrometers in diameter or less (PM_{10}), because these particles, when inhaled, are not filtered out prior to reaching the lungs, where they can aggravate respiratory diseases. Particulates originate from automobile traffic, urban construction, grading, farm tilling, and other activities that expose soil and dust. Dry summer conditions and daily winds can increase particulate concentrations. Numerous scientific studies have linked particle pollution exposure 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
- increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.

People with heart or lung diseases, children, and older adults are the most likely to be affected by particle pollution exposure (EPA 2018b).

Separate standards have been established for particulate matter that is 2.5 micrometers or less in size ($PM_{2.5}$), sometimes referred to as "fine particulate matter." The $PM_{2.5}$ standards reflect health concerns related to respiration of smaller particles, which can go deeper into the lungs than larger particulate matter. Fine particulates include sulfates, nitrates, organics, ammonium, and lead compounds originating from activities in urban areas.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels. The main source of CO in the San Joaquin Valley is on-road motor vehicles. Other CO sources in the Valley include other mobile sources, miscellaneous processes, and fuel combustion from stationary sources. Because of its ability to readily combine with hemoglobin and displace oxygen in the human body, high levels of CO can affect human health, causing fatigue, headache, confusion, and dizziness, especially for elderly people or individuals with respiratory ailments.

In 2019, approximately 1,017 tons of ROG and 218 tons of NO_x were emitted each day from sources in the San Joaquin Valley Air Basin. Approximately 316 tons of PM_{10}, of which approximately 103 tons were $PM_{2.5}$, were emitted daily. Areawide sources account for most of the ROG emissions; major sources include farming operations, solvent evaporation, cleaning and surface coatings, and waste disposal. Major sources of PM_{10} emissions are also areawide; these include farming operations, road and fugitive windblown dust, and wildfires. Most of the NO_x emissions were caused primarily by motor vehicles. Wildfires were a major source of CO emissions in 2019, along with mobile sources (ARB 2020a).

Toxic Air Contaminants (TACs)

TACs are air pollutants that cause or may cause short-term (acute) or long-term (chronic) adverse health effects. These health effects may include cancer (from carcinogenic TACs), birth defects, neurological and reproductive disorders, or chronic eye, lung, or skin irritation. TACs also may cause adverse environmental and ecological effects. The State's Air Toxics Inventory includes more than 250 substances considered TACs (ARB 2008a). They include such substances as chlorinated hydrocarbons, asbestos, dioxin, toluene, gasoline engine exhaust, particulate matter emitted by diesel engines, and metals such as cadmium, mercury, chromium, and lead compounds, among many others. Most TACs are emitted by specialized industrial processes; however, they may also be emitted from a variety of common sources such as gasoline stations, automobiles, diesel engines, dry cleaners, and painting operations.

Most TACs are associated with industrial processes and are uncommon. However, diesel particulate matter (PM) is of concern because it is present at some concentration in all developed areas of the state. Diesel PM is designated by the State of California as a TAC,

as it is a potential source of both cancer and non-cancer health effects. The ARB has identified diesel PM as a major contributor to ambient cancer risk levels; while it accounts for only about 4% of air toxic emissions in the state, it is associated with more than 70% of the 2000 cancer risk associated with outdoor ambient levels of all TACs. General risks can be elevated with proximity to the source, which for diesel particulate matter includes freeways, ports and railyards, and distribution centers (ARB 2005).

REGULATORY FRAMEWORK

Federal Clean Air Act

Federal air quality regulation stems from the Clean Air Act, as amended. The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to establish air quality standards for criteria pollutants, known as the National Ambient Air Quality Standards, as shown in Table 6-1. There are six criteria pollutants: ozone, carbon monoxide, particulate matter, nitrogen dioxide, lead, and sulfur dioxide. Two types of National Ambient Air Quality Standards are established:

- Primary standards to protect human health, based on EPA medical research and specific concentration thresholds derived therefrom; and
- Secondary standards to protect the public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage.

Regions of the country are classified with respect to their attainment of National Ambient Air Quality Standards. Areas where these standards are exceeded are considered "nonattainment" areas and are subject to more intensive air quality management and more stringent regulation. Table 6-2 shows the attainment status of the Air Basin for federal standards. The Air Basin is designated Nonattainment/Extreme for ozone and Nonattainment for $PM_{2.5}$. The Air Basin meets all other federal standards.

The Clean Air Act requires the states to submit a State Implementation Plan for nonattainment areas. The State Implementation Plan in California is prepared by the ARB and is reviewed and approved by the EPA, subject to a determination of adequacy in demonstrating how the federal standards will be achieved. The local air pollution or air quality management districts are responsible for preparation of Air Quality Attainment Plans for their jurisdictions. These Air Quality Attainment Plans become part of the State Implementation Plan.

California Clean Air Act

The California Clean Air Act provides the planning framework for California air quality. It establishes the State's own set of ambient air quality standards for criteria pollutants, known as the California Ambient Air Quality Standards (see Table 6-1). The State standards cover other pollutants besides the six criteria pollutants designated by the

federal Clean Air Act; additionally, the State standards are generally more stringent than the corresponding federal standards.

TABLE 6-1
NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Air Pollutant	Averaging Time	California Standards	Primary National Standards[1]	Secondary National Standards[2]
Ozone	1 Hour	0.090 ppm	--	--
	8 Hour	0.070 ppm	0.070 ppm	0.070 ppm
PM_{10}	24 Hour	50 $\mu g/m^3$	150 $\mu g/m^3$	150 $\mu g/m^3$
	Annual Mean	20 $\mu g/m^3$	--	--
$PM_{2.5}$	24 Hour	--	35 $\mu g/m^3$	35 $\mu g/m^3$
	Annual Mean	12 $\mu g/m^3$	12 $\mu g/m^3$	15 $\mu g/m^3$
Carbon Monoxide	1 Hour	20 ppm	35 ppm	--
	8 Hour	9 ppm	9 ppm	--
Nitrogen Dioxide	1 Hour	0.18 ppm	100 ppb	--
	Annual Mean	0.030 ppm	0.053 ppm	0.053 ppm
Sulfur Dioxide	1 Hour	0.25 ppm	75 ppb	--
	3 Hour	--	--	0.5 ppm
	24 Hour	0.04 ppm	0.14 ppm*	--
	Annual Mean	--	0.030 ppm*	--
Lead	30 Day Avg.	1.5 $\mu g/m^3$	--	--
	Calendar Qtr.	--	1.5 $\mu g/m^3$	1.5 $\mu g/m^3$
	3 Month Average	--	0.15 $\mu g/m^3$	0.15 $\mu g/m^3$
Sulfates	24 Hour	25 $\mu g/m^3$	N/A	N/A
Hydrogen Sulfide	1 Hour	0.03 ppm	N/A	N/A
Vinyl Chloride	24 Hour	0.01 ppm	N/A	N/A
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer.[3]	N/A	N/A

Notes: ppm – parts per million; ppb – parts per billion; $\mu g/m^3$– micrograms per cubic meter; N/A – not applicable
[1] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
[2] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
[3] The "extinction coefficient" is a measure of the diminishing of light through scattering and absorption.
* For certain areas.
Source: ARB 2016.

Table 6-2 shows the attainment status of the Air Basin for California Ambient Air Quality Standards. For ozone, the Air Basin is designated Nonattainment/Severe by the State. The State also classifies the Air Basin as Nonattainment for PM_{10} and $PM_{2.5}$. The Air Basin is in attainment of, or unclassified for, all other State standards. The California

Clean Air Act requires areas that are designated nonattainment to achieve a 5% annual reduction in emissions until the standards are met. Responsibility for implementation of the California Clean Air Act requirements rests with the ARB.

TABLE 6-2
SAN JOAQUIN VALLEY AIR BASIN ATTAINMENT STATUS

	Designation/Classification	
Pollutant	**Federal Primary Standards**	**State Standards**
Ozone - One hour	No Federal Standard[a]	Nonattainment/Severe
Ozone - Eight hour	Nonattainment/Extreme[b]	Nonattainment
PM_{10}	Attainment[c]	Nonattainment
$PM_{2.5}$	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

[a] Effective June 15, 2005, EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the Air Basin as Extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan in 2010. Many applicable requirements for Extreme 1-hour ozone nonattainment areas continue to apply to the Air Basin.

b Though the Valley was initially classified as Serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to Extreme nonattainment in the Federal Register in 2010.

[c] In 2008, the U.S. Environmental Protection Agency (EPA) redesignated the San Joaquin Valley to attainment for the PM_{10} National Ambient Air Quality Standard (NAAQS) and approved the PM_{10} Maintenance Plan.

[d] The Valley is designated nonattainment for the 1997 $PM_{2.5}$ NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS in 2009.

Source: SJVAPCD 2020.

Toxic Air Contaminants

The State regulates TACs primarily through the Tanner Air Toxics Act and the Air Toxics Hot Spots Information and Assessment Act of 1987. Under these programs, the State is responsible for an inventory of TACs, for analysis of exposure and risk, and for planning to reduce risk. The agencies primarily responsible for administering these programs are ARB and the Office of Environmental Health Hazard Assessment. Like other federal and state air quality requirements, the various elements of the State air toxics program are implemented by the local air districts.

Diesel PM is regulated by the ARB under various programs and regulations designed to reduce emissions. These include the Advanced Clean Trucks regulation, which requires manufacturers to sell an increasing percentage of zero-emission trucks by 2035, and the Advanced Clean Fleets regulation, with the goal of achieving a statewide zero-emission truck and bus fleet by 2045.

Advanced Clean Truck Regulation

On June 25, 2020, the ARB adopted the Advanced Clean Truck Regulation. The goal of this proposed strategy is to achieve NO_x and GHG emission reductions through advanced clean technology, and to increase the penetration of the first wave of zero-emission heavy-duty technology into applications that are well suited to its use.

The regulation has two components. First, manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines would be required to sell zero-emission trucks as an increasing percentage of their annual California sales. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b-3 truck sales, 75% of Class 4-8 straight truck sales, and 40% of truck tractor sales. By 2045, every new truck sold in California will be zero-emission. Second, large employers, including retailers, manufacturers, brokers, and others would be required to report information about shipments and shuttle services.

The ARB anticipates that by 2040, the Advanced Clean Truck Regulation would reduce NO_x emissions by approximately 16% from baseline, PM2.5 emissions by approximately 14.5% from baseline, and GHG emissions by approximately 7% below baseline. "Baseline" is the anticipated emissions that would occur with implementation of other emission reduction regulations adopted by the State (ARB 2020).

Advanced Clean Fleets Regulation

Also on June 25, 2020, the ARB announced it is developing a medium and heavy-duty zero-emission fleet regulation with the goal of achieving a zero-emission truck and bus fleet everywhere feasible by 2045, and earlier for certain market segments such as last-mile delivery and drayage applications. The regulation intends to accelerate the number of medium- and heavy-duty zero-emission vehicle purchases to achieve a full transition to zero-emission vehicles in California as soon as possible. The initial focus would be on larger fleets with vehicles that are suitable for early electrification, their subhaulers, and large entities that hire them.

San Joaquin Valley Air Pollution Control District

Projects within the Air Basin are subject to the regulatory authority of the San Joaquin Valley Air Pollution Control District (SJVAPCD), which implements and enforces air quality regulations in eight counties, from San Joaquin County in the north to western Kern County in the south. The District's responsibilities include air quality standard attainment planning, regulation of emissions from non-transportation sources, and mitigation of emissions from on-road sources.

Air Quality Plans

Air quality plans adopted by the SJVAPCD to meet Clean Air Act standards, including those designed to protect human health, are presented in Table 6-3 below. All the plans include federal, State, and local measures that would be implemented through rule making or program funding to reduce air pollutant emissions in the Air Basin.

TABLE 6-3
SJVAPCD AIR QUALITY PLANS

Pollutant	**Plan**	**Objective**
Ozone	2013 Plan for the Revoked 1-Hour Ozone Standard	Attainment of federal 1-hour ozone standard by 2017 (EPA determined Air Basin attained standard in 2016).
	2007 Ozone Plan	Attainment of 1997 federal 8-hour ozone standard for all areas of the Air Basin no later than 2023.
	2016 Ozone Plan	Attainment of 2008 federal 8-hour ozone standard for all areas of the Air Basin by end of 2031.
Particulate Matter	2007 PM_{10} Maintenance Plan and Request for Redesignation	Continued attainment of federal PM_{10} standard met by the Air Basin.
	2012 $PM_{2.5}$ Plan	Attainment of 2006 federal $PM_{2.5}$ standard, estimated to occur in 2019.
	2015 $PM_{2.5}$ Plan for the 1997 $PM_{2.5}$ Standard	Attainment of 1997 federal annual and 24-hour $PM_{2.5}$ standards by end of 2020.
	2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard	Attainment of 2012 federal $PM_{2.5}$ standard, requested deadline of 2025.
	2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards	Consolidates previous $PM_{2.5}$ plans into a single plan that addresses attainment of the various $PM_{2.5}$ standards.

The San Joaquin Valley will not be able to attain stringent health-based federal air quality standards without significant reductions in emissions from heavy heavy-duty trucks, the single largest source of NO_x emissions in the San Joaquin Valley. The District's 2018 $PM_{2.5}$ Plan includes significant new reductions from heavy-duty trucks, including emissions reductions by 2023 through the implementation of the ARB's Statewide Truck and Bus Regulation, which requires truck fleets operating in California to meet the 2010 0.2 grams per brake horsepower-hour (g/bhp-hr) NO_x standard by 2023. Additionally, to meet the federal air quality standards by the 2020 to 2024 attainment deadlines, the 2018 $PM_{2.5}$ Plan relies on a significant and immediate transition of heavy-duty truck fleets to

zero or near-zero emissions technologies, including the near-zero truck standard of 0.02 g/bhp-hr NO_x established by the ARB (SJVAPCD 2018).

SJVAPCD Rules and Regulations

SJVAPCD has adopted several regulations that are applicable to the project. These regulations are summarized below.

Regulation VIII (Fugitive Dust PM_{10} Prohibitions)

Rules 8011-8081 which are, together, Regulation VIII, are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

Rule 4101 (Visible Emissions)

Rule 4101 prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.

Rule 4601 (Architectural Coatings)

Rule 4601 limits emissions of volatile organic compounds from architectural coatings by specifying storage, clean up and labeling requirements.

Rule 9410 (Employer Based Trip Reduction)

The purpose of Rule 9410 is to reduce vehicle miles traveled (VMT) by private vehicles used by employees to commute to and from their worksites, which in turn would reduce emissions of NO_x, volatile organic compounds (a component of ozone), and particulate matter. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate participation in the development of an ETRIP by providing information to its employees explaining the requirements and applicability of this rule. A SJVAPCD staff report indicates that a comprehensive trip program similar to ETRIP typically reduces peak-hour automobile trips by 5-20%, and more if supported by regional transportation demand management strategies.

Under Rule 9410, employers shall collect information on the modes of transportation used for each eligible employee's commutes both to and from work for every day of the commute verification period, as defined by using either the mandatory commute verification method or a representative survey method. An ETRIP for each worksite must be submitted to the SJVAPCD, and the ETRIP must be updated annually. Annual reporting includes the results of the commute verification for the previous calendar year, along with the measures implemented and, if necessary, any updates to the ETRIP.

Rule 9510 (Indirect Source Review)

Rule 9510, also known as the Indirect Source Rule, is intended to reduce or mitigate emissions of NO_x and PM_{10} from new development in the SJVAPCD including construction and operational emissions. This rule requires specific percentage reductions in estimated on-site construction and operation emissions, and/or payment of off-site mitigation fees for required reductions that cannot be met on the project site. Construction emissions of NO_x and PM_{10} exhaust must be reduced by 20% and 45%, respectively. Operational emissions of NO_x and PM_{10} must be reduced by 33.3% and 50%, respectively. Rule 9510 applies to light industrial development projects of 25,000 square feet and larger, so the project would be subject to this rule.

Voluntary Emission Reduction Agreement

A Voluntary Emission Reduction Agreement (VERA) is a voluntary contractual agreement between the SJVAPCD and a project developer. Under a VERA, a project proponent agrees to mitigate project-specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-specific regional impacts on air quality can be fully mitigated. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new and more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved by completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-specific regional emissions have been mitigated to a less-than-significant level. The feasibility of adopting and implementing a VERA is determined between the District and the project proponent.

Health Risk Assessment

The SJVAPCD recommends that projects that could emit substantial amounts of carcinogens conduct a Health Risk Assessment if there are nearby sensitive receptors that could be exposed to carcinogenic emissions. To determine if a Health Risk Assessment would be necessary, a "facility prioritization" is conducted on all sources of potential toxic emissions. If a project has a prioritization score of 10 or less, then the project is considered not to exceed the SJVAPCD significance threshold for health impacts and a Health Risk Assessment would not be required. As noted, diesel particulate matter is a TAC that would be generated by the project. The proposed project had a facility prioritization score that exceeded the significance threshold; therefore, a Health Risk Assessment was conducted for this project. Appendix C contains a copy of the project Health Risk Assessment, prepared by Environmental Permitting Specialists.

Ambient Air Quality Analysis

An Ambient Air Quality Analysis uses air dispersion modeling to determine if emissions from a project will cause or contribute to a violation of the ambient air quality standards. The SJVAPCD recommends that an Ambient Air Quality Analysis be performed for a project if emissions exceed 100 pounds per day of any pollutant. If an analysis is performed, it should include emissions from both project-specific permitted and non-permitted equipment and activities. The SJVAPCD recommends consultation with its staff to determine the appropriate model and input data to use in the analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on air quality if it 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 non-attainment under an applicable federal or state ambient air quality standard [see Chapter 18.0, Cumulative Impacts, for an analysis of potential cumulative air quality impacts],
- Expose sensitive receptors to substantial pollutant concentrations, or
- Result in other emissions, such as those leading to odors, adversely affecting a substantial number of people.

CEQA Guidelines Appendix G states that, where available, significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make significance determinations. In 2015, the SJVAPCD adopted a revised Guide for Assessing and Mitigating Air Quality Impacts, which defines methodology and thresholds of significance for the assessment of air quality impacts for projects within SJVAPCD's jurisdiction, along with mitigation measures for identified impacts.

Table 6-4 shows the significance thresholds established by SJVAPCD for projects, as set forth in the Guide for Assessing and Mitigating Air Quality Impacts. The SJVAPCD's thresholds of significance for criteria pollutants are applied to evaluate regional impacts of project-specific emissions of air pollutants. The SJVAPCD significance thresholds are based on offset thresholds established under SJVAPCD Rule 2201 - New Source Review. Rule 2201 is a major component of the District's attainment strategy as it relates to growth and applies to new and modified stationary sources of air pollution. Under Rule 2201, all new permitted sources with emission increases exceeding two pounds per day, for any criteria pollutant is required to implement Best Available Control Technology. Furthermore, all permitted sources emitting more than the Rule 2201 offset thresholds for

any criteria pollutant must offset all emission increases that exceed threshold levels. The SJVAPCD's attainment plans, developed to meet air quality standards designed in part to protect human health, demonstrate that project-specific emissions below the offset thresholds will have a less-than-significant impact on air quality (SJVAPCD 2015a).

TABLE 6-4
SJVAPCD SIGNIFICANCE THRESHOLDS AND
PROJECT AIR POLLUTANT EMISSIONS

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
SJVAPCD Significance Thresholds[1]	**10**	**10**	**100**	**27**	**15**	**15**
Construction Emissions[2]	5.32	7.30	6.47	0.04	2.18	0.63
Above Threshold?	*No*	*No*	*No*	*No*	*No*	*No*
Operational Emissions[3]	8.76	**22.14**	33.87	0.21	14.31	4.05
Above Threshold?	*No*	***Yes***	*No*	*No*	*No*	*No*
With implementation of Rule 9510	-	**14.77**	-	-	7.15	-

Bold indicates emissions that exceed SJVAPCD significance threshold.
[1] Applicable to both construction and operational emissions.
[2] Maximum emissions in a calendar year.
[3] Tons per year under mitigated conditions (see Chapter 9.0, Greenhouse Gas Emissions).
Notes: ROG – reactive organic gases; NO_x – nitrogen oxide; CO – carbon monoxide; SO_x – sulfur oxide; PM_{10} – particulate matter 10 microns in diameter; $PM_{2.5}$ – particulate matter 2.5 microns in diameter.
Sources: CalEEMod Version 2016.3.2, SJVAPCD 2015a.

The project's construction and operational emissions were calculated using the California Emissions Estimator Model (CalEEMod) computer program, a modeling program recommended by SJVAPCD. The CalEEMod results are shown in Appendix C of this report and summarized in Table 6-4. Construction emissions are the maximum estimated for a calendar year during the construction period that extends approximately 30 months from 2022 to 2025, while operational emissions are estimates of ongoing annual emissions from the proposed development.

Impact AIR-1: Air Quality Plans and Standards – Construction Emissions

As indicated in Table 6-4, project construction air pollutant emissions would be below the significance thresholds adopted by the SJVAPCD for the proposed project. Project-specific emissions below SJVAPCD significance thresholds would not interfere with attainment plans that would bring SJVAPCD into consistency with national and State ambient air quality standards. Based on this, construction impacts of the proposed project regarding consistency with the applicable air quality plans would be less than significant.

Project construction would be subject to Rule 9510, which as noted above requires construction emission reductions of NO_x and PM_{10} exhaust by 20% and 45%,

respectively. The SJVAPCD will be notified of impending project construction as a part of the required filing of an application for coverage under Rule 9510. Rule 9510 is a routinely applied regulatory program that is part of the City's development review process and is routinely reflected in conditions of approval for projects.

Dust emissions would be reduced through the required implementation of SJVAPCD Regulation VIII, enforcement of which is the responsibility of the SJVAPCD. Conformance with plans and specifications is monitoring by City building inspectors. Regulation VIII contains the following dust emission control measures:

- Air emissions related to the project shall be limited to 20% opacity (opaqueness, lack of transparency) or less, as defined in SJVAPCD Rule 8011. The dust control measures specified below shall be applied as required to maintain the Visible Dust Emissions standard.

- The contractor shall pre-water all land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and phase earthmoving.

- The contractor shall apply water, chemical/organic stabilizer/suppressant, or vegetative ground cover to all disturbed areas, including unpaved roads, throughout the period of soil disturbance.

- The contractor shall restrict vehicular access to the disturbance area during periods of inactivity.

- The contractor shall apply water or chemical/organic stabilizers/suppressants, construct wind barriers and/or cover exposed potentially dust-generating materials.

- When materials are transported off-site, the contractor shall stabilize and cover all materials to be transported and maintain six inches of freeboard space from the top of the container.

- The contractor shall remove carryout and trackout of soil materials daily unless it extends more than 50 feet from site; carryout and trackout extending more than 50 feet from the site shall be removed immediately. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden. If the project would involve more than 150 construction vehicle trips per day onto the public street, additional restrictions specified in Section 5.8 of SJVAPCD Rule 8041 would apply.

Conformance with SJVAPCD dust control standards will also be facilitated by the City by the incorporation of dust control requirements in project conditions of approval. Dust control provisions are also routinely included in site improvement plans and specifications.

Chapter 3.0, Project Description, notes that the project would be bound by a condition of approval to implement the Additional Air Quality Improvement Measures shown in

Appendix B. These measures, based on recommendations from the California Air Resources Board, the San Joaquin Valley Air Pollution Control District, and the California Department of Justice, would further reduce the potential construction air quality impacts of the project, which have been found to be less than significant, as described above.

With the implementation of Rule 9510 and the Additional Air Quality Improvement Measures, project construction emissions would be further reduced from the emissions predicted by CalEEMod. Since these emissions are considered less than significant without these measures, based on the SJVAPCD significance thresholds, construction emissions would have impacts that are less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact AIR-2: Air Quality Plans and Standards – Operational Emissions

As indicated in Table 6-4, estimated annual project operational emissions would be below SJVAPCD significance thresholds, except for NO_x. The operational emissions estimates take into consideration project features that would reduce such emissions (e.g., implementation of SJVAPCD Rule 9410 trip reduction program, water conservation and waste reduction requirements). Project operational emissions would not exceed 100 pounds per day for any pollutant; therefore, an Ambient Air Quality Analysis was not conducted for project emissions.

SJVAPCD Rule 9510, a routinely applied component of the City's development review process, requires development projects to reduce operational NO_x emissions by 33.3%. Application of the rule to the proposed project would reduce the estimated NO_x operational emissions to approximately 14.77 tons per year, as shown in Table 6-4. This figure remains above the SJVAPCD significance threshold for NO_x.

As discussed under Construction Emissions above, the project would implement Additional Air Quality Improvement Measures, listed in Appendix B. These include measures applicable to project operations, including truck and light vehicle traffic. While the reductions resulting from these measures cannot be quantified, the measures are expected to reduce the project's operational air pollutant emissions predicted by CalEEMod. In addition, as described above, trucks that would be used in proposed warehouse activities would be required to comply with the Advanced Clean Truck Regulation, which would reduce both NO_x and $PM_{2.5}$ emissions from this source. However, even with implementation of these measures, it cannot be stated with certainty that NO_x emissions would be reduced to an amount below its SJVAPCD significance threshold.

The GPEIR analyzed the environmental impacts of development as set forth in the Stockton General Plan 2040, adopted in 2018. Emissions from development pursuant to the General Plan would exceed the SJVAPCD regional significance thresholds and would affect compliance with adopted Air Quality Management Plans. The General Plan

contains numerous policies and actions that would contribute to minimizing long-term emissions, and various SJVAPCD rules and regulations would reduce emissions from development projects. Additional contributions would be made by GPEIR Mitigation Measures AQ-1 through AQ-5, which are as follows:

AQ-1: Implement Mitigation Measure AQ-3 to further reduce long-term criteria air pollutant emissions.

AQ-2: Prior to issuance of any construction permits for development projects subject to California Environmental Quality Act (CEQA) review (i.e., non-exempt projects), development project applicants shall prepare and submit to the City of Stockton Planning and Engineering Division a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. [The mitigation measure goes on to specify the type of analysis to occur depending on the size of the project and the mitigation measures recommended to reduce impacts.]

AQ-3: Prior to discretionary approval by the City of Stockton for development projects subject to California Environmental Quality Act (CEQA) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project operation phase-related air quality impacts to the City of Stockton Planning and Engineering Division for review and approval. [The mitigation measure goes on to describe the requirements of the assessment, including suggested mitigation measures if necessary.]

AQ-4a: Implement Mitigation Measures AQ-2 and AQ-3 to further reduce construction and operation-related criteria air pollutant emissions.

AQ-4b: Prior to discretionary approval, applicants for development projects that are subject to the California Environmental Quality Act (CEQA) shall assess their projects to the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Rule 9510 Applicability Thresholds as follows: [The thresholds are listed here]. Applicants for development projects subject to CEQA that do not meet the SJVAPCD Rule 9510 Applicability Thresholds shall assess whether project-related construction and operational emissions exceed the SJVAPCD 100 pounds per day ambient air quality screening threshold. [The mitigation measure goes on to describe the requirement for an ambient air quality analysis, including a description of mitigation measures if necessary.]

AQ-5: Prior to discretionary project approval, applicants for industrial or warehousing land uses in addition to commercial land uses that would generate substantial diesel truck travel (i.e., 100 diesel trucks per day or 40 or more trucks with diesel-powered transport refrigeration units per day based on the California Air Resources Board recommendations for siting new sensitive land uses), shall contact the San Joaquin Valley Air Pollution Control District (SJVAPCD) or the City of Stockton in conjunction with the SJVAPCD to determine the appropriate level of health risk assessment (HRA) required. If preparation of an HRA is required, all

HRAs shall be submitted to the City of Stockton and the SJVAPCD for evaluation. [The mitigation measure goes on to describe the required contents of an HRA.]

Nevertheless, the GPEIR concluded that impacts would remain significant and unavoidable, even with implementation of these policies, actions, and mitigation measures. In accordance with CEQA, a Statement of Overriding Considerations was adopted concurrently with certification of the GPEIR.

The proposed project is consistent with the land use designations set forth in the Stockton General Plan 2040. As such, the project does not have any air quality impacts not otherwise analyzed in the GPEIR. However, it is not certain that application of SJVAPCD rules and Additional Air Quality Improvement Measures, which are considered feasible mitigation measures, would reduce NO_x emissions below the SJVAPCD significance threshold. Therefore, operational impacts of the proposed project regarding consistency with the applicable air quality plans are considered significant and unavoidable.

Level of Significance: Significant

Mitigation Measures: None feasible

Significance after Mitigation: Significant and unavoidable

Impact AIR-3: Exposure of Sensitive Receptors to Criteria Pollutants

"Sensitive receptors" refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to spend time also may be called sensitive receptors; these include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (SJVAPCD 2015a). The nearest sensitive receptors to the project site are three rural residences adjacent to and east of the project site, and numerous rural residences to the west along Clark Drive and Marfargoa Road.

As indicated in Table 6-4, the proposed project would have construction emissions that are below the SJVAPCD significance thresholds. Project construction may generate localized dust emissions at levels above existing ambient conditions, which is of concern if sensitive receptors are near the project site. Implementation of SJVAPCD Regulation VIII would reduce the amount of fugitive dust emissions released into the air, thereby reducing potential exposure of these residences. In particular, Rule 8021, which is part of Regulation VIII, sets forth explicit requirements for fugitive dust emission control during construction and other earthmoving activities. Table 6-4 also indicates that project operational emissions would be below SJVAPCD significance thresholds with application of SJVAPCD Rule 9510. Based on these thresholds, project emissions would not have the potential to affect sensitive receptors.

Health Impacts of Pollutant Emissions

In 2018, the California Supreme Court decided *Sierra Club v. County of Fresno*, also known as the Friant Ranch case. In its opinion, the court stated that an EIR prepared for a community plan update and specific plan inadequately described air quality impacts in part because, although it did explain the general health impacts of pollutants, it did not explain the specific impacts the project's emissions would have on health. A brief filed in the case by the SJVAPCD, along with a brief filed jointly by the California Association of Environmental Professionals and the American Planning Association California Chapter, explained that the current state of air quality modeling does not allow for assessing the specific impacts of a project's air quality emissions on human health in an area. The joint brief noted that the Court of Appeals opinion in the Friant Ranch case focused on regional concentrations of pollutants, then stated:

> "The volumes of air contained in a regional air basin are immense, and even the largest project's emissions are the proverbial 'drop in the bucket.' The situation is further complicated by the fact that background concentrations of regional pollutants are not uniform either temporally or geographically throughout an air basin but are constantly fluctuating based upon meteorology and other environmental factors.
>
> Under these circumstances, an analysis attempting to take "tons per year" regional mass emissions data and directly translate that into precise pollutant concentrations, and hence project-specific health effects, would not be practical or meaningful." (AEP-APA 2015)

In its brief, the SJVAPCD made the following observations:

> "Although these levels [of project emissions] well exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration of ozone and PM.
>
> Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level." (SJVAPCD 2015b)

The California Supreme Court stated in its Friant Ranch opinion that "if it is not scientifically possible to do more than has already been done to connect air quality effects with potential human health impacts, the EIR itself must explain why, in a manner reasonably calculated to inform the public of the scope of what is and is not yet known about the Project's impacts." Based upon the information presented above, a specific connection between the project's emissions and health impacts cannot be reasonably drawn. Generalized health impacts of criteria pollutants for which the Air Basin currently is in nonattainment status are discussed in the Environmental Setting section above. It

should be noted that, as discussed earlier, the SJVAPCD significance thresholds were developed in part to ensure attainment of primary federal ambient air quality standards, which were designed to protect human health.

Localized Carbon Monoxide Concentrations

CO in high concentrations would have adverse health impacts, as previously described. A CO "hotspot" is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots have the potential to expose sensitive receptors to emissions that violate state and/or federal CO standard even if the broader Basin is in attainment for federal and state levels. A project would create no violations of the CO standards if neither of the following criteria are met (SJVAPCD 2015a):

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or

- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity (See Chapter 16.0, Transportation, for an explanation of LOS).

As noted in Chapter 16.0, Transportation, a traffic study for the project was conducted, in which potential impacts on LOS at 15 intersections and proposed driveways were evaluated under Existing Plus Approved Projects (EPAP) Plus Project conditions. Under EPAP Plus Project conditions, all the intersections would maintain an acceptable LOS except for three: Arch-Airport Road/Qantas Lane, Arch-Airport Road/SR 99, and Mariposa Road/Carpenter Road. Land adjacent to these intersections are developed with commercial uses; no sensitive receptors as defined above are near any of these intersections. A sensitive receptor (residence) is within approximately 50 feet of the Mariposa Road/Carpenter Road intersection; however, recommended intersection improvements would lead to operation at a LOS that would not generate unhealthful CO emissions. This recommendation is presented as mitigation below, which would reduce potential impacts related to CO emissions to a level that would be less than significant.

Impacts on Disadvantaged Communities

Chapter 13.0, Land Use, and Chapter 20.0, Other CEQA Issues, discuss environmental justice and potential project impacts on disadvantaged communities. The State of California has recently become more active in promoting environmental justice in land use and environmental planning. More specifically, warehouse projects have come under scrutiny from State agencies for their potential air quality impacts on disadvantaged communities. The project site is within an area identified as the Mariposa Road Disadvantaged Urban Community (see Chapter 13.0, Land Use).

The project would implement a list of Additional Air Quality Improvement Measures designed to reduce air quality emissions associated with warehouse projects. These measures are listed in Appendix B of this EIR. The Department of Justice measures, which are considered feasible and relevant, would be incorporated as part of the project.

These measures, along with compliance with SJVAPCD rules and regulations, would reduce adverse air quality impacts on the disadvantaged community in the area.

However, as discussed under Impact AIR-2, operational emissions of NO_x would be above its SJVAPCD significance threshold. As described in the Environmental Setting above, high concentrations of ground-level ozone could have substantial health impacts. While implementation of SJVAPCD rules and the Additional Air Quality Improvement Measures in Appendix B of this EIR would reduce NO_x emissions, thereby likely reducing the possible generation of ground-level ozone, the resulting reduction in health impacts on the disadvantaged community cannot be precisely determined, though it is expected that there would be reduced health impacts. As such, the significance of health impacts after implementation of these rules and measures likewise cannot be determined. Therefore, although NO_x and other pollutant emissions would be reduced, impacts on the nearby disadvantaged community are considered significant and unavoidable for CEQA purposes.

Level of Significance: Significant

Mitigation Measures:

AIR-1: The project applicant, to reduce carbon monoxide concentrations to an acceptable level, shall contribute fair-share costs to an improvement on the Mariposa Road and Carpenter Road intersection that would widen the northeast-bound Carpenter Road approach to include an exclusive northeast-bound-to northwest-bound left-turn lane, and a combined through/right-turn lane. (See also Transportation Improvement Measure TRANS-2 in Chapter 16.0, Transportation.)

Significance after Mitigation: Significant and unavoidable

Impact AIR-4: Exposure of Sensitive Receptors to Toxic Air Contaminants

Project construction would likely use construction equipment that would emit diesel PM, which is classified as a TAC. The CalEEMod run estimated that project construction would generate a maximum of approximately 0.15 tons per year of exhaust PM_{10} emissions, which include diesel PM (see Appendix C). Rural residences near the project site could be exposed to these emissions. As with project construction, the TAC that would most likely be emitted from project operations would be diesel PM, mainly from truck traffic. The CalEEMod run estimated that project operations would generate approximately 0.18 tons per year of exhaust PM_{10} emissions, including diesel PM.

Impacts of these emissions were analyzed in a Health Risk Assessment conducted for the project (see Appendix C). The Health Risk Assessment evaluated both short-term construction and long-term operational emissions of TACs for this project. The main toxic air contaminant associated with construction is diesel exhaust consisting of fine particulate matter from construction equipment. Long-term toxic emissions are associated with onsite emissions from truck idling and on-site travel of light-duty vehicles and

heavy-duty trucks and offsite emissions associated with vehicle travel to and from the project site.

The results of the Health Risk Assessment show that the cancer risk from construction activities varies between 3.9 to less than 0.1 cancers per million, depending on location, with the maximum cancer risk of 3.93 cancers per million at the residence adjacent to the proposed project site entrance. The results also show that the maximum residential cancer risk from project operations is 10.49 cancers per million at a residence along East Mariposa Road. The significance threshold for cancer risk, as established by SJVAPCD, is 20 cancers per million. Therefore, the cancer risk from project construction and operations on nearby sensitive receptors is below the significance threshold. Non-cancer health risks were also assessed, and all such risks were below significance thresholds (see Table 4-1 of the Health Risk Assessment in Appendix C).

As has been noted, the project proposes to incorporate Additional Air Quality Improvement Measures (see Appendix B) to reduce air quality impacts. For construction emissions, such actions would include requiring electric off-road construction equipment, limiting the use time of off-road diesel-powered equipment, and the idling of heavy equipment. For operational emissions, actions would include requiring electric on-site equipment, requiring tenants to use zero-emission light- and medium-duty vehicles, and posting signs that identify idling restrictions. Implementation of these measures would reduce the amount of diesel PM generated by the project, making such impacts less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact AIR-5: Odors and Other Emissions

Odors are more of a nuisance than an environmental hazard. Nevertheless, the Environmental Checklist in CEQA Guidelines Appendix G regards objectionable odors as a potentially significant environmental impact. Some industrial raw materials, processes, and products can emit odors that would be considered objectionable, sometimes intensely. Examples include waste disposal and recycling, chemical production, and wastewater treatment. The Guide for Assessing and Mitigating Air Quality Impacts states that a project should be evaluated to determine the likelihood that it would result in nuisance odors (SJVAPCD 2015a).

Proposed project development is not expected to generate significant odors, other than from vehicle emissions. Proposed warehousing and distribution uses would not involve livestock, food processing, handling of organic waste, or handling of other odor-generating industrial activity. Vehicle emissions, as indicated in the CalEEMod run, would be minimal. These emissions would be localized and would dissipate rapidly outside the project site. As noted above, the nearest sensitive receptors would be the rural residences to the east, and these residences would be unlikely to be exposed to substantial odors from project operations. Project impacts related to odors and other emissions are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

7.0 BIOLOGICAL RESOURCES

Information for this section was obtained primarily from a Biological Assessment prepared by Moore Biological Consultants. Appendix D contains the Moore report, which was based upon a search of the California Natural Diversity Database (CNDDB) managed by the California Department of Fish and Wildlife (CDFW), a review of information from the U.S. Fish and Wildlife Service (USFWS), and field surveys of the project site conducted on five days from August 2020 to April 2021.

ENVIRONMENTAL SETTING

The project site is essentially level, other than remnant fish ponds at the site center, and it is at an elevation of approximately 35 feet above mean sea level. The northern part of the project site contains a mature walnut orchard. The remainder of the site has areas of leveled fallow fields, the remnant fish ponds, and a few home sites.

Land uses in this portion of San Joaquin County are primarily agricultural and rural residential. Lands south of the site have been developed for industrial use within the last several years. Mariposa Road borders the northeast part of the site, and lands east of the site are open agricultural and rural residential parcels.

Vegetation

Table 1 of the biological assessment lists the plant species observed on the project site and their scientific names. As noted, the northern portion of the project site consists of a mature walnut orchard. Vegetation within the grassland portions of the site is best described as ruderal annual grassland with highly disturbed soils. Dominant grasses on the site include oats, ripgut brome, and foxtail barley. Other grassland species such as black mustard, yellow star thistle, field bindweed, prickly lettuce, filaree, and common mallow are intermixed with the grasses.

Besides the walnut orchard, there are several trees on the project site, primarily along the corridors of North Littlejohns Creek and a tributary ditch in the southern portion of the project site. Valley oak is the dominant tree along the creek and ditch, which occurs along with pines, Fremont's cottonwood, and blue gum. There are also a few trees associated with the residences and structures in the southern part of the site, a few oaks along the east fence line, and a cluster of trees in the east-central part of the site near the old fish ponds. Dominant trees within these areas include blue gum, black walnut, stonefruit and nut trees, and common ornamental landscape trees and shrubs.

Approximately 0.9 acres of seasonal wetlands have been identified in the southern part of the project site. These contain hydrophytic plant species common to seasonal wetland habitats. Seaside barley, bearded popcorn flower, curly dock, annual rabbit's-foot grass,

and Pacific meadow foxtail are the dominant hydrophytes in the seasonal wetlands. The beds of North Littlejohns Creek and the ditch support a few of these same hydrophytes, along with tall sedge and pennyroyal. No blue elderberry shrubs that provide habitat for the valley elderberry longhorn beetle were observed on or adjacent to the project site.

Wildlife

Table 2 of the biological assessment lists wildlife species documented on the project site. Several bird species were observed during the field surveys, all of which are common species found in agricultural and riparian areas of San Joaquin County. Turkey vulture, American kestrel, mourning dove, northern mockingbird, and white-crowned sparrow are representative of the avian species observed in the site. There are several potential nest trees on and near the project site that are suitable for nesting raptors and other protected migratory birds. A raptor stick nest was observed in a tree along the tributary ditch, and another raptor nest was observed in a tree just off site to the south. While Swainson's hawk and white-tailed kite were observed soaring over the south part of the site during the April 2021 survey, neither of these nests appeared to be occupied by raptors during any of the field surveys. Smaller birds, such as songbirds, likely nest within the small trees and grasslands on the project site, particularly within trees along North Littlejohns Creek and the ditch.

A limited variety of mammals common to agricultural areas are likely occur in the project site. A coyote and a red fox were observed in an adjacent parcel during one of the fields surveys. Tracks from raccoon, sign of Botta's pocket gopher, and California ground squirrels and their burrows were also observed. Other common species such as black-tailed hare, striped skunk, desert cottontail, and Virginia opossum are expected to occur occasionally on the project site.

Due to lack of suitable habitat, few amphibians and reptiles are expected to use habitats on the project site. Western fence lizard was the only amphibian or reptile observed within the site. Other common species, including Pacific chorus frog and western terrestrial garter snake may occur occasionally on the site. Because North Littlejohns Creek and the ditch are dry for much of the year, neither provides suitable habitat for fish.

Waters of the U.S. and Wetlands

Waters of the U.S. include navigable waterways, their tributaries, and adjacent wetlands. More specifically, Waters of the U.S. encompass territorial seas, tidal waters, and non-tidal waters. Other jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages; lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. State and federal agencies regulate these habitats (see below). The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the "ordinary highwater mark", which is established by physical characteristics such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris.

Potentially jurisdictional Waters of the U.S. and/or wetlands on the project site include North Littlejohns Creek, a ditch that discharges into the creek, and five seasonal wetlands in the field just north of both streams (Figure 7-1). North Littlejohns Creek is an intermittent stream that originates in the foothills to the east. The creek is mapped as "Freshwater Emergent Wetland" in the National Wetlands Inventory maintained by the USFWS. The ditch, north of the main stem of the creek before its confluence, does not extend beyond the eastern boundary of the project site. It also contains intermittent flow. The ditch is mapped as a "Riverine" feature in the National Wetlands Inventory maintained by the USFWS. Both streams have well-defined beds and banks, and their beds support a mixture of upland and wetland species.

The five seasonal wetlands encompass approximately 0.9 acres. The largest of these, the crescent-shaped wetland in Figure 7-1, is the only one depicted on the National Wetlands Inventory map; it is classified as "Freshwater Emergent Wetland." The seasonal wetlands are best described as highly disturbed, as they have been subject to periodic disking in the past and most or all are currently subject to extensive livestock grazing and trampling. Additionally, the easternmost wetland contained tree limbs and trash at the time of the field surveys. Despite high levels of disturbance, the wetlands contain heavily cracked soils and support hydrophytic species. The wetlands also have wetland hydrology, as evidenced by ponded water in wet-season aerial photographs.

There is a complex of shallow rectangular basins, approximately five feet deep, in the central portion of the site. They appear to be remnants of an aquaculture facility that has been closed for several years. There is also a small basin in the northwestern corner of the site that appears to be related to farming activities. These basin areas and other fallow parts of the site are vegetated in upland grasses and weeds that have been highly disturbed from periodic mowing and disking, as well as extensive livestock trampling. None of these basins meets the technical and regulatory criteria of jurisdictional Waters of the U.S. or wetlands.

Special-Status Species

Special-status species are plants and animals that are legally protected under the federal and California Endangered Species Acts or other regulations (see below). Special-status species also include other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Special-status plants are those which are designated rare, threatened, or endangered and candidate species for listing by the USFWS, along with considered rare or endangered under the conditions of CEQA Guidelines Section 15380, such as plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society. They also may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on California Native Plant Society List 3.

A search of the CNDDB was undertaken to identify special-status species that have been previously documented in the greater project vicinity or have the potential to occur based on presence of suitable habitat and geographical distribution. Table 7-1 shows identified special-status species in the project vicinity.

TABLE 7-1
SPECIAL-STATUS SPECIES DOCUMENTED OR POTENTIALLY OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Fed. Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence
Plants						
Alkali milk-vetch	*Astragalus tener var. tener*	None	None	1B	Alkali vernal pools.	None: No Alkali milk-vetch was observed on the site. The project site does not provide suitable habitat; there are no vernal pools on the project site.
Heartscale	*Atriplex cordulata var. cordulata*	None	None	1B	Valley and foothill grassland, chenopod scrub.	Unlikely: No heartscale was observed on the site. The grassland on the project site is highly disturbed and does not provide suitable habitat.
Big tarplant	*Blepharizonia plumosa*	None	None	1B	Valley and foothill grassland.	Unlikely: No big tarplant was observed on the site. The grassland on the project site is highly disturbed and does not provide suitable habitat.
Watershield	*Brasenia schreberi*	None	None	2	Marshes and swamps.	Unlikely: No watershield was observed on the site. There are no marshes or swamps on the project site to support this species.
Palmate-bracted salty bird's-beak	*Chloropyron palmatum*	E	E	1B	Chenopod scrub, valley and foothill grassland.	Unlikely: No palmate bracted salty bird's-beak was observed on the site. The project site does not provide suitable habitat.
Slough thistle	*Cirsium crassicaule*	None	None	1B	Chenopod scrub, marshes and swamps, and riparian scrub.	Unlikely: No slough thistle was observed on the site. The project site does not provide suitable habitat.
Recurved larkspur	*Delphinium recurvatum*	None	None	1B	Chenopod scrub in alkaline soils.	Unlikely: No recurved larkspur was observed on the site. The project

Common Name	Scientific Name	Fed. Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence
						site does not provide suitable habitat.
Delta button celery	*Eryngium racemosum*	None	E	1B	Riparian scrub in seasonally inundated floodplain with clay substrates.	Unlikely: No Delta button celery was observed on the site. The project site does not provide suitable habitat.
San Joaquin spearscale	*Extriplex joaquinana*	None	None	1B	Chenopod scrub, alkali meadow, valley and foothill grassland.	Unlikely: No San Joaquin spearscale was observed on the site. The project site does not provide suitable habitat.
Woolly rose mallow	*Hibiscus lasiocarpos var. occidentalis*	None	None	2	Freshwater marshes and swamps.	Unlikely: No woolly rose mallow was observed on the site. The project site does not provide suitable habitat.
Delta tule pea	*Lathyrus jepsonii var. jepsonii*	None	None	1B	Marshes and swamps.	Unlikely: No Delta tule pea was observed on the site. The project site does not provide suitable habitat.
Sanford's arrowhead	*Sagittaria sanfordii*	None	None	1B	Standing or slow-moving freshwater ponds, marshes, and ditches.	Unlikely: No Sanford's arrowhead was observed on the site. The project site does not provide suitable habitat.
Suisun marsh aster	*Symphotrichum lentum*	None	None	1B	Marshes and swamps.	Unlikely: No Suisun marsh aster was observed on the site. The project site does not provide suitable habitat.
Wright's trichocoronis	*Trichocoronis wrightii var. wrightii*	None	None	2	Marshes and swamps, riparian forest, meadows and seeps and vernal pools.	Unlikely: No Wright's trichocoronis was observed on the site. The project site does not provide suitable habitat.
Saline clover	*Trifolium hydrophilum*	None	None	1B	Marshes and swamps, mesic (wet) areas in valley and foothill grassland, vernal pools.	Unlikely: No saline clover was observed on the site. The project site does not provide suitable habitat.
Birds						
Burrowing owl	*Athene cunicularia*	None	SC	N/A	Open, dry annual or perennial grasslands, deserts and scrublands	Unlikely: No burrowing owl was observed on the site. Portions of the project site provide marginally suitable

Common Name	Scientific Name	Fed. Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence
					characterized by low-growing vegetation.	habitat. However, the grassland in the site is highly disturbed, and other fields within the site are cultivated. A few ground squirrel burrows were observed during the surveys, but none of the burrows showed signs of past or current occupancy.
Swainson's hawk	*Buteo swainsoni*	None	T	N/A	Breeds in stands of tall trees in open areas. Requires adjacent suitable foraging habitats such as grasslands or alfalfa fields supporting rodents.	High: Swainson's hawks were observed foraging on the site, and a raptor stick nest was observed in a tree along the ditch. The project site provides suitable foraging and nesting habitat.
Tricolored blackbird	*Agelaius tricolor*	None	CE	N/A	Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat.	Low: No tricolored blackbird was observed on the site. The project site provides marginally suitable habitat. However, there is little to no emergent wetland vegetation in North Littlejohns Creek on or near the site that could be used by nesting tricolored blackbirds.
White-tailed kite	*Elanus leucurus*	None	FP	N/A	Herbaceous lowlands with variable tree growth and dense population of voles.	Moderate: A white-tailed kite was observed flying over the site. The project site provides suitable habitat for white-tailed kite.
Loggerhead shrike	*Lanius ludovicianus*	None	SC	N/A	Annual grasslands and agricultural areas; nests in trees and shrubs.	Low: No loggerhead shrike was observed on the site. The grasslands on the site provides marginally suitable foraging habitat, and trees and shrubs in the site are suitable for nesting. However, this species is not common in the project vicinity.

Common Name	Scientific Name	Fed. Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence
Song sparrow ("Modesto" population)	*Melospiza melodia*	None	SC	N/A	Resident of brackish water marshes surrounding Suisun Bay. Inhabits cattails, tules, and tangles bordering sloughs.	Unlikely: No song sparrow was observed on the site. The project site does not provide suitable aquatic habitat for this species.
Least Bell's vireo	*Vireo bellii pusillus*	E	E	N/A	Nests in willow thickets and other shrubs, primarily in southern California riparian forests.	Unlikely: No least Bell's vireo was observed on the site. There is no suitable habitat on or near the project site, and this species is not known from the area.
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	None	SC	N/A	Brackish and freshwater marshes; usually nests in expansive patches of cattails or tules, often along borders of lakes and ponds.	Unlikely: No yellow-headed blackbird was observed on the site. The project site does not provide suitable habitat.
Mammals						
Riparian brush rabbit	*Sylvilagus bachmani riparius*	E	E	N/A	Riparian thickets in Stanislaus and southern San Joaquin Counties.	None: No riparian brush rabbit was observed on the site. The project site and adjacent areas do not provide suitable habitat. The riparian corridor along North Littlejohns Creek does not contain well-developed riparian forest vegetation; there is no expansive scrub-shrub vegetation to support this species.
Reptiles and Amphibians						
California red-legged frog	*Rana aurora draytonii*	T	SC	N/A	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Unlikely: No California red-legged frog was observed on the site. There is no suitable aquatic habitat on or near the project site. Species is presumed extinct on the floor of the Central Valley of California.
California	*Ambystoma*	T	T	N/A	Seasonal water	Unlikely: No California

Common Name	Scientific Name	Fed. Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence
tiger salamander	*californiense*				bodies without fish (i.e., vernal pools and stock ponds) and grassland/ woodland habitats with summer refugia (i.e., burrows).	tiger salamander was observed on the site. There is no suitable habitat on or near the project site. This species occurs in the transitional bands between the valley floor and foothills.
Giant garter snake	*Thamnophis gigas*	T	T	N/A	Freshwater marsh and low gradient streams; also adapted to drainage canals and irrigation ditches, primarily for dispersal or migration.	Unlikely: No giant garter snake was observed on the site. North Littlejohns Creek is intermittent and does not contain suitable habitat.
Western pond turtle	*Emys marmorata*	None	SC	N/A	Permanent or semi-permanent water bodies; require basking sites such as logs.	Unlikely: No western pond turtle was observed on the site. North Littlejohns Creek is intermittent and does not contain suitable habitat.
Western spadefoot	*Spea hammondii*	None	SC	N/A	Breeds and lays eggs in seasonal water bodies such as deep vernal pools or stock ponds.	Unlikely: No western spadefoot was observed on the site. There is no suitable aquatic habitat on the site.
Fish						
Delta smelt	*Hypomesus transpacificus*	T	E	N/A	Shallow lower Delta waterways with submersed aquatic plants and other suitable refugia.	None: No Delta smelt was observed on the site. There is no suitable aquatic habitat on the project site. Species occurs in Delta waterways.
Longfin smelt	*Spirinchus thaleichthys*	C	T	N/A	Brackish estuarine habitats.	None: No longfin smelt was observed on the site. There is no suitable aquatic habitat on the project site.
Steelhead – Central Valley DPS	*Oncorhynchus mykiss irideus pop. 11*	T	None	N/A	Riffle and pool complexes with adequate spawning substrates within Central Valley drainages.	None: No steelhead was observed on the site. There is no suitable aquatic habitat on the project site.

Common Name	Scientific Name	Fed. Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence
Invertebrates						
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	T	None	N/A	Elderberry shrubs, usually in Central Valley riparian habitats.	Unlikely: No valley elderberry longhorn beetle was observed on the site. There are no blue elderberry shrubs on or near the project site.
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	None	N/A	Vernal pools	Moderate: No vernal pool fairy shrimp was observed on the site. However, the highly disturbed seasonal wetlands in the project site could potentially support vernal pool fairy shrimp. This species is known to occur in marginal wetland environments. The site is not within designated critical habitat for vernal pool fairy shrimp
Vernal pool tadpole shrimp	*Lepidurus packardi*	E	None	N/A	Vernal pools	Unlikely: No vernal pool tadpole shrimp was observed on the site. The highly disturbed seasonal wetlands in the project site are too small and shallow to support vernal pool tadpole shrimp. The site is not within designated critical habitat for vernal pool tadpole shrimp.
Western bumble bee	*Bombus occidentalis*	None	CE	N/A	Meadows and grasslands with abundant floral resources, usually high elevations.	Unlikely: No western bumble bee was observed on the site. There is no suitable habitat in the site to support western bumble bee. The nearest occurrence of this species in the CNDDB (2021) search area is approximately 10 miles southeast of the site.

[1] T = Threatened; E = Endangered; C = Candidate.

[2] T = Threatened; E = Endangered; R = Rare; CE = Candidate for Endangered Status; SC=State of California Species of Special Concern; FP = Fully Protected Species.

[3] 1B = rare, threatened, or endangered in California and elsewhere; 2 = rare, threatened or endangered in California but more common elsewhere.

As indicated by Table 7-1, the likelihood of occurrence of listed, candidate, and other special-status species in the site is generally low. However, four special-status species were determined to have the potential to occur on the site on more than a transitory or occasional basis:

- *Swainson's Hawk.* Swainson's hawk is listed as a threatened species under the California Endangered Species Act. A migratory bird, Swainson's hawk is found in the Central Valley primarily during their breeding season, a population is known to winter in the San Joaquin Valley. The Migratory Bird Treaty Act and the California Fish and Game Code protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). A large raptor stick nest was observed in a tree along the ditch, and Swainson's hawk was observed soaring over the south part of the site during the April 2021 survey.

- *Burrowing Owl.* Burrowing owls have been designated a State Species of Concern. They are year-long residents that inhabit a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere. The primary habitat requirement of the burrowing owl is small mammal burrows for nesting, usually in abandoned ground squirrel burrows. The Migratory Bird Treaty Act and California Fish and Game Code protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Several ground squirrel burrows were observed within the project site, No sign of burrowing owl, past or present, was observed within any of the burrows within the site. However, burrowing owls are known to occur in this part of Stockton and may nest within the site in the future.

- *White-Tailed Kite.* White-tailed kite is a State Species of Concern. White-tailed kites can be found in a variety of habitats across California, including grasslands, open woodlands, riparian areas, marshes, and cultivated fields. This species may nest in trees in or near the site and may forage in grasslands in and adjacent to the site. Nesting usually commences in the early spring, and most young fledge by early-July. The Migratory Bird Treaty Act and Fish and Game Code protect white-tailed kite year-round, as well as their nests during nesting season. A white-tailed kite was observed soaring over the south part of the site during the April 2021 survey.

- *Vernal Pool Fairy Shrimp.* In 1994, USFWS listed three species of Central Valley fairy shrimp and one species of tadpole shrimp as threatened or endangered species under the federal Endangered Species Act. The vernal pool fairy shrimp was listed as threatened, while Conservancy fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp were listed as endangered. All these species occur in vernal pools and other seasonal wetland habitats throughout much of the

Central Valley. Although the five seasonal wetlands in the site are highly disturbed from past farming and extensive grazed by livestock, they provide potentially suitable habitat for vernal pool fairy shrimp, though not for the other fairy shrimp or tadpole shrimp species. Visual examinations of the soils collected from the seasonal wetlands during dry-season sampling revealed the presence of eggs belonging to the genus *Branchinecta* in the largest wetland in the site. These most likely belong to either the vernal pool fairy shrimp or the midvalley fairy shrimp, the latter an unlisted species. Efforts to hatch some of the cysts in a biological laboratory occurred during Spring 2021 in an attempt to identify the species of *Branchinecta* in the crescent-shaped wetland. These efforts were unsuccessful.

Two additional special-status species are of concern, although the presence of both these species on the project site is considered unlikely. The giant garter snake is listed as threatened under both federal and California Endangered Species Acts. Western pond turtle is a State Species of Concern. Although neither of those species were observed at the project site, pursuant to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), discussed below, the adjacent North Littlejohns Creek is considered "potential habitat" for both species.

REGULATORY FRAMEWORK

Federal Endangered Species Act

The federal Endangered Species Act protects fish and wildlife species, subspecies, or distinct population segments that are listed as endangered or threatened, along with their habitats. "Endangered" species are those that are in danger of extinction through all or a significant portion of their range, while "threatened" species are likely to become endangered in the near future. The USFWS and the National Marine Fisheries Service are responsible for implementation of the Endangered Species Act, depending on the species. Section 9 of the Endangered Species Act prohibits the "take" of any fish or wildlife species listed as endangered. "Take" is defined as an action or attempt to hunt, harm, harass, pursue, shoot, wound, capture, kill, trap, or collect a species, as well as the destruction of habitat that prevents the species' recovery.

California Endangered Species Act (CESA)

The CESA establishes State policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. It mandates that State agencies should not approve projects that jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect a species that is on the federal and State lists, compliance with the federal Endangered Species Act satisfies CESA if the CDFW determines that the federal incidental take authorization is consistent with CESA under California Fish and Game Code Section 2080.1. For projects that would result in take of only a State-listed

species, the project proponent must apply for a take permit under Fish and Game Code Section 2081(b).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the former Soviet Union. It prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter any migratory birds or their eggs, parts, or nests except as authorized under a valid permit. Executive Order 13186 directs each federal agency taking actions that have or may have a negative effect on migratory bird populations to work with USFWS to develop a memorandum of understanding that will promote the conservation of migratory bird populations.

Clean Water Act

The federal Clean Water Act is the primary federal law regulating water quality. The objective of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Waters of the U.S., including wetlands, are broadly defined in 33 Code of Federal Regulations Part 328.3(a) to include navigable waterways, their tributaries, and adjacent wetlands, as well as other waters described in the Environmental Setting portion of this chapter. Implementing the Clean Water Act is the responsibility of the EPA, but the EPA depends on other agencies, such as individual state governments and the U.S. Army Corps of Engineers (Corps), to assist in implementation.

Sections 401 and 404 of the Clean Water Act apply to activities that would impact waters in the United States, such as creeks, ponds, and wetlands. For waters subject to federal jurisdiction, a permit under Section 404 of the Clean Water Act, issued by the Corps, must be secured prior to the discharge of dredged or fill materials into these waters. Projects requiring a Section 404 permit also must obtain a Water Quality Certification in accordance with Section 401 of the Clean Water Act. For this project, the Central Valley Regional Water Quality Control Board (RWQCB) would issue the Section 401 certification.

On April 21, 2020, the EPA and the Corps issued a Final Rule on Waters of the U.S. that clarifies the limits of jurisdiction under the Clean Water Act. The Final Rule states that Waters of the U.S. encompass traditional navigable waters, including the territorial seas; tributaries that contribute perennial or intermittent flow to such waters; certain ditches; certain lakes and ponds; impoundments of otherwise jurisdictional waters; and wetlands adjacent to other jurisdictional waters. Some features that were previously defined as Waters of the U.S. are not so under the Final Rule, such as many ditches, constructed features (excavated basins), isolated waters and wetlands, and ephemeral tributaries. The Final Rule took effect on June 22, 2020.

Section 404

The Corps is responsible under Section 404 of the Clean Water Act for regulating the discharge of fill material into Waters of the U.S. and their lateral limits. The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the "ordinary high water mark" or the limit of adjacent wetlands. Any permanent extension of the limits of an existing water of the United States, whether natural or human-made, results in a similar extension of Corps jurisdiction.

In general, a permit must be obtained from the Corps before an individual project can place fill or grade in wetlands or other Waters of the U.S that are subject to Section 404. Along with general permits, the Corps has Nationwide Permits that apply to specific actions. Mitigation for such actions will be required based on the conditions of the Corps permit. The Corps is required to consult with the USFWS and/or the National Marine Fisheries Service under Section 7 of the Endangered Species Act if the action being permitted could affect federally listed species.

Section 401

Pursuant to Section 401 of the Clean Water Act, projects that require a Corps permit for discharge of dredge or fill material must also obtain a Water Quality Certification or waiver that confirms the project complies with State water quality standards, or a no-action determination, before the Corps permit becomes valid. State water quality is regulated and administered by the State Water Resources Control Board (SWRCB) through the RWQCB with jurisdiction over the project. As noted, the project site is within the jurisdiction of the Central Valley RWQCB. For the RWQCB to issue a Section 401 certification, a project must demonstrate compliance with CEQA.

Waters of the State

Under the Porter-Cologne Water Quality Control Act, "Waters of the State" fall under the jurisdiction of the SWRCB and the RWQCB with jurisdiction over the affected water. The RWQCBs are required to prepare and periodically update water quality control basin plans, which set forth water quality standards for surface water and groundwater, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards. Projects that affect Waters of the State may also be required to meet Waste Discharge Requirements set by the RWQCB. SWRCB's Resolution 2008-0026 identified a need to protect Waters of the State that are not subject to Section 404 permitting and associated Section 401 Water Quality Certification.

In April 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State (Procedures), which was finalized and became operative on May 28, 2020. The Procedures consist of four major elements: 1) a wetland definition, 2) a framework for determining if a feature that meets the wetland definition is a Water of the State, 3) wetland delineation procedures, and 4) procedures for application submittal and the review and approval of Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Central

Valley RWQCB is expected to require issuance of Waste Discharge Requirements that authorize the impacts of filling isolated wetlands that are not subject to Section 404 permitting, or in some cases granting a waiver. It should be noted that these Procedures are the subject of ongoing litigation.

CDFW Streambed Alteration Agreement

Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks or the outer edge of riparian vegetation, whichever is wider.

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

The SJMSCP is a comprehensive program for assessing and mitigating the biological impacts of converting open space or biologically sensitive lands to urban development (SJCOG 2000). It has been adopted locally by San Joaquin County, the City of Stockton, and the other incorporated cities in San Joaquin County. The SJMSCP protects 97 wildlife species and 52 vegetative communities, many of which are listed or proposed for listing under federal and State Endangered Species Acts. The SJMSCP also protects many birds covered by the Migratory Bird Treaty Act and other sensitive species that may be of concern pursuant to CEQA, or species that are included on one of the California Native Plant Society lists. The San Joaquin Council of Governments (SJCOG) implements the SJMSCP on a project-by-project basis.

For the conversion of open space to non-open space uses that affect covered plant, fish, and wildlife species, the SJMSCP provides three compensation methods: preservation of existing sensitive lands, creation of new comparable habitat on the project site, or payment of fees that would be used to secure preserve lands outside the project site. SJMSCP fees, and preservation and re-creation ratios that are required, are established based upon the type and value of the land to be converted and are revised annually to correspond with current market values. Conversion of lands of higher biological values, such as wetlands, requires higher SJMSCP fees or higher preservation and creation ratios. The SJMSCP fees are updated annually by SJCOG. Most of the site, including the ditch, is within Category C - Agricultural Habitat Open Spaces Pay Zone B. North Littlejohns Creek is within Category D - Natural Lands Habitat Pay Zone B.

In addition to fee payments, the SJMSCP identifies and requires the applicants to abide by Incidental Take Minimization Measures (ITMMs), which are protection measures that avoid direct impacts of development on special-status species. Examples of ITMMs include prescriptions for protection of Swainson’s hawk nest trees or timely tree removal, prevention of burrowing owl nesting in unoccupied burrows discovered outside the

nesting season or pre-construction surveys of nesting activity if construction will occur during the nesting season.

The participating local agencies consider a project that complies with the SJMSCP to result in biological resource impacts that are less than significant. However, a project may choose to not participate in the SJMSCP and instead may comply independently with the various statutes and regulations that apply to biological resources. Whether or not a project participates in the SJMSCP, it still would be required under CEQA to mitigate any biological resource impacts to levels that are less than significant.

City of Stockton Heritage Tree Ordinance

Stockton Municipal Code Chapter 16.130 addresses Heritage Trees, which are any valley oak, coast live oak, and interior live oak tree which has a trunk diameter of 16 inches or more, measured at 24 inches above actual grade. For trees with multiple trunks, the combined total trunk diameter shall be used for all trunks measuring 6 inches or greater measured at 24 inches above actual grade. Removal of any Heritage Tree requires a City permit, regardless of location on a property or condition of the tree, except where the condition of a Heritage Tree poses an imminent threat to public health, safety, or welfare. Heritage Trees that are removed or effectively removed must be replaced on a three-for-one basis at the discretion of the City's Community Development Director. The size of the replacement trees shall be determined by the Director based on the size of the tree that was removed, but replacements are required to be at least 15-gallon container stock and planted on the same parcel as the tree that was removed, if possible.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant 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 the CDFW or USFWS,
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS,
- Have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means,

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites,
- Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact BIO-1: Special-Status Species and Habitats

As noted, two special-status species – Swainson's hawk and white-tailed kite – were observed during field surveys at the project site. Two other special-status species – burrowing owl and vernal pool fairy shrimp – were considered species that could potentially occur on the site. The biological assessment noted that the project would likely result in the loss of foraging habitat for Swainson's hawk and potential seasonal wetland habitat for vernal pool fairy shrimp.

The project proponents intend to participate in the SJMSCP by paying the required SJMSCP fees and implementing ITMMs required by the SJCOG. ITMMs would include pre-construction surveys for nesting Swainson's hawks within 0.5 miles of the project site for construction activities between March 1 and September 15, pre-construction surveys for nesting burrowing owls within 250 feet of the project site for construction activities between February 1 through August 31, and pre-construction surveys for nesting white-tailed kites within 100 feet of the site for construction activities between February 15 and September 15. Standard measures for the vernal pool species, primarily consisting of pre-construction surveys, are expected to be included in the ITMMs. This participation would be required by implementation of the mitigation measure presented below. In addition, as described under Impact BIO-3 below, additional measures shall be taken to ensure that populations of vernal pool shrimp shall not be adversely impacted.

SJCOG has applied the SJMSCP with the assumption that certain protected species exist in habitats such as creeks and wetlands, even if biological surveys determine that their presence is unlikely. Based on past coordination with SJCOG, it is anticipated that SJCOG will assume that North Littlejohns Creek will support giant garter snake (federal and State threatened) and western pond turtle (State Species of Concern). North Littlejohns Creek and the ditch are considered potential habitat for giant garter snake, triggering an automatic "no construction" buffer extending 200 feet from the centerline of the creek. Similarly, the creek is considered potential habitat for western pond turtle, triggering an automatic "no construction" buffer extending 300 feet from the centerline of the creek. In November 2020, the project applicant requested a reduction in the buffer area along North Littlejohns Creek to 25 feet for both species, and SJCOG subsequently granted the request. As such, the project is not expected to affect potential habitat for giant garter snake or western pond habitat, neither of which were expected to occur on the project site. Nevertheless, standard take avoidance measures for these species

outlined in the SJMSCP, primarily consisting of pre-construction surveys, are expected to be included in the ITMMs.

A project that complies with the SJMSCP can be deemed to result in biological resource impacts that are less than significant for CEQA purposes. Implementation of the mitigation measure below would reduce potential impacts on special-status species to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

BIO-1: The developer shall apply to the San Joaquin Council of Governments (SJCOG) for coverage under the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP). The project site shall be inspected by the SJMSCP biologist, who will recommend which Incidental Take Minimization Measures (ITMMs) set forth in the SJMSCP should be implemented. The project applicant shall pay the required SJMSCP fee, if any, and be responsible for the implementation of the specified ITMMs.

Significance After Mitigation: Less than significant

Impact BIO-2: Riparian and Other Sensitive Habitats

A riparian vegetation corridor exists along North Littlejohns Creek and the tributary ditch, which are considered potentially jurisdictional Waters of the US. The project is not expected to alter the existing vegetation community, other than with work associated with a potential outfall to North Littlejohns Creek for the discharge of drainage collected in a proposed detention basin located to the immediate north of the ditch. This potential work would have a limited disturbance area and would only minimally affect existing riparian vegetation. Work affecting jurisdictional waters would be subject to conditions of permits required from the Corps and CDFW (see Impact BIO-3 below), including any required mitigation. Impacts on riparian and other sensitive habitats would be less than significant. Impacts on seasonal wetlands are discussed below.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact BIO-3: Waters of the U.S. and Wetlands

As noted above, North Littlejohns Creek, a ditch, and five seasonal wetlands have been identified as potential Waters of the U.S. No other potential jurisdictional Waters of the U.S. or wetlands of any type were observed on the project site. The project proposes an outfall for the detention basin that would be constructed within North Littlejohns Creek, which would potentially affect approximately 0.02 acres of jurisdictional Waters of the U.S. The project also proposes to fill the existing ditch on the project site, which would

affect approximately 0.15 acres of area that is considered potentially-jurisdictional Waters of the U.S. Finally, the project proposes to fill the seasonal wetlands, which total approximately 0.9 acres.

Projects proposing the fill of wetlands or Waters of the U.S. would be required to obtain a Section 404 permit from the Corps. For the proposed work in North Littlejohns Creek and the ditch, as the estimated fill in Waters of the U.S. is less than 0.2 acres, the work would be authorized by the Corps under a Nationwide Permit. Additionally, the work in North Littlejohns Creek would be required to obtain a Streambed Alteration Agreement from the CDFW, a Section 401 Water Quality Certification from the RWQCB, and a permit from the Central Valley Flood Protection Board. These requirements are specified in the mitigation presented below.

Pursuant to the Navigable Waters Protection Rule, the seasonal wetlands are believed to be outside Corps jurisdiction, as they are hydrologically isolated and spatially separated from North Littlejohns Creek. If the seasonal wetlands are verified as non-jurisdictional, these wetlands would still be regulated by RWQCB under the State Wetlands Procedures, which would require Waste Discharge Requirements to be issued prior to the placement of fill. This requirement is specified in the mitigation presented below for development that occurs in the seasonal wetland area.

It should be noted that if development does not occur in the area where the seasonal wetlands are located, no impacts on these wetlands would occur, and no mitigation action would be necessary. The project may develop in phases that involve areas where no wetlands have been identified, so no actions would need to be taken during these particular phases.

In summary, the project would affect seasonal wetlands and Waters of the U.S. However, mitigation prescribed below would reduce project impacts on wetlands or Waters of the United States to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

BIO-2: Prior to the start of construction work in the area where seasonal wetlands have been identified, the project developer shall conduct a wetland delineation identifying jurisdictional Waters of the U.S. and wetlands. The delineation shall be verified by the U.S. Army Corps of Engineers (Corps). The delineation shall be used to determine if any project work will encroach upon any jurisdictional water, thereby necessitating an appropriate permit. For any development work that may affect a delineated jurisdictional Water, the project developer shall obtain any necessary permits from the U.S. Army Corps of Engineers prior to the start of development work within these locations. Depending on the Corps permit issued, the project applicant shall also apply for a Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board. If the seasonal wetlands are

avoided, or if phased development occurs in areas where no wetlands have been identified, then this mitigation measure does not apply.

BIO-3: Prior to the start of construction work in North Littlejohns Creek, the project developer shall obtain any necessary permits from the California Department of Fish and Wildlife and the Central Valley Flood Protection Board. The project developer shall comply with all conditions attached to any required permit.

BIO-4: Prior to the start of construction work in the area where seasonal wetlands have been identified, the project developer shall obtain any necessary Waste Discharge Requirements from the Central Valley Regional Water Quality Control Board. Pursuant to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, the filling of seasonal wetlands containing vernal pool invertebrates shall be delayed until the wetlands are dry and SJCOG biologists can collect the surface soils from the wetlands, to store them for future use on off-site seasonal wetland creation on SJOCG preserve lands. If the seasonal wetlands are avoided, then this mitigation measure does not apply.

Significance After Mitigation: Less than significant

Impact BIO-4: Fish and Wildlife Migration

The biological assessment identified North Littlejohns Creek as an intermittent stream, meaning it is dry for part of the year. Because of this, North Littlejohns Creek does not provide suitable aquatic habitat for fish and therefore would not be considered a fish migratory corridor. The ditch is likewise not considered a migratory corridor, given its short length and intermittent flow.

The biological assessment noted that there are several trees in the project vicinity that are suitable for nesting raptors and other protected bird species. As noted, the presence of large trees in and adjacent to the project site may attract special-status birds and other common bird species, including migratory species. Participation in the SJMSCP, as required by Mitigation Measure BIO-1, would require implementation of measures that would reduce impacts on migratory birds and their nests to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures: Implementation of Mitigation Measure BIO-1.

Significance After Mitigation: Less than significant

Impact BIO-5: Local Biological Requirements

As noted, valley oak was identified along North Littlejohns Creek. The biological review did not identify which of these oak trees were Heritage Trees, which are covered by the

Stockton Municipal Code. Oak trees may need to be removed for project development, particularly in the ditch area. Mitigation described below would require a survey of any oak trees proposed for removal to determine if the tree would be subject to the Heritage Tree provisions of the Municipal Code and would require the project to obtain the necessary permit for Heritage Oak Tree removal. Implementation of the mitigation measure would reduce potential impacts on Heritage Trees to a level that is less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

BIO-5: If removal of any oak tree on the project site is required, a certified arborist shall survey the oak trees proposed for removal to determine if they are Heritage Trees as defined in Stockton Municipal Code Chapter 16.130. The arborist report with its findings shall be submitted to the City's Community Development Department. If Heritage Trees are determined to exist on the property, removal of any such tree shall require a permit to be issued by the City in accordance with Stockton Municipal Code Chapter 16.130. The permittee shall comply with all permit conditions, including tree replacement at specified ratios.

Significance After Mitigation: Less than significant

Impact BIO-6: Habitat Conservation Plans

The project site is in the coverage area of the SJMSCP and is classified as Category B – Multi-Purpose Open Space. Mitigation Measure BIO-1 would require the project to participate in the SJMSCP, including payment of SJMSCP fees based on the land category and implementation of applicable ITMMs. The project would involve no conflict with the SJMSCP with implementation of the mitigation measure. No other habitat conservation plans apply to the project site. Impacts would be less than significant with implementation of Mitigation Measure BIO-1.

Level of Significance: Potentially significant

Mitigation Measures: Implement Mitigation Measure BIO-1.

Significance After Mitigation: Less than significant

SOURCE: Moore Biological

BaseCamp Environmental

Figure 7-1
POTENTIAL WATERS OF THE U.S.

8.0 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

Information for this section comes primarily from a cultural resources technical memorandum prepared by Solano Archaeological Services. Research for the memorandum included record searches of the California Historical Resources Information System conducted by the Central California Information Center at California State University Stanislaus, contact with the Native American Heritage Commission (NAHC), and field surveys of the project site conducted on March 19-20, 2021. Information related to the cultural resources report and consultation with Native American tribes pursuant to AB 52 is included in Appendix E of this EIR.

ENVIRONMENTAL SETTING

Prehistoric Setting

Human occupation in the Sacramento-San Joaquin Delta region may have occurred as early as 12,000 years ago, but few archaeological sites pre-dating 5,000 years before the present (BP) have been documented in the Delta or the broader Central Valley. California prehistory is divided into three periods that reflect similar cultural characteristics throughout the state: Paleo-Indian period (about 12,000 years BP - 8,000 BP), Archaic period (8,000 BP - 1,500 BP), and Emergent period (1,500 BP to time of Euro-American contact). Each period, and times within these periods, are defined by environmental changes and variability in subsistence, settlement, and technological systems as seen in the archaeological record.

The project site is considered within North Valley Yokuts territory. The Northern Valley Yokuts occupied the land on either side of the San Joaquin River from the Sacramento-San Joaquin Delta to south of Mendota. The Diablo Range probably marked the western boundary of Yokuts territory; the eastern boundary would have lain along the Sierra Nevada foothills. The Yokuts had gradually expanded their lands northward and clearly occupied the project site and vicinity during the Spanish colonial period, as evidenced by mixed assemblages of historic-era and prehistoric artifacts on archaeological sites.

The North Valley Yokuts were organized into at least 11 small political units or tribes. Each tribe had a population of approximately 300 people, most of who lived within one principal settlement that usually had the same name as the political unit. Acorns, ground into flour, was a staple of the Yokuts diet, along with seeds and other plants gathered. Bedrock outcroppings were frequently utilized for creating fixed, non-portable mortars used in grinding nuts and seeds into meal. In locales where bedrock outcroppings were nonexistent, smaller, portable mortars and stone pestles were used. The hunting of terrestrial game such as tule elk, mule deer, antelope, pronghorn, rabbits, squirrels, and

gophers was considered important, but it was subsidiary to collected foods that could be stored year-round. In riparian areas, fishing and the hunting of waterfowl were also utilized to supplement dietary intake.

The late prehistoric Yokuts may have been the largest ethnic group in pre-contact California. However, the Yokuts were severely impacted by Euro-American settlement. Missionization and exposure to disease decimated the population. The influx of Europeans during the Gold Rush era further reduced the population because of disease and violent encounters with the miners. Because of this, the North Valley Yokuts are generally not well documented in the ethnographic record.

A database search by the Central California Information Center found no record of any prehistoric resources on the project site. Solano Archaeological Services contacted the NAHC and requested a search of the Sacred Lands File for record of any lands on the project site considered sacred by tribes. The NAHC reported a positive result, although specific information was not provided. Consequently, the NAHC recommended that the North Valley Yokuts be contacted for more information. An intensive pedestrian survey of the project site by Solano Archaeological Services did not reveal any prehistoric archaeological resources (Solano Archaeological Services 2021).

In addition, Solano Archaeological Services attempted to contact eight representatives of four local tribes: North Valley Yokuts, Confederated Villages of Lisjan, Muwekma Ohlone, and Tule River. These representatives were listed by the NAHC in its response to the request for a Sacred Lands File search of the project site. Initial letters were followed up by electronic mail contacts and telephone calls. To date, no tribes have responded to these inquiries.

Historic Setting

Euro-American contact with the Northern Valley Yokuts began with infrequent excursions by Spanish explorers traveling through the Sacramento-San Joaquin Valleys in the late 1700s to early 1800s. The project site is located in an area once part of the Campo De Los Franceses land grant that was awarded to Guillermo Gulnac by the Mexican government in 1843. Gulnac entered into a partnership with Captain C. M. Weber, a recent German immigrant. After receiving a half interest in the rancho from Gulnac, Weber moved to the area in 1847 and later purchased the other half interest. As part of his efforts to encourage settlement on and near his rancho, in 1847 Weber laid out the town of Tuleburg. During the Gold Rush, Weber realized that he could reap larger rewards by focusing on establishing Tuleburg as a supply center catering to the Gold Rush miners. The town was re-surveyed, and the name was formally changed to Stockton, in honor of Commodore Robert F. Stockton, who was a key figure in the capture of California during the Mexican-American War.

By the winter of 1850, the population of Stockton had increased to 5,000. As the Gold Rush boom eventually receded, further growth was spurred with the establishment of the railroads, the first of which was the Central Pacific whose locomotive, *Governor Stanford*, arrived in August of 1869. Another prominent line, The San Francisco & San

Joaquin Valley Railroad Company, began construction from Stockton to Bakersfield in 1895. This line is located just east of the project site and is presently operated by the Burlington Northern Santa Fe. Stockton's growth continued throughout the 20th century, with the city becoming a rail, water, and highway transportation hub linking the Central Valley's agricultural fields and other industries to national and world markets.

A search by the Central California Information Center found no records of any historical resources on the project site, although three such resources were recorded within a half-mile radius of the site. Additional archival research did not indicate the presence of any extant historical resources. However, the field surveys conducted by Solano Archaeological Services led to the recording of two potential historical resources:

- Three operational parallel electrical transmission lines, maintained by the Pacific Gas and Electric Company (PG&E), along the northern project site boundary. Two lines are suspended on steel lattice towers, and a third is on wood poles. An analysis of aerial photography and historic mapping indicates these three lines were constructed sometime between 1943 and 1952.

- A non-operational well site and associated machinery in the southern portion of the project site. This resource consists of a fractured poured concrete pad, a Peerless horizontal electrical well pump or a portion thereof, and a fragment of a milled wood post set into the concrete. The pump remains appear to date to the 1950s or 1960s. No pipes or electrical lines extend to or from the pump, and it appears to have been rendered inoperable for a significant period of time.

REGULATORY FRAMEWORK

CEQA Guidelines Section 15064.5

Criteria specified in CEQA Guidelines Section 15064.5 suggest that an "important historical or archaeological resource" is one which generally meets the criteria for listing in the California Register of Historical Resources, including the following:

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

- Is associated with the lives of persons important in California's past;

- 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 value; or

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

If a resource does not meet any of the above criteria, it does not preclude a lead agency from determining that a resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

AB 52

In 2014, the California Legislature enacted Assembly Bill (AB) 52, which requires CEQA consultation with Native American tribes on projects that could potentially affect resources of value to the tribes. The intent of this consultation is to avoid or mitigate potential impacts on "tribal cultural resources," which are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe.

Under AB 52, consultation with tribes on a notice list shall be initiated prior to the release of the CEQA document for public review. When a tribe requests consultation, the lead agency must provide the tribe with notice of a proposed project within 14 days either of a project application being deemed complete or when the lead agency decides to undertake the project if it is the agency's own project. The tribe has 30 days from receipt of the notification letter to respond in writing, including the designation of a lead contact person. If the tribe requests consultation, then the lead agency has up to 30 days after receiving the tribe's request to initiate formal consultation. The consultation process ends when either (1) the resource in question is not considered significant, (2) the parties agree to mitigate or avoid a significant effect on a tribal cultural resource, or (3) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. Regardless of the outcome, a lead agency is still obligated under CEQA to mitigate for any significant environmental effects, as explicitly noted in AB 52.

The City of Stockton provided notice of the proposed project on December 10, 2020 by email to the NAHC and to eight tribal entities: American Indian Council of Mariposa County, Buena Vista Rancheria Band of Me-Wuk Indians, California Miwok Tribe, North Valley Yokuts Tribe, Wilton Rancheria, United Auburn Indian Community, Ione Band of Miwok Indians, and Torres Martinez Desert Cahuilla Indians. A response was received from only one tribal representative of the Northern Valley Yokuts, who requested consultation under AB 52. The City acknowledged the response and initiated the consultation by email. However, the tribe had no further contact with the City after the initiation of consultation; correspondence with the tribe to date is shown in Appendix E of this EIR.

City of Stockton Municipal Code

The City of Stockton has established provisions in its Municipal Code to protect cultural resources. The section of the Municipal Code most relevant to the proposed project is Section 16.36.050, described below.

Section 16.36.050 - Cultural Resources

If a historical or archaeological resource or human remains may be impacted by a development project requiring a discretionary land use permit, the Secretary of the Cultural Heritage Board shall be notified, any survey needed to determine the significance of the resource shall be conducted, and the proper environmental documents shall be prepared. In addition:

A. Historical Resources. Resources that have been identified as a landmark or part of a historic district in compliance with Chapter 16.220 (Cultural Resources) shall require a certificate of appropriateness (Section 16.220.060) if any exterior changes to the resource are proposed.

B. Archaeological Resources. In the event that archaeological resources are discovered during any construction, construction activities shall cease, and the Community Development Department shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may occur in compliance with State and federal law.

C. Human Remains. In the event human remains are discovered during any construction, construction activities shall cease, and the County Coroner and Community Development Director shall be notified immediately in compliance with CEQA Guidelines 15064.5 (d). A qualified archaeologist shall be contacted to evaluate the situation. If the human remains are of Native American origin, the Coroner shall notify the NAHC within 24 hours of this identification. The NAHC will identify the most likely descendent of the Native American to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5,
- Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5,
- Disturb any human remains, including those interred outside of formal cemeteries.

Also, a project may have a significant impact on the environment if it would cause a substantial adverse change in the significance of a tribal cultural resource, defined in California Public Resources Code Section 21074 as a site, feature, place, sacred place,

cultural landscape that is geographically defined in terms of the size and scope of the landscape, 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 Public Resources Code Section 5024.1(c). In applying the Section 5024.1(c) criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact CULT-1: Historical Resources

As noted, the field surveys conducted by Solano Archaeological Services on the project site led to the recording of two potential historical resources: three transmission lines and the remains of a well. Both resources were evaluated on the criteria for listing on the California Register of Historical Resources (see Regulatory Framework above). Neither were determined to meet any of the criteria for such listing. Since these criteria are very similar to those for listing on the National Register of Historic Places, the resources also would not meet criteria for listing on the National Register of Historic Places. As such, the two resources are not considered to have historical value. The project would have no impact on historical resources. It should be noted that the project is unlikely to affect the three transmission lines in any case.

Level of Significance: No impact

Mitigation Measures: None required

Impact CULT-2: Archaeological and Tribal Cultural Resources

The Solano Archaeological Services memorandum did not identify any prehistoric resources on the project site in the records search, nor were any encountered any in the field survey. The memorandum concluded that the site is of "low" archaeological sensitivity and that it is unlikely that presently undocumented buried archaeological remains would be encountered within the project site.

The NAHC indicated the potential presence of a Sacred Land on or near the project site, and the Northern Valley Yokuts representative indicated in her request for AB 52 consultation that, "If tribal cultural resources are identified within the project area, it is our policy that tribal monitors must be present for all ground disturbing activities." The Solano Archaeological study did not, however, identify any tribal or other cultural resources during its survey of the project site, and the City has received no other information that would indicate that significant tribal cultural resources are present on the site. Therefore, no tribal monitoring is necessary. Even though the project site has been extensively disturbed by past agricultural activities, it is nonetheless conceivable that

archaeological resources could be encountered during project construction activities. Disturbance or damage to such resources would be a potentially significant impact.

Requirements related to cultural resource protection during construction have been addressed by the Stockton Municipal Code, which requires construction activity to be halted at an inadvertently disturbed archaeological site until it is evaluated. Mitigation measures described below provide more direction in complying with these requirements of the Stockton Municipal Code. These measures also would address the concerns of the Northern Valley Yokuts, as they are based upon measures that have been approved by the tribal representative for other projects. Implementation of these mitigation measures would reduce potential impacts on archaeological resources and tribal cultural resources to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-1: If any subsurface archaeological resources, including human burials and associated funerary objects, are encountered during construction, all construction activities within a 50-foot radius of the encounter shall be immediately halted until a qualified archaeologist can examine these materials and evaluate their significance. The City shall be immediately notified in the event of a discovery. If burial resources or tribal cultural resources are discovered, the City shall notify the appropriate tribal representative, who may examine the materials with the archaeologist and advise the City as to their significance.

The archaeologist, in consultation with the tribal representative if contacted, shall recommend mitigation measures needed to reduce potential cultural resource effects to a level that is less than significant in a written report to the City, with a copy to the tribal representative. The City shall be responsible for implementing the report recommendations. Avoidance is the preferred means of disposition of tribal cultural resources. The contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in written reports to the City.

Significance After Mitigation: Less than significant

Impact CULT-3: Human Burials

The Solano Archaeological Services memorandum did not indicate the presence of any human burials on the project site. Discoveries of remains are considered unlikely, given the negative results of the research, survey, and Native American community outreach. However, it is conceivable that human remains, including Native American burials, could be encountered during project construction activities. Disturbance of encountered remains would be a potentially significant impact.

CEQA Guidelines Section 15064.5(e) describes the procedure to be followed when human remains are uncovered in a location outside a dedicated cemetery. All work in the vicinity of the find shall be halted and the County Coroner shall be notified to determine if an investigation of the death is required. If the County Coroner determines that the remains are Native American in origin, then the County Coroner must contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the Most Likely Descendants of the deceased Native American, and the Most Likely Descendants may make recommendations on the disposition of the remains and any associated grave goods with appropriate dignity. If a Most Likely Descendant cannot be identified or fails to make a recommendation, or the landowner rejects the recommendations of the Most Likely Descendant, then the landowner shall rebury the remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance.

Compliance with CEQA Guidelines Section 15064.5(e) typically would ensure that impacts on any human remains encountered during project construction associated with the project would be less than significant. In addition, the Stockton Municipal Code has provisions generally similar to CEQA Guidelines Section 15064.5(e) regarding the discovery and disposition of human remains, with the additional requirement that the Community Development Director also be notified of a find. However, there is additional concern about Native American burials, particularly if grave goods are associated with a burial. Mitigation described below provides further detail on the treatment of remains determined to be Native American. Implementation of this mitigation measure, along with compliance with CEQA Guidelines Section 15064.5(e) and the applicable provisions of the Stockton Municipal Code, would reduce project impacts on human burials to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-2: If project construction encounters evidence of human burial or scattered human remains, the contractor shall immediately notify the County Coroner and the City, which shall in turn notify the appropriate tribal representative. The City shall notify other federal and State agencies as required. The City will be responsible for compliance with the requirements of California Health and Safety Code Section 7050.5 and with any direction provided by the County Coroner.

If the human remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission, which will notify and appoint a Most Likely Descendant. The Most Likely Descendant will work with the archaeologist to decide the proper treatment of the human remains and any associated funerary objects in accordance with California Public Resources Code Sections 5097.98 and 5097.991. Avoidance is the preferred means of disposition of the burial resources.

Significance After Mitigation: Less than significant

9.0 GEOLOGY, SOILS AND MINERAL RESOURCES

ENVIRONMENTAL SETTING

Geomorphology and General Geology

The project site in the San Joaquin Valley in central California near the Sacramento-San Joaquin River Delta. The San Joaquin Valley is in the southern portion of the Great Valley Geomorphic Province. The Great Valley, also known as the Central Valley, is a topographically flat, northwest-trending, structural trough about 50 miles wide and 450 miles long. It is bordered by the Tehachapi Mountains on the south, the Klamath Mountains on the north, the Sierra Nevada on the east, and the Coast Ranges on the west. As noted in Chapter 7.0, Biological Resources, the elevation of the project site is approximately 35 feet above mean sea level. The project site is essentially level but has a very slight slope downward from southeast to northwest.

The San Joaquin Valley is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. The sediments that form the Valley floor were derived largely from erosion of the Sierra Nevada. The smaller and steeper slopes on the west side of the Valley overlie sedimentary rocks more closely related to the Coast Ranges. Large alluvial fans have developed on each side of the Valley. The larger and more gently sloping fans are on the east side of the Valley, and they overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of metasedimentary, volcanic, and granitic rocks. The Geologic Map of the San Francisco-San Jose Quadrangle designates the underlying geology of the project site as the Modesto Formation, consisting of Quaternary sediments (Wagner et al. 1991).

Geological Conditions

Seismicity

There are several faults and potential fault traces located within San Joaquin County, concentrated along its eastern and western margins. Faults are classified as to their potential for seismic activity based on evidence of past activity. An “active” fault is defined as one along which displacement has been demonstrated to occur within the past 11,700 years. A fault is considered “potentially active” if there is evidence of movement within the past 700,000 years and further movement is considered likely. An “inactive fault” shows no evidence of movement within the last 1.6 million years, and renewal activity is not considered likely. Fault rupture is a potential hazard that occurs within

active earthquake fault zones. A fault zone has significant width, ranging from a few feet to several miles (Bryant and Hart 2007).

The GPEIR did not identify any active or potentially active faults in the Stockton vicinity. The Stockton Fault is a south-dipping reverse fault that trends east-west across the Stockton area. The fault is not exposed at the surface. It is not a recently active fault in geological terms, and it has not been classified as an "active" fault by the California Geological Survey. The nearest active fault is the Greenville Fault, approximately 22 miles west-southwest of Stockton. The Greenville Fault is considered capable of a maximum moment earthquake magnitude of 6.0, with a low probability of an earthquake of greater magnitude (City of Stockton 2018b). Portions of the Concord-Green Valley and Hayward fault zones, 35 and 50 miles west of Stockton, and the Calaveras fault zone, approximately 40 miles southwest of Stockton, have also been rated as active within the last 200 years. The project site, along with the rest of San Joaquin County, is subject to seismic shaking from these fault zones, as well as the San Andreas Fault farther to the west (San Joaquin County 2016b).

Ground Shaking

The severity of seismic ground shaking depends on many variables, such as earthquake magnitude, proximity, local geology (including the properties of unconsolidated sediments), groundwater conditions, and topographic setting. In general, ground-shaking hazards are most pronounced in areas that are underlain by loosely consolidated soil/sediment.

Earthquakes of magnitude 6.7 or greater can create ground accelerations severe enough to cause major damage to structures and foundations not designed to resist the forces generated by earthquakes. Underground utility lines are also susceptible where they lack adequate flexibility to accommodate the seismic ground motion. The estimated likelihood of a magnitude 6.7 or greater earthquake in greater San Francisco Bay area before 2036 is 63 percent. Individually, the forecasted probabilities are 31 percent for the Hayward Fault, 7 percent for the Calaveras Fault, and 3 percent for the Greenville Fault, the closest earthquake fault to the Stockton area. Stockton's significant distance from active earthquake faults would help mitigate impacts related to ground shaking (City of Stockton 2018b).

Liquefaction

Liquefaction generally occurs in areas where moist, fine-grained, cohesionless sediment or fill materials are subjected to strong seismic ground shaking. Under certain circumstances, seismic ground shaking can temporarily transform an otherwise solid, granular material to a fluid state. Liquefaction is a serious hazard because buildings in areas that experience liquefaction may suddenly subside and suffer major structural damage. Liquefaction is most often triggered by seismic shaking, but it can also be caused by improper grading, landslides, or other factors. Neither the California Geological Survey nor the U.S. Geological Survey has mapped any seismically induced liquefaction hazard zones in the Stockton area (City of Stockton 2018b).

Other Geological Hazards

Subsidence is the sinking of a large area of ground surface in which the material is displaced vertically downward, with little or no horizontal movement. The San Joaquin Valley and the Sacramento-San Joaquin Delta are areas that have experienced subsidence. The main cause of subsidence in valley areas is the withdrawal of groundwater from aquifers. If the amount of groundwater withdrawn exceeds the amount by which the groundwater is replaced, then clay beds in the aquifer may be compressed to the point that they no longer expand to their original thickness after groundwater recharge. When the clay particles in the beds settle, the beds become effectively thinned, resulting in permanent land subsidence at the ground surface. Subsidence is not anticipated outside of the Delta area, and the project site is not within the Delta area.

Soils and Soil Conditions

Figure 9-1 identifies the soil types on the project site. According to the Soil Survey of San Joaquin County, there are two predominant soil types underlying the project site (SCS 1992, NRCS 2018):

- Jacktone clay, 0 to 2 percent slopes (designated as 180 on Figure 9-1). This is a somewhat poorly drained soil also formed in alluvium from mixed rock sources, and it is moderately deep to a hardpan. Permeability and runoff of Jacktone clay are slow, and the water erosion hazard is slight. Jacktone clay is the predominant soil in the northern and central portions of the project site.

- Stockton clay, 0 to 2 percent slopes (designated as 250 on Figure 9-1). This is a deep-to-hardpan, somewhat poorly drained soil formed in alluvium from mixed rock sources. Permeability and runoff of Stockton clay are slow, and the water erosion hazard is slight. Stockton clay is the predominant soil in the southern portion of the project site.

Both Jacktone clay and Stockton clay soils have a high expansive, or “shrink-swell”, potential. Expansive soils can change dramatically in volume depending on moisture content. When dry, these soils can contract (shrink); conversely, when wet, they can expand (swell). Sources of moisture that can trigger this shrink-swell phenomenon include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soils can develop wide cracks in the dry season, and changes in moisture content over time have the potential to damage concrete slabs, foundations, and pavement. Special structural design or soil treatment are often needed in areas with expansive soils.

Potential soil erosion associated with construction and development and resulting impacts on water quality are addressed by State of California stormwater permit requirements and corresponding local implementation plans, ordinances, and standards, including those adopted by the City of Stockton. Storm water pollution prevention controls are addressed in detail in Chapter 12.0, Hydrology and Water Quality; however, soil erosion controls specific to construction work are described in the Regulatory Framework section below.

Paleontological Resources

Paleontological resources are fossils or groups of fossils that are unique, unusual, rare, uncommon, or important, and those that add to an existing body of knowledge in specific areas. Surface examination of a study or project area often does not reveal whether paleontological resources are present. A search of the database of the Museum of Paleontology at UC Berkeley includes numerous records of vertebrate fossil localities related to the Modesto or the Riverbank Formations in the greater Central Valley. As noted, the project site is underlain by the Modesto Formation.

The Museum of Paleontology database showed that San Joaquin County has more than 800 documented fossil localities. Most paleontological specimens have been found in rock formations in the foothills of the Diablo Mountain Range, but remains of extinct animals could be found virtually anywhere in the County, especially along watercourses such as the San Joaquin River and its tributaries (San Joaquin County 2016b). However, only a handful of specimens have been recorded within the Stockton General Plan Planning Area, and these specimens were identified as relatively recent (City of Stockton 2016). No paleontological resources within the project site have been recorded.

Mineral Resources

Mineral resources within San Joaquin County are primarily sand, gravel, and other construction material deposits in the alluvial portion of the valley floor. Sand and gravel deposits have been identified along the Stanislaus River in San Joaquin County (DMG 1977). Portland cement concrete aggregate deposits also have been identified within San Joaquin County, but none are located on the project site (DMG 1988).

Oil and natural gas deposits have been identified throughout the Central Valley, with extensive natural gas deposits in the Delta area west of Stockton. The project site does not contain any known oil or natural gas fields. The nearest active field is the French Camp natural gas field south of Stockton and west of the project site (DOGGR 2001).

REGULATORY FRAMEWORK

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act, enacted in 1972 and subsequently amended, prohibits the location of most structures for human occupancy across the traces of active faults and to thereby mitigate the hazard of fault rupture. Under the Act, the State Geologist is required to delineate Earthquake Fault Zones along known active faults in California. Cities and counties affected by the zones must regulate certain development projects within the zones, withholding development permits for sites within the zones

until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting (Bryant and Hart 2007).

The project site is not within an area mapped by the State Geologist as a "Zone of Required Investigation," which includes Alquist-Priolo Earthquake Fault Zones. A Zone of Required Investigation is established where required to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake-triggered ground failures (California Geological Survey 2017).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 to address earthquake hazards such as seismically induced liquefaction and landslides, with the purposes of reducing the threat to public health and safety and minimizing the loss of life and property that may result from earthquake-triggered ground failure. Under the Act, seismic hazard zones are mapped through the Seismic Hazards Zonation Program of the California Geological Survey to identify areas prone to earthquake-induced liquefaction, landslides, and amplified ground shaking. Section 2697(a) of the Act states that cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard. As noted, the project site is not within an area mapped by the State Geologist as a Zone of Required Investigation, which includes Seismic Hazards Mapping Act zones.

California Building Code

The California Building Code is in Title 24 of the California Code of Regulations and incorporates the International Building Code, a model building code adopted across the United States. The California Building Code is updated every three years, and the 2019 version took effect January 1, 2020. The City of Stockton adopted the 2019 California Building Code by reference, pursuant to Section 15.40.010 of the City's Municipal Code.

The California Building Code contains building requirements that address likely ground shaking hazards that may occur in Stockton. It can require detailed soils and/or geotechnical studies in areas of suspected geological hazards, such as unstable geologic units that may be subject to collapse, subsidence, landslides, liquefaction, or lateral spreading.

Construction General Permit

Construction projects that involve one acre or more of ground disturbance are required to obtain a Construction General Permit, issued by the SWRCB. Discharges subject to the Construction General Permit must develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which includes a site map and description of construction activities and identifies the Best Management Practices (BMPs) that will be employed to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. A monitoring program is generally required to ensure that BMPs are implemented according to the SWPPP and are effective at

controlling discharges of stormwater-related pollutants. The City of Stockton has incorporated the Construction General Permit as part of its Storm Water Management Program, which is described below.

Modifications to the Construction General Permit in 2010 established BMP and monitoring requirements through a "risk-based" approach. Construction activities would be assessed for the risk that erosion and sedimentation generated by the activity would pose to water quality in the area, based on potential rainfall likelihood and intensity and on the sensitivity of waters receiving runoff from the construction site.

Surface Mining and Reclamation Act

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 (DMG 1988). Neither the City of Stockton nor the San Joaquin County General Plans has identified any mineral resources on or near the project site.

Local

City of Stockton Storm Water Management Program

The City has adopted and implemented a Storm Water Management Program, a requirement of a general permit issued by the SWRCB for municipal storm drainage systems (see Chapter 12.0, Hydrology and Water Quality). The program is intended to minimize the potential storm water quality impacts of development, including both construction and post-construction activity. The Storm Water Management Program consists of a variety of programs, including controls on illicit discharges, public education, controls on City operations, and water quality monitoring. Program elements most applicable to land development include construction storm water discharge requirements and the incorporation of post-construction BMPs in new development.

Stockton Municipal Code

Section 15.48.050 of the Stockton Municipal Code, entitled Construction and Application, includes a requirement that seeks to mitigate hazards associated with erosion, stating that "During construction, construction activities shall be designed and conducted to minimize runoff of sediment and all other pollutants onto public properties, other private properties and into the waters of the United States." Section 15.48.110, entitled Erosion Control Requirements, contains specific provisions for erosion control for those construction projects where a grading permit is not required. Section 15.48.070 includes requirements for a grading permit that apply to most construction projects. Such permits require implementation of BMPs for erosion control.

Section 16.192.020 requires final subdivision maps to submit a geologic soils report, prepared by a civil engineer who is registered by the State. If the preliminary soils report indicates the presence of critically expansive soils or other soil problems, which, if not corrected, would lead to structural defects, the person filing the map may be required to submit a soils investigation covering each lot in the subdivision, prepared by a California registered civil engineer, which shall recommend corrective action that is likely to prevent structural damage to each dwelling proposed to be constructed on the expansive soil.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on geology, soils, and mineral resources if it would:

- Indirectly cause 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 liquefaction), or 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,
- Be located on expansive soil as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property,
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater,

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature,
- Result in the loss of availability of a known mineral resource that would be of value to the region and 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.

Regarding the fifth bullet point, since future development would connect to the City of Stockton's wastewater system, it would not use septic systems. Therefore, this issue is not analyzed in this EIR.

Impact GEO-1: Faulting and Seismicity

As noted, there are no active or potentially active faults within or near the project site. The project site is not within an Alquist-Priolo Earthquake Fault Zone. The project would have no impact related to fault rupture.

The project site, along with the rest of the City, is subject to seismic shaking from active faults outside San Joaquin County. Proposed building construction would be required to incorporate engineering design features that would be in accordance with the adopted California Building Code. Compliance with the California Building Code and the seismic design criteria therein would enable structures to withstand projected seismic shaking. Impacts related to seismicity would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact GEO-2: Other Geologic Hazards

The project site and its surroundings are flat and therefore not prone to landslide hazards. As noted, subsidence is not considered a potential hazard outside the Delta region, nor are there identified areas where liquefaction could occur. The Norcal Logistics Center EIR noted that the types of soils and the depth to groundwater in the area provide little potential for ground failures (ESA 2014).

Stockton Municipal Code Section 16.192.020 requires a soils report to be provided in conjunction with a final subdivision map, as previously noted. The soils report would identify any geological or soil issues that structural engineering and design would address to avoid potential adverse effects. Implementation of this section of the Stockton Municipal Code would reduce project impacts related to other geologic hazards to a level that would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact GEO-3: Soil Erosion

Both Jacktone clay and Stockton clay soils have a low potential for soil erosion. Project construction activities would loosen the soil, leaving it exposed to potential water and wind erosion. The eroded soils, in turn, could be transported off the project site by runoff or wind.

As noted, the City of Stockton has a water quality program that is applicable to potential erosion from construction activities, including a requirement for projects disturbing one acre or more of soil to obtain a Construction General Permit. Proposed development on the project site would need to obtain a Construction General Permit and comply with its provisions, including the preparation and implementation of a SWPPP that would control soil erosion and sedimentation. As part of the SWPPP, the developer must incorporate an Erosion Control Plan consistent with all applicable provisions of the SWPPP within the site development plans.

Additionally, as noted, the City has a Storm Water Management Program that requires implementation of its own construction BMPs for erosion control. The project also would comply with SJVAPCD Regulation VIII, which is discussed in Chapter 6.0, Air Quality. The measures specified in Regulation VIII would control dust emissions, thereby reducing potential wind erosion impacts. Compliance with the requirements of the Construction General Permit and SJVAPCD Regulation VIII, as well as with applicable provisions of the Stockton Municipal Code, would make potential construction erosion impacts less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact GEO-4: Expansive Soils

As noted, both of the soil units mapped on the project site have a high shrink-swell potential. Expansive soils can lead to damage of buildings and supporting infrastructure if not addressed. As such, the existence of expansive soils is a potentially significant impact.

As mentioned, Stockton Municipal Code Section 16.192.020 requires submittal of a soils report that may indicate further investigation if expansive soils may be present on a site. The includes recommendations that are incorporated within development plans prior to approval of future development, particularly large developments. With implementation of this section of the Municipal Code, expansive soil impacts would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact GEO-5: Paleontological Resources and Unique Geological Features

Geological materials underlying the site consist of mixed alluvial deposits. There are no unique geological features located on the project site that would be indicative of any special resources.

As noted above, there is no record of paleontological resources on the project site. Nevertheless, it is conceivable that excavation associated with project development could unearth paleontological materials. The Modesto Formation, which underlies the project site, has been identified as a potential source of paleontological resources. Mitigation described below provides for interruption of construction activities in such an event, inspection of resources encountered by a qualified paleontologist, and recommendations for disposition of the resource as specified by the paleontologist. Implementation of this mitigation measure would reduce potential impacts to a level that is less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

GEO-1: If any subsurface paleontological resources are encountered during construction, all construction activities within a 50-foot radius of the encounter shall be immediately halted until a qualified paleontologist can examine these materials, initially evaluate their significance and, if potentially significant, recommend measures on the disposition of the resource. The City shall be immediately notified in the event of a discovery. The contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in written reports to the City.

Significance After Mitigation: Less than significant

Impact GEO-6: Access to Mineral Resources

There are no identified mineral, petroleum, or natural gas resource areas on the project site, nor are there any active mining operations or petroleum/natural gas extractions occurring on or near the project site. The project would have no effect on the availability of or access to locally designated or known mineral resources. The project would have no impact on mineral resources.

Level of Significance: No impact

Mitigation Measures: None required

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
180	Jacktone clay, 0 to 2 percent slopes	133.1	64.2%
250	Stockton clay, 0 to 2 percent slopes	74.2	35.8%
Totals for Area of Interest		**207.3**	**100.0%**

BaseCamp Environmental

SOURCE: USDA Soils Report

Figure 9-1
SOILS MAP

10.0 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL SETTING

Global Climate Change and Greenhouse Gases

Global climate change is a change in the average weather conditions, such as temperature and rainfall, of the Earth over a long period of time. Recent scientific observations and studies indicate that global climate change, linked to an increase in the average global temperature that has been observed, is now occurring. There is a consensus among climate scientists that the primary cause of this change is human activities that generate emissions of greenhouse gases (GHGs) (CAPCOA 2009). GHGs are gases that trap heat in the earth's atmosphere. They include carbon dioxide, the most abundant GHG, as well as methane, nitrous oxide, and other, less abundant gases. GHGs vary in their heat-trapping properties. Because of this, measurements of GHG emissions are commonly expressed in carbon dioxide equivalent (CO_2e), in which emissions of all other GHGs are converted to equivalent carbon dioxide emissions.

GHG emissions in California in 2018, the most recent year for which data are available, were estimated at approximately 425 million metric tons CO_2e – a decrease of approximately 13% from the peak level in 2004. Transportation was the largest contributor to GHG emissions in California, with approximately 40% of total emissions. Other significant sources include industrial activities, with approximately 21% of total emissions, and electric power generation, both in-state and imported, with approximately 15% of total emissions (ARB 2020b). Total GHG emissions from Stockton in 2005 were an estimated 2,360,932 metric tons CO_2e. Of the total emissions, approximately 48% percent came from on-road transportation and 33% came from building energy use (City of Stockton 2014).

Concerns related to global climate change include the direct consequences of a warmer climate, but also include indirect effects such as reduced air quality, reduced snowpack, higher-intensity storms, and rising sea levels. All these changes have implications for the human environment, as well as existing ecosystems and the species that depend on them. The United Nations Intergovernmental Panel on Climate Change has concluded that stabilization of greenhouse gases at a concentration of 400-450 parts per million (ppm) CO_2e is required to keep mean global warming below 2° Celsius, which is considered necessary to avoid dangerous impacts of climate change (IPCC 2001). According to data collected by the National Oceanic and Atmospheric Administration, the carbon dioxide concentration in the atmosphere was 413.92 ppm in June 2019 (NOAA 2019).

The State of California, through a collaboration of three agencies, has prepared Climate Change Assessments that provide scientific assessments on the potential impacts of climate change in California and reports potential adaptation responses. The most recent report, issued in 2019, includes assessments of climate change impacts by region,

including the San Joaquin Valley. Potential climate change impacts occurring in the San Joaquin Valley include the following (Westerling et al. 2018):

- Acceleration of warming across the region and state.
- More intense and frequent heat waves.
- Higher frequency of catastrophic floods.
- More intense and frequent drought.
- More severe and frequent wildfires.

The consequences of these impacts would fall on the following sectors in the San Joaquin Valley:

- Agriculture - constraints on water supply, more variable precipitation, new pests, reduced chill hours.
- Ecosystems - scarce water supply.
- Water resources - prolonged periods of drought alternating with pronounced precipitation events, more precipitation as rain and less as snow at higher elevations, changes in reservoir operations for flood protection, less available surface water during summer when irrigation requirements are highest, decreased water quality.
- Infrastructure - increased stress from higher temperatures and extreme precipitation events, including droughts and floods.
- Public health - warmer temperatures that facilitate the spread of disease, worsen air quality from extended agricultural fallowing, and challenge food security in disadvantaged communities; concentration of pollutants in drinking water increasing the incidence of waterborne diseases.

REGULATORY FRAMEWORK

Federal

As noted above, the EPA has found that GHG emissions endanger both the public health and public welfare under Section 202(a) of the Clean Air Act. However, the federal government does not have a comprehensive GHG strategy.

Some GHG emission reduction actions have been adopted at the federal level. In coordination with the U.S. Department of Transportation, EPA issued GHG emission and fuel economy standards for passenger vehicles and trucks that are intended to cut six billion metric tons of GHG emissions over the lifetimes of vehicles sold in model years 2012-2025. In 2010, the EPA set GHG emissions thresholds to define when permits

under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2013, the EPA proposed standards to cut carbon emissions from new power plants, which were adopted in 2015. Also, in 2015, the EPA adopted the Clean Power Plan, which established guidelines for states in limiting carbon dioxide emissions from existing power plants. However, the Trump administration did not implement either of these actions. It is not known at this time if the current Biden administration will reactivate these measures.

In 2015, the Paris Agreement was reached among 196 countries, with each country pledging to take actions to decrease GHG emissions to reach the overall goal of limiting the increase in global temperature to no more than 2 degrees Celsius. The Paris Agreement does not set legally binding reduction targets to be met. However, it does require all parties to put forward their best efforts through "nationally determined contributions" and to strengthen these efforts in the years ahead. This includes requirements that all parties report regularly on their emissions and on their implementation efforts. Although the United States was a signatory, the Trump administration withdrew from the Paris Agreement. However, the United States has rejoined the agreement under the Biden administration.

State

California has addressed climate change on its own initiative as early as 1988, when the California Energy Commission was designated as the lead agency for climate change issues. However, the most significant state activities have occurred since 2005, when executive orders and State legislation established the current framework for dealing with GHG emissions and climate change. Several of these actions are described below.

Executive Orders S-3-05 and B-30-15

Executive Order S-3-05, signed by Governor Schwarzenegger in 2005, established GHG emission reduction targets for California. Specifically, GHG emissions would be reduced to the level of emissions in the year 2000 by 2010, to the level of emissions in the year 1990 by 2020, and to 80% below the 1990 emissions level by 2050. The desired 2050 GHG emission reduction is consistent with the Intergovernmental Panel on Climate Change objectives for stabilizing global climate change. The 2020 reduction goal set forth by S-3-05 was codified by AB 32, which is described below.

On April 29, 2015, Governor Brown signed Executive Order B-30-15, which advances the goals of Executive Order S-3-05 by establishing a GHG reduction target of 40% below 1990 emission levels by 2030. The 2030 reduction goal set forth by B-30-15 was codified by Senate Bill (SB) 32, which also is described below.

To date, the 2050 reduction goal has not been made State law, and the State has not prepared any plans to achieve the 2050 goal. In its ruling on *Cleveland National Forest Foundation v. SANDAG* (2017), the California Supreme Court stated that the CEQA lead

agency did not abuse its discretion by declining to explicitly engage in an analysis of the consistency of projected 2050 GHG emissions with the goals in the executive order, given the lack of reliable means to forecast how future technology and State legislative action will affect future emissions. The same condition applies to this project; therefore, an analysis of project consistency with the 2050 reduction goal in Executive Order S-3-05 will not be conducted in this EIR.

AB 32

AB 32, the Global Warming Solutions Act of 2006, is State legislation that sets goals of reducing GHG emissions to year 2000 levels by 2010 and to year 1990 levels by 2020. These specific goals are directly related to the Governor's overall objectives established in Executive Order S-3-05. The State's initial planning efforts were oriented toward meeting the legislated 2010 and 2020 goals, while placing the State on a trajectory that will facilitate eventual achievement of the 2050 goal set forth in Executive Order S-3-05.

The ARB has primary responsibility for AB 32 implementation. ARB adopted a Climate Change Scoping Plan in 2008 with the purpose of meeting the AB 32 targets. The Scoping Plan details the various GHG reduction initiatives that will be undertaken by the State or passed down to local governments, and it quantifies the GHG emission reductions associated with each of the initiatives. The 2008 Scoping Plan proposed to reduce GHG emissions from the State's projected 2020 "business-as-usual" emissions by approximately 29%. Under the Scoping Plan, nearly 85% of the GHG reductions would be achieved under a "cap-and-trade" program and "complementary measures," including expansion of energy efficiency programs, increase in the use of renewable energy sources, and low-carbon fuel standards, among others. The remaining 15% would include measures applicable to GHG sources not covered by the cap-and-trade program (ARB 2008b).

The cap-and-trade program is the centerpiece of the GHG reduction program set forth in the Scoping Plan. In general, the program sets a "cap" on the total GHG emissions that would be allowed in California, which gradually decreases over time. Allowances for GHG emissions are sold at auction to industrial activities and utilities that emit large quantities of GHGs, which in turn can sell allowances that are unused to other activities that need more allowances (the "trade" component). The State Legislature recently extended the cap-and-trade program from its original expiration in 2020 to 2030, as part of a strategy to meet GHG reduction targets set by SB 32 (see below).

In May 2014, the ARB approved the First Update to the Scoping Plan. The 2014 Update lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to the 2050 target set forth in Executive Order S-3-05. It recommends actions in nine sectors: energy, transportation, agriculture, water, waste management, natural and working lands, short-lived climate pollutants, green buildings, and the cap-and-trade program (ARB 2014).

Recently, the ARB released the California Greenhouse Gas Emission Inventory, with data from 2018. As noted above, total state GHG emissions in 2018 were approximately

425 million metric tons CO2e. This total was approximately six million metric tons CO_2e below the 2020 target established by AB 32 (ARB 2020b).

SB 32

In 2016, SB 32 was enacted. SB 32 extends the GHG reduction goals of AB 32 by requiring statewide GHG emission levels to be 40% below 1990 levels by 2030, in accordance with the target established by Executive Order B-30-15. The State has adopted an updated Scoping Plan that sets forth strategies for achieving the SB 32 target. The updated Scoping Plan continues many of the programs that were part of the previous Scoping Plans, including the cap-and-trade program, low-carbon fuel standards, renewable energy, and methane reduction strategies. As noted, the cap-and-trade program has been extended from its original expiration in 2020 to 2030.

It also addresses for the first time GHG emissions from the natural and working lands of California, including the agriculture and forestry sectors. Both natural and working lands sequester carbon in trees, other vegetation, soils, and aquatic sediment. The Scoping Plan recommends protecting working lands from conversion, enhancing carbon sequestration, and encouraging innovation in the disposal of biomass from working lands (ARB 2017).

Executive Order B-55-18

On September 10, 2018, Governor Brown signed Executive Order B-55-18. This executive order set a statewide goal of achieving carbon neutrality no later than 2045. "Carbon neutrality" refers to achieving net zero carbon emissions (i.e., GHGs) by balancing a measured amount of carbon released with an equivalent amount sequestered or offset. After 2045, California shall achieve and maintain net negative GHG emissions, or greater GHG sequestration or offsets than emissions. The goals set by Executive Order B-55-18 were codified in part by SB 100, also signed by Governor Brown in 2018 and addressing sources of electricity. Chapter 17.0 Utilities and Energy, describes SB 100 in more detail.

SB 375/Sustainable Communities Strategy

In 2008, the State enacted SB 375, which requires a metropolitan planning organization to include a Sustainable Communities Strategy in its Regional Transportation Plan (see Chapter 16.0, Transportation). The Sustainable Communities Strategy demonstrate an approach to how land use development and transportation can work together to meet GHG emission reduction targets for cars and light trucks. These targets, set by ARB, call for the region to reduce per capita GHG emissions. If a metropolitan planning organization is unable to meet the targets through the Sustainable Communities Strategy, then an alternative planning strategy must be developed which demonstrates how targets could be achieved.

SJCOG is the metropolitan planning organization for San Joaquin County and its incorporated cities. The ARB provided GHG reduction targets for the preparation of SJCOG's 2014 Regional Transportation Plan, setting the targets at a 5% per capita

reduction relative to 2005 levels by 2020, and a 10% per capita reduction relative to 2005 levels by 2035. These remain the targets in the recently adopted 2018 Regional Transportation Plan (SJCOG 2018a).

The adopted Sustainable Communities Strategy includes policies and supporting strategies designed to attain the GHG per capita reduction targets. Among the strategies that may be relevant to the project are improving transportation options linking residents to employment centers within and out of San Joaquin County, promoting safe and efficient strategies that improve the movement of goods by truck, and improving regional transportation system efficiency (SJCOG 2018a). SJCOG has no authority to enforce the policies and strategies in the Sustainable Communities Strategy; the ultimate decisions regarding land use remain with the local governments. However, as noted below, the City General Plan proposes to coordinate City plans and programs with the Regional Transportation Plan/Sustainable Communities Strategy

Local

City of Stockton Climate Action Plan

The City of Stockton adopted a Climate Action Plan (CAP) in 2014, in compliance with a Settlement Agreement with the California Attorney General and the Sierra Club related to the City's adopted General Plan 2035 and associated EIR. The CAP "outlines a framework to feasibly reduce community GHG emissions in a manner that is supportive of AB 32 and is consistent with the Settlement Agreement and 2035 General Plan policy" (City of Stockton 2014).

The CAP sets a GHG emission reduction target of 10% below 2005 GHG emission levels by 2020, or approximately 20.6% below 2020 "business as usual" GHG emissions (i.e., 2020 GHG emissions that are unmitigated), which is the level by which the State has set its emission reduction goal. Approximately 83% of the reductions needed to achieve the City's GHG reduction goal are achieved through state-level programs, and 17% are achieved through City-level programs. The largest GHG reductions are identified in the areas of building energy (both energy efficiency and renewable energy), transportation, and waste. It should be noted that the GHG emission inventory on which CAP targets and policies are based did not include heavy industrial sources.

Approximately 1% of the total reduction would be achieved through a Development Review Process through which development projects requiring discretionary approval from the City must demonstrate a 29% reduction from 2020 business-as-usual GHG emissions, consistent with the SJVAPCD target. Appendix F of the CAP has a Climate Impact Study Process, which is part of the Development Review Process, that describes BMPs to reduce GHG emissions from construction and operational activities. Development must identify the BMPs or other mitigation that would provide the reduction in GHG emissions (City of Stockton 2014).

Stockton General Plan 2040

The following Stockton General Plan 2040 policies and implementing actions are relevant to this project (City of Stockton 2018a):

- Action LU-6.6B: Participate in the San Joaquin Council of Governments' (SJCOG) regional planning programs and coordinate City plans and programs with those of SJCOG, including the Regional Transportation Plan/Sustainable Communities Strategy, among others, and work with non-profit organizations also engaging in these planning programs.
- Action CH-5.1B: Maintain and implement the City of Stockton Climate Action Plan (CAP) and update the CAP to include the following:
    - Updated community-wide GHG emissions inventory,
    - 2030 GHG emissions reduction target, consistent with SB 32,
    - Estimated 2030 GHG emissions reduction benefits of State programs,
    - Summary of the City's progress toward the 2020 local GHG emissions reduction target,
    - New and/or revised GHG reduction strategies that, when quantified, achieve the 2030 reduction target and continue emission reductions beyond 2030, and
    - New or updated implementation plan for the CAP.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact related to GHG emissions if it would:

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

This EIR conducts its GHG analysis in accordance with CEQA Guidelines Section 15064.4, which states that a lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. CEQA Guidelines Section 15064.4(b) states that a Lead Agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- 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.

Some jurisdictions have established quantitative thresholds for determining the significance of project GHG emissions from construction activities and project operations. Neither the City, San Joaquin County, nor SJVAPCD has established such quantitative significance thresholds, although the SJVAPCD recommends a 29% reduction from business-as-usual GHG levels for project operational emissions. As noted above, the Stockton CAP determined that approximately 83% of the GHG reductions targeted by the City would be accomplished by statewide measures, while 17% would be accomplished by local measures. Based on these percentages, approximately 5% of GHG reductions would be required by local measures. For the purposes of this analysis, a project that can attain at least a 5% reduction in GHG emissions from business-as-usual levels would have impacts on GHG reduction plans that would be less than significant.

Impact GHG-1: Project GHG Construction Emissions and Consistency with Applicable Plans and Policies

The CalEEMod model estimated the total GHG construction and operational emissions associated with the proposed project site development (see Chapter 6.0, Air Quality and Appendix C of this EIR). Table 10-1 presents the results of the CalEEMod run. Based on results from the CalEEMod run, maximum project construction GHG emissions for a calendar year would be approximately 3,363 metric tons CO_2e for the assumed construction period.

TABLE 10-1
PROJECT GHG EMISSIONS

GHG Emission Type	Unmitigated Emissions (metric tons CO_2e)	Mitigated Emissions (metric tons CO_2e)
Construction[1]	3,363	3,363
Operational[2]	31,704	27,461

[1] Maximum GHG emissions for calendar year.
[2] Annual emissions.
Source: California Emissions Estimator Model v. 2016.3.1.

Mitigation measures applied to reduce air pollutant emissions from construction emissions have no significant impact on GHG emissions. Construction emissions would occur only during construction work and would cease once work is completed. Also, the ARB has implemented the Regulation for In-Use Off-Road Diesel Fueled Fleets, which applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles (except on-road two-engine sweepers). The overall purpose of the Off-Road Regulation is to reduce emissions of NO_x and particulate matter from off-road diesel vehicles operating within California. The Off-Road Regulation imposes limits on idling and requires a written idling policy. It also requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or by installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). Compliance with the Off-Road Regulation, particularly the idling limitations, is expected to lead to an incidental reduction in GHG emissions, though the amount of this reduction cannot be determined.

The Climate Impact Study Process in the Stockton CAP describes construction BMPs to reduce GHG emissions from construction activities. These include having at least 3% of the construction fleet electric-powered and reducing idling time of construction equipment to three minutes. These measures have been incorporated as mitigation below. In addition, as discussed in Chapter 3.0, Project Description and Chapter 6.0, Air Quality, the project will incorporate the Additional Air Quality Improvement Measures listed in Appendix B to reduce air quality and GHG emissions from construction activities generally, and to reduce adverse effects on the nearby disadvantaged community. However, since these measures cannot be precisely quantified, and no quantified thresholds applicable to GHG construction emissions are available, it cannot be stated with certainty that GHG emissions would be reduced to a level that is considered less than significant. Therefore, impacts of project construction GHG emissions are considered significant and unavoidable.

Level of Significance: Potentially significant

Mitigation Measures:

GHG-1: The project shall implement the Off-Road Vehicles Best Management Practices specified in the Stockton Climate Action Plan. At least three (3) percent of the construction vehicle and equipment fleet shall be powered by electricity. Construction equipment and vehicles shall not idle their engines for longer than three (3) minutes.

Significance After Mitigation: Significant and unavoidable

Impact GHG-2: Project GHG Operational Emissions and Consistency with Applicable Plans and Policies

The CalEEMod run estimated that operational GHG emissions resulting from development under the proposed project would be approximately 31,704 metric tons CO_2e annually under "unmitigated" conditions (i.e., without implementation of any reduction measures). To estimate "mitigated" with project conditions, the CalEEMod run

incorporated the following project features and regulations that would reduce GHG emissions.

- Distance to downtown is 4.25 miles.
- Installation of sidewalk along currently unimproved frontage per City standards.
- Implementation of employee trip reduction program, which is required by SJVAPCD Rule 9410 (see Chapter 6.0, Air Quality).
- Implement required water conservation reduction (20% reduction in water use).
- Institute recycling and composting services (75% reduction in waste disposed).

With incorporation of these measures, estimated operational GHG emissions would be reduced to approximately 27,461 metric tons CO_2e annually, an approximately 13.4% reduction in GHG emissions from unmitigated levels. Much of the decrease is from mobile emissions, which were reduced by approximately 2,468 metric tons CO_2e. It is likely ETRIP implementation plus the relatively short distance to downtown accounts for these emission reductions. Another significant reduction was from solid waste generation, with a reduction of approximately 1,282 metric tons CO_2e. Recycling and composting requirements contribute to this reduction.

As noted, a project that can show GHG reductions greater than 5% from the business-as-usual (unmitigated) level can be said to be consistent with the reduction goals of the Stockton CAP. As indicated in Table 10-1, project GHG operational emissions reduction would be reduced by more than 5%. Since the CAP goals are intended to be consistent with both the State's and SJVAPCD's plans, this reduction would be consistent with the goals of these plans.

Per SB 32, the State has set a 2030 reduction target of 40% below 1990 GHG emission levels. The Stockton CAP does not have 2030 reduction targets. However, assuming the same growth in business-as-usual GHG emissions that was projected to occur between 2005 and 2020 by the CAP, the total 2030 business-as-usual GHG emissions in Stockton would be 3,025,292 metric tons CO_2e. Based on information in the CAP, the 2030 reduction target (40% below 1990 emissions) would be 1,074,672 metric tons CO_2e. Therefore, the percentage reduction from business-as-usual levels that would be required in 2030 would be approximately 64.5%, which would considerably exceed the State target.

The 2017 Scoping Plan proposes various measures to achieve the 2030 target. Most of these are State measures, such as use of the cap-and-trade program, the Short-Lived Climate Pollutant Plan, and achievement of the 50% renewable sources of electricity in the Renewables Portfolio Standard.[1] Based on estimates in the 2017 Scoping Plan, State actions would account for 89.8% of GHG reductions needed by 2030, with local actions accounting for approximately 9.3% of reductions. Applying this ratio to the percentage reduction for 2030, then approximately 6.0% of the reduction from 2030 business-as-

[1] Please refer to Chapter 17.0, Utilities and Energy, for a description of the Renewables Portfolio Standard.

usual levels would be achieved by local measures, including the Development Review Process. A project that can shows GHG reductions greater than 6.0% can be said to be consistent with the reduction goals of SB 32. Project GHG operational emission reductions would exceed this percentage. Therefore, the project would be consistent with the reduction goals of SB 32.

While the project would be consistent with GHG reduction plans, the project would also implement the Additional Air Quality Improvement Measures listed in Appendix B. These measures include similar measures prescribed by the California Department of Justice in conjunction with the nearby Sanchez-Hoggan Annexation project in 2020 to reduce air quality and GHG emissions from warehouse operations and to reduce potential adverse effects on the nearby disadvantaged community (see Appendix B). With the implementation of these measures, project operational impacts on GHG emissions would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

11.0 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL SETTING

This chapter focuses on health and safety issues associated with hazardous materials, proximity to airports, and wildfires. Chapter 6.0, Air Quality, discusses hazards from TAC emissions. Chapter 9.0, Geology, analyzes geologic and soil hazards. Chapter 12.0 Hydrology and Water Quality addresses potential flooding hazards.

Hazardous Materials

As described in Chapter 5.0, Agricultural Resources, agriculture has been a historical activity on the project site, and much of the site is currently used for agricultural production. Agricultural uses typically involve pesticides and other chemicals, which may be considered hazardous materials and can contaminate soils and water if not properly applied or excessively applied. Nearby land uses, such as Delta Charter and the auto salvage businesses on Clark Road, involve activities that handle potentially hazardous materials such as motor vehicle fluids.

Data on hazardous waste and hazardous material use and transportation sites are kept in the GeoTracker database, maintained by the SWRCB, and in the EnviroStor database, maintained by the California Department of Toxic Substances Control (DTSC). GeoTracker and EnviroStor map the locations and provide the names and addresses of hazardous material sites, along with their contamination history and cleanup status. A search of both databases indicated no record of active hazardous material sites on the project site (SWRCB 2020, DTSC 2020a). The nearest active hazardous material sites, as indicated by EnviroStor, are Ripon Pacific and Amador Chemical Corporation, both on East Carpenter Road east of Mariposa Road, approximately 300 feet northeast of the project site (DTSC 2020a). Figure 11-1 shows the locations of the mapped hazardous material sites in the general project vicinity. The GeoTracker database recorded the Delta Charter site to the north as a Leaking Underground Storage Tank site; however, that site has been remediated and the case has been closed (SWRCB 2020).

A list of solid waste disposal sites identified by SWRCB that exhibit waste constituent levels outside the waste management unit as being above hazardous waste screening criteria did not contain any locations within the project vicinity (CalEPA 2021a). Likewise, a list by SWRCB containing sites under Cease and Desist Orders and Cleanup and Abatement Orders showed no locations on or near the project site (CalEPA 2021b).

A Phase I Environmental Site Assessment was conducted for the project site by Cornerstone Earth Group. The Phase I assessment sought to identify, to the extent feasible, recognized environmental conditions on the project site. A "recognized environmental condition" is the presence or likely presence of any hazardous substances

or petroleum products in, on, or at a property due to any release to the environment, under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment. Cornerstone reviewed environmental databases, looked at information on historical use, conducted questionnaires and interviews, and conducted field reconnaissance of the project site. The results of the Phase I assessment identified the following recognized environmental conditions (Cornerstone Earth Group 2021a):

- Storage of small structures, debris, and apparently abandoned vehicles in the western and west-central portions of the project site on APN 179-220-13. The address associated with this area was identified on the Clandestine Drug Laboratory database, and a letter was issued by the County Environmental Health Division indicating recommendation to abate the potentially hazardous materials/waste observed in this area. No record of cleanup was provided.

- Significant amounts of debris, automotive parts, motor vehicle fluid, and dumping activity in the vicinity of the structures on APNs 179-220-10 and -11, some of which have been dumped in the adjacent North Littlejohns Creek.

- Observation of burned construction materials, dumping, and debris in the vicinity of the concrete pool-like structures on APN 179-220-16.

Past and current agricultural activities have likely used agricultural chemicals, potentially leaving residues in the project site soils at concentrations that can affect human health. Agricultural chemicals are typically applied in diluted concentrations, and they degrade relatively quickly when used properly. However, the Phase I Environmental Site Assessment concluded that residual pesticides may be present in the area of current and former structures.

A Phase II Environmental Site Assessment was also conducted by Cornerstone, after completion of the Phase I assessment. This document reported the results of soil sampling conducted on the project - general sampling related to potential residual agricultural chemicals and sampling in the areas of the recognized environmental conditions. The results of the Phase II assessment indicated that no organochlorine pesticides, total petroleum hydrocarbons, residual polychromatic hydrocarbons (generally associated with burned areas), or volatile organic compounds were detected at concentrations that exceeded screening levels established for the development of residential projects – the most-strict of screening levels (Cornerstone Earth Group 2021b).

Airport Hazards

Development near airports is potentially subject to hazards arising from airport operations. In general, development that concentrates residents and employees near airports is discouraged, both to avoid potential hazards associated with aircraft takeoffs and landings and to reduce exposure to noise associated with aircraft. Chapter 14.0, Noise, discusses potential noise impacts related to airport operations.

The closest public airport to the project site is Stockton Metropolitan Airport, approximately two miles to the southwest. The airport offers scheduled passenger air service, along with general aviation and air cargo services. The project site is within the land use compatibility planning area for Stockton Metropolitan Airport, specifically within Compatibility Zone 7b (Figure 11-2). Compatibility Zone 7b allows a maximum non-residential development intensity of 450 persons per acre, requires airspace review of objects more than 100 feet tall, and prohibits the following land uses (Coffman Associates 2016):

- New dumps or landfills, other than those consisting entirely of earth and rock but including those that are subject to applicable law and implementing advisories.
- Outdoor stadiums.
- Other hazards to flight.

Compatibility Zone 7b corresponds with the Traffic Pattern Safety Zone 7b designated in accordance with Federal Aviation Administration regulations. Land development prohibitions for both zones are the same.

Wildfire Hazards

Wildland fires are an annual hazard in San Joaquin County. Wildland fires burn natural vegetation on undeveloped lands and include rangeland, brush, and grass fires. Long, hot, and dry summers with temperatures often exceeding 100°F add to the county's fire hazard. Human activities are the major causes of wildland fires, while lightning causes the remaining wildland fires. High hazard areas for wildland fires are the grass-covered areas in the east and the southwest foothills of the county (San Joaquin County 2016b). The project site is not within these areas.

The Fire and Resource Assessment Program, managed by the California Department of Forestry and Fire Protection (Cal Fire), identifies fire threat based on a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined in determining the following Fire Hazard Severity Zones: Moderate, High, Very High, Extreme. These zones are mapped for two separate areas: State Responsibility Areas are where the State of California is financially responsible for the prevention and suppression of wildfires, while Local Responsibility Areas are where fire protection is typically provided by city fire departments, fire protection districts, counties, or by Cal Fire under contract to local government. The project site and surrounding lands are within a Local Responsibility Area and have not been placed in a Fire Hazard Severity Zone (Cal Fire 2007a, 2007b).

REGULATORY FRAMEWORK

Federal Hazardous Material Regulations

At the federal level, the principal agency regulating the generation, transport and disposal of hazardous substances is the EPA, under the authority of the Resource Conservation and Recovery Act (RCRA). The RCRA established a federal hazardous substance "cradle-to-grave" regulatory program that regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. Under RCRA, individual states may implement their own hazardous substance management programs if they are consistent with, and at least as strict as, the RCRA and if they receive EPA approval.

The EPA regulates hazardous substance sites under the Comprehensive Environmental Response Compensation and Liability Act, commonly referred to as Superfund. The purpose of Superfund is to provide authorities with the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. The subsequent Superfund Amendments and Reauthorization Act amended Superfund to, among other things, expand EPA's response authority, strengthen enforcement activities at Superfund sites, and broaden the application of the law to include federal facilities. In addition, new provisions were added dealing with emergency planning and community right-to-know.

The U.S. Department of Transportation regulates the interstate transport of hazardous materials and wastes through implementation of the Hazardous Materials Transportation Act. This act specifies driver-training requirements, load labeling procedures, and container design and safety specifications. Transporters of hazardous wastes must also meet the requirements of additional statutes such as RCRA.

State Hazardous Material Regulations

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including the California Environmental Protection Agency and the Office of Emergency Services. The California Highway Patrol and Caltrans enforce regulations related to hazardous materials transport.

The DTSC is part of the California Environmental Protection Agency. It has the primary authority to enforce hazardous materials regulations for the generation, transport, and disposal of hazardous wastes under the authority of the Hazardous Waste Control Law, with delegation of enforcement to local jurisdictions that enter into agreements with the agency. DTSC is also responsible for overseeing the evaluation and cleanup of contaminated properties throughout California, including military facilities, school construction and expansion projects, and permitted facilities.

Under both RCRA and the Hazardous Waste Control Law, the generator of a hazardous substance must complete a manifest that accompanies the waste from the point of generation to the ultimate treatment, storage, or disposal location. The manifest describes the waste, its intended destination, and other regulatory information about the waste.

Copies must be filed with the DTSC. Generators must also match copies of waste manifests with receipts from the treatment, storage, or disposal facility to which it sends waste.

California Fire Code

California Code of Regulations Title 24, Part 9 contains the California Fire Code, which is revised approximately every three years by the California Building Standards Commission. It incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official Fire Code for the State and all political subdivisions. The City of Stockton has adopted the 2019 version of the California Fire Code by reference in Chapter 15.12 of the Stockton Municipal Code.

Local Hazardous Material Regulation

Certified Unified Program Agency (CUPA)

The Unified Hazardous Waste and Hazardous Management Regulatory Program, enacted in 1993, is a state and local effort to consolidate, coordinate, and make consistent existing programs regulating hazardous waste and hazardous materials management. The California Environmental Protection Agency adopted implementing regulations for the Unified Program in 1996.

The Unified Program is implemented at the local level by a Certified Unified Program Agency (CUPA). The San Joaquin County Environmental Health Department was approved by the State as the CUPA for the County and its incorporated cities. In that role, the County Environmental Health Department administers the California Accidental Release Prevention, Aboveground Petroleum Storage Act, Hazardous Waste Generator, Hazardous Waste Onsite Treatment, and Underground Storage Tank programs.

The CUPA also provides the management and record keeping of hazardous materials through the Hazardous Materials Program. This program inspects businesses for compliance with the Hazardous Waste Control Law and issues hazardous materials/waste permits to businesses that handle quantities greater than or equal to 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas at any given time. Businesses issued these permits are required to submit a Hazardous Materials Business Plan, which includes an inventory of hazardous materials and hazardous wastes, and an emergency response plan for incidents involving hazardous materials and wastes.

Stockton Metropolitan Airport Land Use Compatibility Plan

The Airport Land Use Compatibility Plan (ALUCP) for Stockton Metropolitan Airport was adopted by SJCOG in 2016. The purposes of the ALUCP are to protect the public from the adverse effects of airport noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.

The ALUCP establishes land use compatibility zones within the Airport Influence Area of Stockton Metropolitan Airport, which is the area covered by the ALUCP (Figure 11-2). Allowable development densities and intensities are specified within each zone, along with prohibited land uses and other development conditions, all of which are based on safety criteria in the ALUCP (Coffman Associates 2016). Eight safety and compatibility zones have been established around the airport. The project site is within Compatibility Zone and Traffic Pattern Safety Zone 7b, which were described above.

Projects that could potentially affect airport operations are subject to review by the Airport Land Use Commission, members of which are the SJCOG Board of Directors. The Airport Land Use Commission reviews projects for consistency with the ALUCP prepared for the airport and to ensure that the project does not interfere with airport operations. Projects within the Airport Influence Area of an airport are subject to Commission review. The project site is within the Airport Influence Area of Stockton Metropolitan Airport.

San Joaquin County Emergency Operations Plan

An update to the San Joaquin County Emergency Operations Plan was adopted in April 2019. The primary purpose of the plan, prepared by the County Office of Emergency Services, is to outline the County's all-hazard approach to emergency operations to protect the safety, health, and welfare of its citizens throughout all emergency management mission areas The plan is an all-hazards document describing the County's incident management structure, compliance with relevant legal statutes, other relevant guidelines, whole community engagement, continuity of government focus, and critical components of the incident management structure. Hazards include natural hazards such as floods, earthquakes, and extreme heat, along with technological hazards such as dam and levee failure and hazardous material releases and human-caused hazards such as civil disturbances and terrorism. (San Joaquin County OES 2019a).

As part of the preparation of the Emergency Operations Plan, evacuation routes have been designated in various parts of the County, including southeast Stockton. Within an area designated as the Stockton South East Evacuation Zone, Mariposa Road has been designated as an evacuation route (San Joaquin County OES undated).

County Agricultural Commissioner

The County Agricultural Commissioner is directed by the County Office of Emergency Services to track agricultural uses and issue use permits for pesticide application on agricultural land. The Commissioner's staff conducts routine inspections to ensure that farm operations comply with the requirements set forth in the Federal Insecticide, Fungicide, and Rodenticide Act, the main federal statute governing agricultural chemical use. This act, among other provisions, requires users to register when purchasing pesticides; later amendments to the law required users to take exams for certification as applicators of pesticides. For the most recent year information is available, most farmland in the County was permitted for pesticide use.

Stockton Municipal Code

The City of Stockton has established provisions in its Municipal Code related to hazards and hazardous materials. The sections of the Municipal Code most relevant to the proposed project are described below.

Section 16.28.030 – Aircraft Operations Overlay District

Chapter 16.28 regulates development and new land uses in overlay districts established by Section 16.16.020. Section 16.28.030 establishes the Airport Operations overlay district and provides height limits for structures in the vicinity of the Stockton Metropolitan Airport, based on zones or surfaces defined in the air space above the airport and its surroundings. It also requires that all proposed uses in the overlay district be consistent with the ALUCP.

Section 16.36.080 - Hazardous Materials

This section sets forth the standards for regulating the use, handling, storage, and transportation of hazardous materials. Per Section 16.36.080(A), a use permit is required for any new commercial, industrial, institutional, or accessory use, or major addition (over 10 percent) to an existing use within 1,000 feet of a residential zoning district that involves the manufacture, storage, handling, or processing of hazardous materials in sufficient quantities that would require permits as hazardous materials. In addition, this section provides standards for reporting, notification, new development, and both underground and aboveground storage of hazardous materials. Proposed project development is within 1,000 feet of a residential zoning district.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact related to hazards and hazardous materials if it would:

- 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,
- Emit hazardous emissions or handle hazardous or acutely hazardous materials within one-quarter mile of an existing or proposed school,
- Be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5, and as a result create a significant hazard to the public or the environment,

- For a project located within an airport land use plan or within two miles of a public or public-use airport if no plan has been adopted, result in a safety hazard or excessive noise for people residing or working in the project area,
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan, or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Impact HAZ-1: Hazardous Material Transportation and Storage

Future warehousing projects or other development resulting from proposed by the project will likely require the storage, transport, use, and disposal of hazardous materials, generally cleaning products, fuels, solvents, and products designed to maintain warehouse equipment. The proposed warehouses also could store finished goods or raw materials that may be considered hazardous to human health.

Project site activities that would transport or store hazardous materials would be required to do so in compliance with applicable local, state, and federal regulations. These requirements would include preparation and implementation of a Hazardous Materials Business Plan for activities that would transport or store specified quantities of hazardous materials (see CUPA section above). Compliance with existing hazardous material regulations and Business Plan provisions would reduce impacts related to routine transport, use, and storage of hazardous materials to a level that would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact HAZ-2: Hazardous Material Releases

Construction activities on the project site may involve the use of hazardous materials such as fuels and solvents, and thus create a potential for hazardous material spills. Construction and maintenance vehicles would transport and use fuels in ordinary quantities. Fuel spills, if any occur, would ordinarily be minimal and would not typically have significant adverse effects. Potential hazardous materials spills during construction are addressed in the required SWPPP, described in Chapter 9.0, Geology. In accordance with SWPPP requirements, contractors have absorbent materials at construction sites to clean up minor spills. Other substances used in the construction process would be stored in approved containers and used in relatively small quantities, in accordance with the manufacturers' recommendations and/or applicable regulations.

An issue of concern is the proximity of a "disadvantaged community" to the proposed development (see Chapter 13.0, Land Use, for a description of a disadvantaged community). Lands immediately west of the site are zoned for residential use, and some residences are located adjacent to or in the immediate vicinity of the project site. Factors

in determining the existence of a disadvantaged community include the presence of hazardous waste generators and facilities. Chapter 6.0, Air Quality, analyzes potential TAC impacts on sensitive receptors near the project site. Although proposed warehouse development would use a limited amount of hazardous materials, other development allowed by the proposed IL zone may use hazardous materials in larger amounts.

As noted in the Impact HAZ-1 discussion, hazardous materials transportation and storage on the project site would be subject to federal, state, and local regulations that would ordinarily prevent release of hazardous materials to the soil and/or groundwater and the creation of new hazardous material or waste sites. These requirements would include preparation and implementation of a Hazardous Materials Business Plan. In case of hazardous materials release, the City and County have emergency response teams that would respond to incidents involving hazardous materials.

If the project does not propose to store hazardous materials in quantities requiring a Hazardous Materials Business Plan, the most likely source of releases would be leaks of fluids from motor vehicles and spills of cleaning products and solvents used in warehouse operations. Spills of these materials would be minimal, and the building floors and pavement would prevent these materials from directly entering the soil.

As previously noted, a project may have significant impacts if it would emit hazardous emissions or handle hazardous or acutely hazardous materials within one-quarter mile of an existing or proposed school. There are no schools within one-quarter mile of the project site; the nearest school is Nightingale Charter School on 1721 Carpenter Road, approximately 2.25 miles west of the project site. Overall, project impacts related to hazardous material releases would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact HAZ-3: Hazardous Material Sites

As noted, a search of hazardous material databases did not find records of active hazardous material sites on or adjacent to the project site, but two active sites were identified across Mariposa Road from the project site. The Amador Chemical Corporation site has soil and groundwater contamination, and the Ripon-Pacific site has soil contamination, mainly by pesticides in disposed wastewater. Nearby land uses, such as Delta Charter and the auto salvage businesses on Clark Road, involve activities that have potential to lead to hazardous materials contamination with improper handling.

Existing and potential soil contamination at these sites would remain confined to these locations. A reassessment of the Amador Chemical Corporation site, prepared for the EPA, states that the prevailing groundwater flow direction is southeast, away from the project site. Moreover, this site is not a suspected source of drinking water well contamination in the area (DTSC 2020b). Therefore, the Amador Chemical Corporation site is not considered to have an impact on groundwater beneath the project site. Neither

site was identified by the Phase I Environmental Site Assessment as a recognized environmental condition that could affect the project site.

The Phase II Environmental Site Assessment determined that project site soils in general and soils at the recognized environmental condition areas did not have concentrations of contaminants that exceeded screening levels established for residential projects. As such, the project does not have any soil contamination that could affect either construction workers or employees working at the proposed development. Project impacts related to hazardous material sites are less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact HAZ-4: Airport Hazards

As noted, the project site is within the Airport Influence Area for the Stockton Metropolitan Airport; therefore, the Airport Land Use Commission would review the proposed project for consistency with the ALUCP. The project site is within Compatibility Zone 7b as established by the Stockton Metropolitan Airport ALUCP. The ALUCP specifies the land uses prohibited within Zone 7b (described in the Environmental Setting above), requires Airport Land Use Commission review of objects exceeding 100 feet in height, and restricts potential hazards to flight.

Proposed development on the project site appears to be consistent with the allowed land uses in Compatibility Zone 7b of the ALUCP. No land uses prohibited by the ALUCP are proposed on the project site. The project may include structures of up to 100 feet in height. While structures of this height may not require FAA airspace review, structures approaching this height may well involve Airport Land Use Commission concerns. ALUCP review would be triggered during City permit review, and as a result of ALUC recommendations, roject impacts related to airport hazards can be expected to be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact HAZ-5: Interference with Emergency Vehicle Access and Evacuations

While project construction work would mostly occur on the project site, frontage improvements and connection to utility lines on Mariposa Road or other public roads may occur. Mariposa Road has been designated as an evacuation route for southeast Stockton. Project construction work that may occur on adjacent roads could potentially interfere with emergency vehicle access and evacuations.

Construction work on Mariposa Road would mainly occur on the edge of the roadway, which is not expected to require closure of the road or any major restriction on travel lanes. Should trenching or other excavation occur, the excavated area can be phased,

covered, or backfilled such that emergency vehicles and evacuee vehicles can pass the work site unobstructed. Once construction work is completed, project development would not obstruct any roads. Project impacts on emergency vehicle access or emergency evacuation plans would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact HAZ-6: Wildfire Hazards

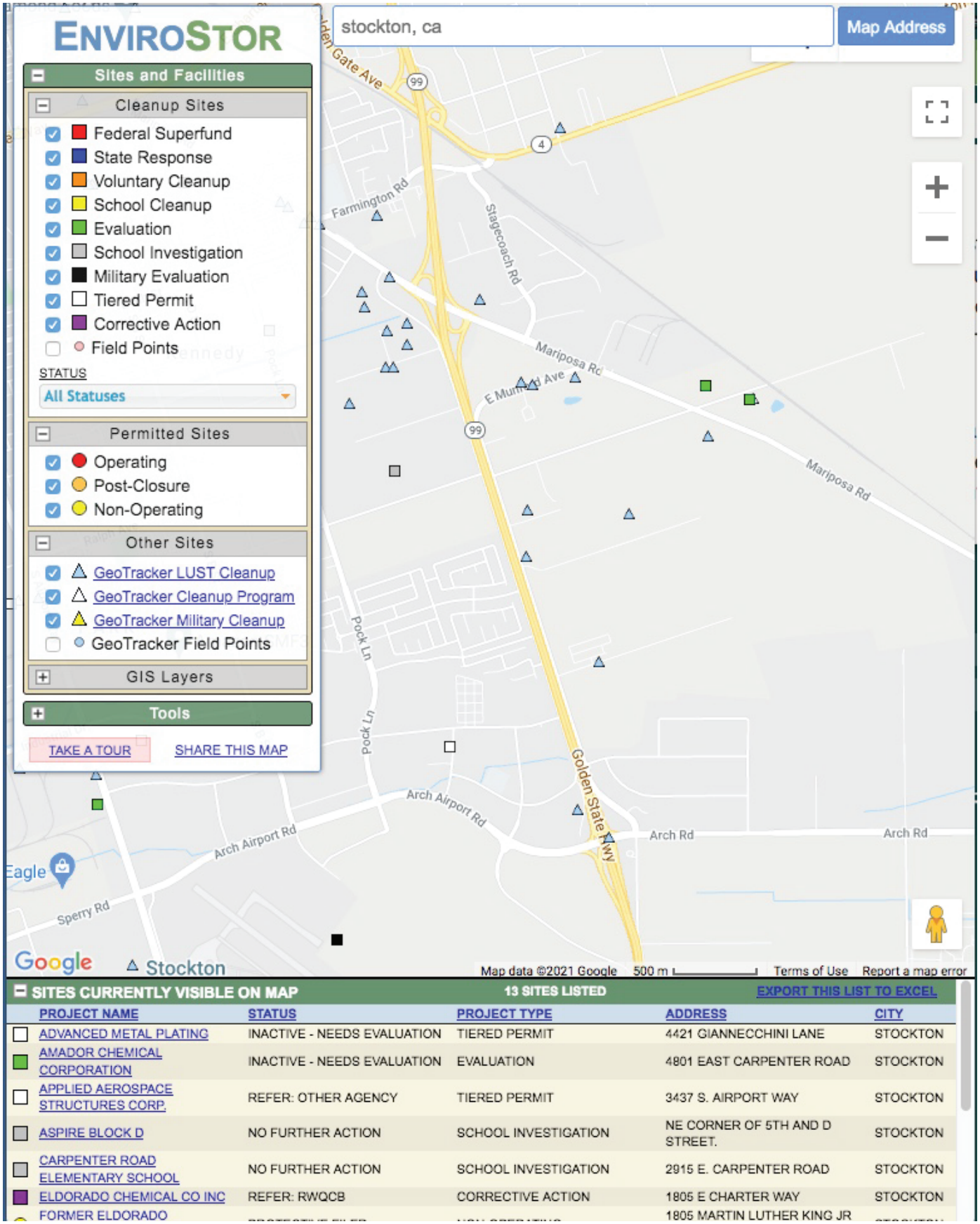
The project site currently is agricultural and vacant land. However, it is within an urbanizing area and is partially surrounded by existing urban development, which has a low wildfire hazard. As noted, the project site is not within a State Responsibility Area nor is it within a designated Fire Safety Hazard Zone, which are the primary concerns of the recently updated CEQA Guidelines Appendix G.

The project would reduce the existing limited wildland fire hazard on the site by replacing the existing vegetation with buildings and pavement. Once annexation is approved, fire protection services for the project site would become the responsibility of the Stockton Fire Department (see Chapter 15.0, Public Services and Recreation). Additionally, the project would be required to comply with the adopted California Fire Code, which would reduce potential fire risks to proposed structures.

Recently, PG&E has implemented Public Safety Power Shutoffs of its electrical facilities during times and in areas where conditions of extreme fire danger are anticipated, mainly in the foothill and mountain regions. The project vicinity is not in an area where Public Safety Power Shutoffs are likely to be implemented. Project impacts related to wildfires would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

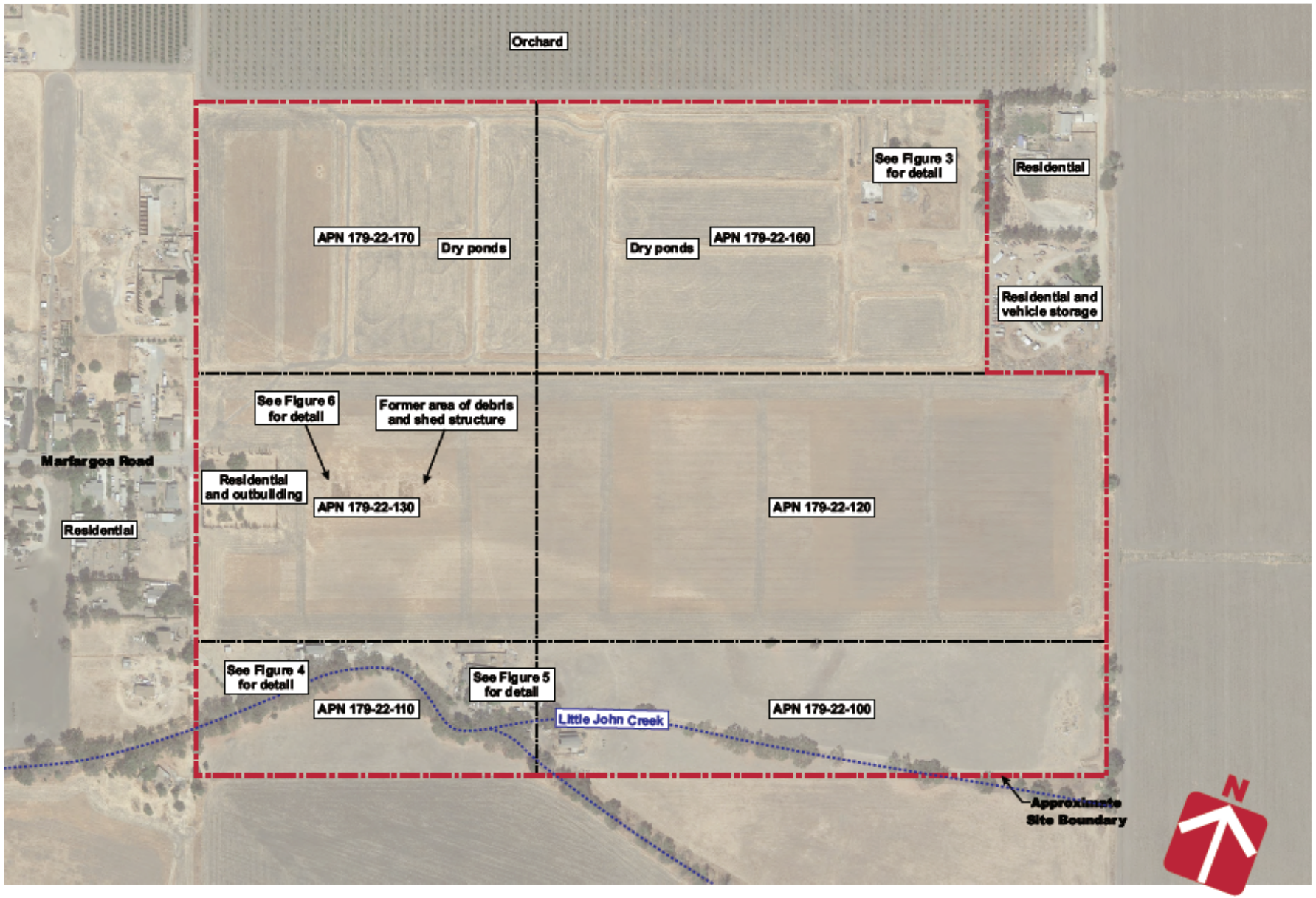


SITES CURRENTLY VISIBLE ON MAP — 13 SITES LISTED — EXPORT THIS LIST TO EXCEL

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY
ADVANCED METAL PLATING	INACTIVE - NEEDS EVALUATION	TIERED PERMIT	4421 GIANNECCHINI LANE	STOCKTON
AMADOR CHEMICAL CORPORATION	INACTIVE - NEEDS EVALUATION	EVALUATION	4801 EAST CARPENTER ROAD	STOCKTON
APPLIED AEROSPACE STRUCTURES CORP.	REFER: OTHER AGENCY	TIERED PERMIT	3437 S. AIRPORT WAY	STOCKTON
ASPIRE BLOCK D	NO FURTHER ACTION	SCHOOL INVESTIGATION	NE CORNER OF 5TH AND D STREET.	STOCKTON
CARPENTER ROAD ELEMENTARY SCHOOL	NO FURTHER ACTION	SCHOOL INVESTIGATION	2915 E. CARPENTER ROAD	STOCKTON
ELDORADO CHEMICAL CO INC	REFER: RWQCB	CORRECTIVE ACTION	1805 E CHARTER WAY	STOCKTON
FORMER ELDORADO			1805 MARTIN LUTHER KING JR	

BaseCamp Environmental

Figure 11-1
HAZARDOUS MATERIAL SITES IN VICINITY



BaseCamp Environmental

SOURCE: Cornerstone Earth Group

Figure 11-2
HAZARDOUS MATERIAL SITES IN VICINITY

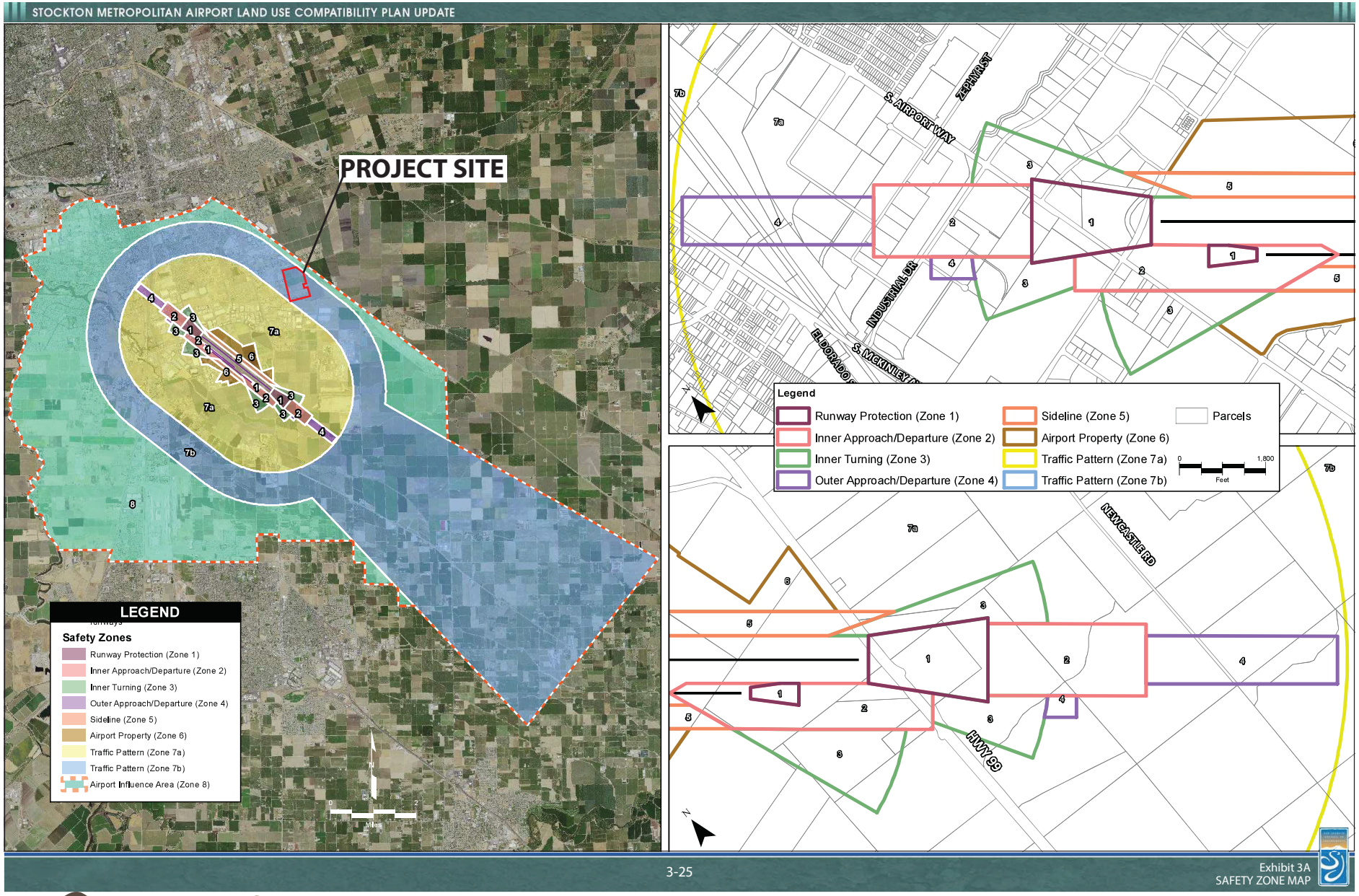


Exhibit 3A
SAFETY ZONE MAP

Figure 11-3
STOCKTON METROPOLITAN AIRPORT SAFETY ZONES

12.0 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL SETTING

Surface Waters and Surface Water Quality

North Littlejohns Creek flows west along the southern boundary of the project site. The creek originates as Littlejohns Creek in the foothills, then diverges from the mainstem of Littlejohns Creek approximately eight miles east of the project site. The North Littlejohns Creek watershed drains approximately 5,414 acres. North Littlejohns Creek is an intermittent stream and is dry for part of the year; it mostly conveys flood flows during and after winter storms. In summer months, the creek receives occasional irrigation runoff and urban stormwater drainage from outfalls (ESA 2014).

North Littlejohns Creek discharges into French Camp Slough west of the Stockton Metropolitan Airport. French Camp Slough flows west until it discharges into the San Joaquin River, upstream from the Stockton Deepwater Shipping Channel. The San Joaquin River, in turn, flows past Stockton and through the Delta region to its confluence with the Sacramento River east of Suisun Bay.

The project site is approximately 6.5 miles east of the San Joaquin River, the primary waterway draining the San Joaquin Valley and the main river in the Stockton area. The site is located approximately five miles east of the boundary of the Sacramento-San Joaquin Delta as defined by statute. The Sacramento-San Joaquin Delta is a 600-square-mile area of waterways and islands of reclaimed land at the confluence of the Sacramento and San Joaquin Rivers. The Delta receives runoff from a watershed that covers approximately 45 percent of the State's land area, including flows from the Sacramento, San Joaquin, Mokelumne, and Cosumnes Rivers (Lund et al. 2007). Portions of the Stockton area are within the legally defined boundaries of the Delta, but the project site is not.

Surface water quality in the Stockton area streams has been greatly influenced by local land uses, which have historically included a range of agricultural uses. Pollutant sources in the vicinity include past waste disposal practices, urban stormwater runoff, agricultural chemicals and fertilizers, and agricultural equipment deposits. Typical contaminants include sediment, hydrocarbons and metals, pesticides, nutrients, and litter. Irrigation and storm events likely transport these pollutants into North Littlejohns Creek (ESA 2014).

The RWQCB has prepared a list under Clean Water Act Section 303(d) that identifies surface waters in the Stockton area considered impaired in water quality, along with the pollutants responsible for the impairment. Littlejohns Creek, consisting of North and South Littlejohns Creek, is listed as having impaired water quality from *E. coli* bacteria

and from an unspecified toxicity (RWQCB 2014). The sources of these contaminants are listed as unknown, but a common source of *E. coli* bacteria in rural areas is animal waste.

Groundwater and Groundwater Quality

The project site is within the Eastern San Joaquin County Groundwater Subbasin of the San Joaquin Valley Groundwater Basin. The Eastern San Joaquin Subbasin is bounded by the Mokelumne River on the north and northwest, the San Joaquin River on the west, the Stanislaus River on the south, and the Sierra Nevada to the east. The subbasin is recharged by water from streams, percolation of rainfall and irrigation water, inflow from other groundwater basins, and intentional recharge in ponds and on some farm fields with compensation to landowners. The GPEIR does not identify any important recharge areas associated with the site.

Average groundwater use in the Eastern San Joaquin Subbasin is about 809,321 acre-feet per year, of which approximately 95 percent is for agriculture and the remainder is for municipal and industrial uses (City of Stockton 2018b). According to the most recent available groundwater report, groundwater levels in the vicinity of the project site range from 20 to 30 feet below ground surface (San Joaquin County Flood Control District 2018).

Groundwater has historically been an important source of domestic water in the Stockton area, but currently supplies less than one-quarter of the City's water (see Chapter 17.0, Utilities and Energy). Since the late 1940s and early 1950s, groundwater extraction to meet agricultural and urban demands has created a pronounced pumping depression between the Mokelumne and Stanislaus Rivers, with the center of the depression east of Stockton. The groundwater gradient beneath the project site is toward the pumping depression east of the site. The demand for groundwater in San Joaquin County appears to have peaked in the 1990s and is projected to continue to decline as the City of Stockton water demands are increasingly met by surface water supplies, and the City adopts more water-efficient urban and irrigation practices, and as the County implements sustainable groundwater management plans.

Groundwater in the subbasin is typically characterized by calcium-magnesium bicarbonate or calcium-sodium bicarbonate types. Groundwater flow toward the depression east of Stockton has allowed poorer-quality, more saline water from the Delta to migrate into the Stockton area (ESA 2014). During earlier periods of substantial over-pumping, migration of water from the Delta degraded water quality and threatened the long-term sustainability of the underlying groundwater basin. However, the groundwater supply of the City is generally of good quality, and once-rapid saline water migration appears to have slowed significantly (City of Stockton 2018b).

Flooding

According to the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA), the southern approximately 150-300 feet of the project site is within an area designated Zone A (100-year floodplain, along the North Littlejohns

Creek channel) or Zone AO (Figure 12-1). Zone AO denotes areas inside the 100-year floodplain with determined average flood depths of 1-3 feet. The 100-year floodplain is an area that is subject to inundation by a flood with a chance of occurring on average once every 100 years. The 100-year flood is the standard flood hazard that is of concern to FEMA. The remainder of the project site is not within any FEMA-designated floodplain.

As described later in this chapter, SB 5 legislation enacted in 2007 requires urban and urbanizing areas in the Central Valley to have protection from a flood with a chance of occurring on average once every 200 years (the "200-year flood") no later than 2025. A particular focus is protection of areas subject to potential 200-year flooding of three feet or more in depth. Based on 200-year flood mapping in the GPEIR (Figure 12-2), the project site would not have any 200-year flood exposure (City of Stockton 2018).

Dam and levee failures are incidents that can cause flooding. According to an annex to the Emergency Operations Plan prepared by the County Office of Emergency Services, the project site is not subject to inundation from failure of major dams or dikes in the area. The project site is outside the boundaries of levee districts established in San Joaquin County (San Joaquin County OES 2019b). No levees have been built along North Littlejohns Creek on or near the project site.

REGULATORY FRAMEWORK

Federal

Clean Water Act

The Clean Water Act, as administered by the EPA, seeks to restore and to maintain the chemical, physical, and biological integrity of the nation's waters. It employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, to finance municipal wastewater treatment facilities, and to manage polluted runoff.

Section 303(d) requires that each state identify water bodies or segments of water bodies that are "impaired" (i.e., not meeting one or more of the water quality standards established by the State). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to support their beneficial uses. The intent of the 303(d) list is to identify water bodies that require future development of a Total Maximum Daily Load for the pollutants causing the conditions of impairment. The Total Maximum Daily Load is the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Typically, it is the sum of the allowable loads of a single pollutant from all contributing point and non-point sources. As noted, Littlejohns Creek is on the Section 303(d) list as having impaired water quality.

National Pollutant Discharge Elimination System

The Clean Water Act authorizes the EPA to implement water quality regulations. The National Pollutant Discharge Elimination System (NPDES) permit program, under Section 402(p), controls water pollution by regulating storm water discharges into the waters of the United States. California has an approved State NPDES program. The EPA has delegated authority for regulating storm water discharges to the SWRCB, which in turn delegates this authority to the RWQCBs. In accordance with the NPDES program, the Central Valley RWQCB has issued a general permit for municipal separate storm sewer systems (MS4) within its jurisdiction (RWQCB Order R5-2016-0040). The City of Stockton implements its storm water quality programs in accordance with this MS4 permit. A description of the City's MS4 permit program is provided later in this section.

National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate FEMA to evaluate flood hazards. FEMA provides Flood Insurance Rate Maps for local and regional planners to promote sound land use and floodplain development by identifying potential flood areas based on the current conditions. To delineate these maps, FEMA conducts engineering studies referred to as Flood Insurance Studies. The most recent maps for the City of Stockton were completed and published in 2009. Using information gathered in these studies, FEMA engineers and cartographers delineate Special Flood Hazard Areas on Flood Insurance Rate Maps. The Special Flood Hazard Area is the area where the floodplain management regulations of the National Flood Insurance Program must be enforced and the area where the mandatory purchase of flood insurance applies. These include areas with Zone AO designations.

Under the National Flood Insurance Program, the City of Stockton has created standards and policies to ensure flood protection. These policies address development and redevelopment, compatibility of uses, predevelopment drainage studies, compliance with discharge permits, enhancement of existing waterways, and cooperation with the Corps and the San Joaquin Area Flood Control Agency, among other matters. The San Joaquin Area Flood Control Agency is a joint powers agency whose members are San Joaquin County, the City of Stockton, and the San Joaquin Flood Control and Water Conservation District. The agency's mission is to study, plan, and implement flood protection projects to reduce the risk to people, structures, and the economy.

State

Water Quality Control Plan (Basin Plan)

The Central Valley RWQCB has prepared a Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan). The Basin Plan identifies water quality standards that are based on identified beneficial uses and water quality objectives based on those uses. Beneficial uses listed for surface water bodies in the vicinity of the project site include municipal and domestic supply, agriculture supply,

wildlife habitat, warm and cold freshwater habitat, contact and non-contact recreation, warm and cold-water migration of aquatic organisms and spawning, industrial process and service supply, and groundwater recharge (RWQCB 2015). The City achieves consistency with the standards of the Basin Plan through implementation of the City's MS4 permit program, which is described below, as well as compliance with Waste Discharge Requirements applied to its wastewater treatment system, which is described in Chapter 17.0, Utilities.

SWRCB General Permits

SWRCB has adopted general permits for construction activity and industrial and commercial use to maintain surface water quality. As described in Chapter 9.0, Geology and Soils, project construction that causes one acre of ground disturbance or more is required to obtain a Construction General Permit, conditions for which include preparation of a SWPPP.

The state Industrial General Permit (Order No. 2014-0057-DWQ) became effective July 1, 2015. The Industrial General Permit implements the federally required storm water regulations in California for storm water associated with industrial activities discharging to waters of the United States. In general, facilities designated by the RWQCB, facilities whose operators seek coverage, and facilities required by EPA stormwater regulations are covered by the Industrial General Permit. Among other things, the Industrial General Permit requires:

- Prohibition of unauthorized non-stormwater discharges. The authorized non-stormwater discharges are addressed in the Special Conditions section of the Industrial General Permit.
- Control of pollutant discharges using the best available technology economically achievable and best conventional pollutant control technology.
- All facility operators to prepare, retain on site, and implement a SWPPP. Development and implementation requirements for the SWPPPs are included in sections of the Industrial General Permit. However, SWPPPs are developed emphasizing BMP implementation and elimination of unauthorized non-stormwater discharges.
- Implementation of a monitoring program to demonstrate compliance with the Industrial General Permit. Allowances for alternative monitoring and group monitoring are also provided in the Permit.

Sustainable Groundwater Management Act

In 2014, the California Legislature passed the Sustainable Groundwater Management Act (SGMA), the purpose of which is to give local agencies greater authority to manage groundwater supplies. The legislation requires the formation by June 30, 2017 of local Groundwater Sustainability Agencies that must assess conditions in their local water

basins and adopt locally based management plans. Several agencies in the Eastern San Joaquin Subbasin have become Groundwater Sustainability Agencies, including the City of Stockton, San Joaquin County, the Stockton East Water District, Central San Joaquin Water Conservation District, and the South San Joaquin Groundwater Sustainability Agency.

Under SGMA, groundwater sustainability plans for critically overdrafted basins are to be adopted by January 31, 2020, while other groundwater basins are required to adopt plans by January 31, 2022. The Eastern San Joaquin Subbasin has been designated a critically overdrafted basin. A Groundwater Sustainability Plan for the Subbasin, which was prepared by several agencies that included the City, was submitted to the DWR on January 29, 2020.

The Groundwater Sustainability Plan follows the method prescribed by SGMA to measure undesirable results, which involves setting minimum thresholds and measurable objectives for a series of representative wells. A total of 20 representative wells were identified for measurement of groundwater levels, and 10 representative wells were identified for groundwater quality monitoring. Groundwater evaluations conducted as a part of plan development have provided estimates of the historical, current, and projected groundwater budget conditions. Based on these analyses, at projected groundwater pumping levels, the long-term groundwater pumping offset and/or recharge required for the Subbasin to achieve sustainability is approximately 78,000 acre-feet per year (ESJGA 2019).

Achieving sustainability in the Subbasin requires implementation of projects and management actions. These include water supply projects that either replace groundwater use or supplement groundwater supplies to attain the current estimated pumping offset and/or recharge need. A final list of 23 potential projects is included in the Groundwater Sustainability Plan, representing a variety of project types, including direct and in-lieu recharge, intra-basin water transfers, demand conservation, water recycling, and stormwater reuse (ESJGA 2019).

SB 5 Bills

In 2007, the State of California approved SB 5 and a series of related Senate and Assembly bills intended to set new flood protection standards for urban areas. These bills, referred to collectively in this document as "the SB 5 Bills," establish the State standard for flood protection in urban areas in the Central Valley as protection from the 200-year flood. Under the SB 5 Bills, urban and urbanizing areas must be provided with 200-year flood protection no later than 2025. After July 2, 2016, new development in areas potentially exposed to 200-year flooding more than three feet deep is prohibited, unless the local land use agency certifies that 200-year flood protection has been provided or that "adequate progress" has been made toward provision of 200-year flood protection by 2025.

Under Stockton Municipal Code Section 16.90.020A(5), a parcel map or a discretionary permit shall not be approved unless the review authority makes one of several potential

findings. One of these findings is that the property is located in an area of potential flooding of three feet or less from a 200-year flood, from sources other than local drainage, in urban and urbanizing areas. As noted, the project site is not within a 200-year flood area.

Regional and Local

City of Stockton Storm Water Management Program

As noted above, storm water quality regulation is established in the MS4 general permit issued by the SWRCB. The MS4 permit requires affected MS4 systems, including the City's, to adopt and implement a Storm Water Management Program, which was discussed in Chapter 9.0, Geology. Along with construction storm water discharge requirements and the incorporation of post-construction BMPs in new development, the Storm Water Management Program places additional controls on the operation of industrial and commercial businesses, in accordance with the Industrial General Permit. These control measures pertain to facility inventory, prioritization and inspection, industrial outreach, enforcement, training, and effectiveness assessment.

Storm Water Quality Control Criteria Plan

The Storm Water Quality Control Criteria Plan applies to the City of Stockton and to adjacent County lands. The Storm Water Quality Control Criteria Plan identifies a range of post-construction BMPs that must be incorporated into development plans. BMPs include provisions for control of storm water volumes such that peak existing discharges are not exceeded. Volume control can be achieved through a combination of low-impact development and specific volume control measures, treatment control, and trash control. Post-construction BMP requirements are contained in City ordinances that require compliance with the plan.

Eastern San Joaquin Groundwater Authority

The Eastern San Joaquin Groundwater Authority, a joint powers agency that includes the City of Stockton, was originally established in 2001 as the Northeastern San Joaquin County Groundwater Banking Authority. Its purpose was to collectively develop locally supported projects to strengthen water supply reliability in eastern San Joaquin County. An Eastern San Joaquin Groundwater Basin Groundwater Management Plan was issued by the San Joaquin County Public Works Department in 2004. This plan set forth groundwater management options to elevate groundwater levels and to maintain or enhance both groundwater and surface water quality (NSJGBA 2004).

In 2017, an adopted joint powers agreement between the Northeastern San Joaquin County Groundwater Banking Authority members and other local agencies created the Eastern San Joaquin Groundwater Authority. The purpose of this agency is to create and adopt a groundwater sustainability plan for the Eastern San Joaquin Subbasin, in accordance with the Sustainable Groundwater Management Act. As noted, the Eastern

San Joaquin Subbasin has been designated a critically overdrafted basin, and a Groundwater Sustainability Plan has been submitted to the DWR.

Stockton Municipal Code

The City of Stockton sets forth stormwater quality requirements in Municipal Code Chapters 13.16, Stormwater Management and Discharge Control, and 13.20, Stormwater Quality Control Criteria Plan. In addition, Chapter 15.48 of the Stockton Municipal Code regulates grading and erosion control in the city.

Chapter 15.44, Flood Damage Prevention, includes provisions that serve to minimize public and private losses due to flood conditions. The chapter applies to "special flood hazard areas," defined as areas that are within the 100-year floodplain, which are designated on FEMA maps as Zones A, AO, or AE, among others. Projects cannot be constructed within these special flood hazard areas without complying with the provisions of this chapter. Such provisions include anchoring of structures and elevation of structures at least two feet above the base flood elevation. Nonresidential structures shall either be elevated or shall be floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water and that its components can resist hydrostatic and hydrodynamic loads and effects of buoyancy.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on hydrology and water quality if it would:

- 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 pattern of the 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 result in substantial erosion or siltation on- or off-site, impede or redirect flood flows, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, or 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,
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation, or

- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact HYDRO-1: Surface Water Resources and Quality

The project site is on North Littlejohns Creek. As discussed in Chapter 7.0, Biological Resources, a setback from North Littlejohns Creek would prevent encroachment on the creek itself, with the exception of a proposed storm drainage outfall. The outfall would be subject to various federal and State permit requirements that will minimize the extent of creek disturbance.

The conceptual plan for the project proposes future development of seven warehouse buildings. As noted in Chapter 9.0, Geology and Soils, construction activities associated with this development could disturb soils, which could be transported off-site by runoff and could eventually enter surface waters. In addition, debris, fuels, oils, and other pollutants from project operations, particularly from motor vehicles, could likewise be transported by runoff. This could have a potentially significant impact on water quality in North Littlejohns Creek, which in turn drains into French Camp Slough and eventually the San Joaquin River.

Potentially significant effects on water quality will be prevented by conformance with City of Stockton storm water management requirements, including the City's NPDES MS4 permit and Storm Water Management Program that are intended to minimize the potential storm water quality impacts of development. Program elements include construction storm water discharge requirements which are met by the development and implementation of an SWPPP, including risk-based monitoring requirements, and the incorporation of post-construction BMPs per the City's adopted Storm Water Quality Control Criteria Plan. On-site drainage will be routed through Low Impact Development features including such elements as vegetated buffer strips and swales, engineered drain inlets, trash control, detention basins and/or vaults and various other filtration and infiltration structures and devices that would provide water quality treatment and volume control for runoff from building, paving, and other developed areas.

Conceptual plans for the project do not include detailed storm drainage management plans. The project will be required to submit detailed storm drainage plans including construction erosion and sedimentation controls as well as post-construction BMPs. Storm drainage plans will include facilities and the practices that would prevent discharges to North Littlejohns Creek unless capacity in the creek is available. Project developers will also be required to enter into a maintenance agreement for post-construction BMPs prior to receiving a Certificate of Occupancy.

Construction and operation of the project would have a potentially significant impact on surface water quality. However, compliance with the applicable permits, programs, and regulations would reduce impacts to a level that would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact HYDRO-2: Groundwater Resources and Quality

The project would not draw directly from groundwater but would be connected to the City's water system, which relies in part on groundwater; groundwater reliance has been reduced in recent years with increased City reliance on surface water supplies. Development on the project site would generate additional water demands, but as documented in the Water Supply Assessment for the project, the City's water system can accommodate this development from its existing and projected water supplies (see Chapter 17.0, Utilities and Energy). Project water demands would not require use of additional groundwater resources or result in a significant effect on groundwater volume.

Development of the project would replace existing vacant land with buildings and pavement. This would reduce the existing groundwater recharge potential of the project site by reducing the amount of rainfall percolated into the soil. The GPEIR analyzed the issue of groundwater recharge and found that projected urban development, including development of the proposed project would not substantially interfere with groundwater recharge. It noted that, while future development would increase the total amount of impervious areas, "priority projects," including 100,000 square foot commercial/ industrial projects, would be required to implement multiple BMPs that minimize impervious areas and retain, reuse, and/or infiltrate stormwater. In addition, proposed General Plan Action SAF-3.2.B requires new development to employ Low Impact Development approaches that conserve natural areas and reduce impervious areas. The EIR concluded that groundwater recharge impacts would be less than significant.

Also, as noted, a Groundwater Sustainability Plan has been prepared for the Eastern San Joaquin Subbasin in accordance with SGMA. This plan proposes projects that are designed to maintain sustainable groundwater levels, including direct and in-lieu recharge projects. Given the City's efforts to reduce reliance on groundwater and the acreage of the project site compared to the subbasin, the project is not expected to interfere substantially with groundwater recharge in the subbasin such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

As noted, groundwater depths at the project site range from 20 to 30 feet. Because of this, project construction is unlikely to intercept any groundwater, thereby potentially contaminating it. The project does not require drilling of new wells on the project site; water to project development would be provided by the City of Stockton's water system. The project would involve use of substantial amounts of hazardous materials or involve on-site waste disposal. Proposed industrial uses would occur in buildings or on paved areas, preventing potential spills that could impact groundwater quality, and project activities would not otherwise affect groundwater. Overall, project impacts on groundwater are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact HYDRO-3: Drainage Patterns and Runoff

Industrial development of the project site as described in the conceptual development plan would alter existing storm drainage patterns, due to grading and the installation of buildings and pavement. In addition, proposed development would result in additional generation of runoff due to the introduction of impervious surfaces on currently undeveloped properties.

The project would include a range of storm water control devices that would increase infiltration of runoff, instead of adding to drainage discharge from the site. The project includes construction of a detention pond in the southern portion of the project site that would collect remaining storm drainage from proposed development, resulting in additional infiltration and treatment of storm water, including trash control, and detaining storm water until it can be discharged to North Littlejohns Creek. Discharges to North Littlejohns Creek would be regulated by metering of flows in the creek; project discharges would not occur unless North Littlejohns Creek flow capacity is available, thereby avoiding any project contribution to downstream flooding.

Runoff from future development on the project site would likely contain pollutants such as motor vehicle fluid and metal deposits, among others. These contaminants would be removed from storm runoff by required conformance with State and local water quality plans, permits, and regulations that would minimize water quality impacts as discussed under Impact HYDRO-1. Project impacts related to drainage and runoff would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact HYDRO-4: Release of Pollutants in Flood, Tsunami, and Seiche Zones

Approximately 7-10 acres, or the southern 150-300 feet of the project site is within the 100-year floodplain designated by FEMA. Industrial development of the site is not proposed in the floodplain; construction activity in the floodplain vicinity would be limited to the detention basin, and no facilities potentially storing or using hazardous materials would be installed in that area. The proposed detention basin is not expected to involve any encroachment into the floodplain area. Warehouse development, which may involve the use and storage of hazardous materials, would occur in an area not within any designated floodplain.

As described in Chapter 11.0, Hazards, prior to operation of the proposed project, the project applicant will be required to file a Hazardous Materials Business Plan with the County Environmental Health Department to describe the types and amounts of hazardous materials stored on the project site, along with procedures to be implemented in the event of release or threatened release. These requirements are expected to be sufficient to avoid any substantial release of pollutants into flood waters.

The project site would not be subject to a 200-year flood, which means the project is not be subject to SB 5-related requirements. The project site would not be subject to potential inundation from failure of dams and dikes associated with foothill water storage reservoirs, or from levees confining the flows of project area streams. The project site is in a topographically flat area distant from large bodies of water. Because of this, the project would not be subject to tsunami or seiche hazards. Overall, project impacts related to flood, seiche, and tsunami hazards are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

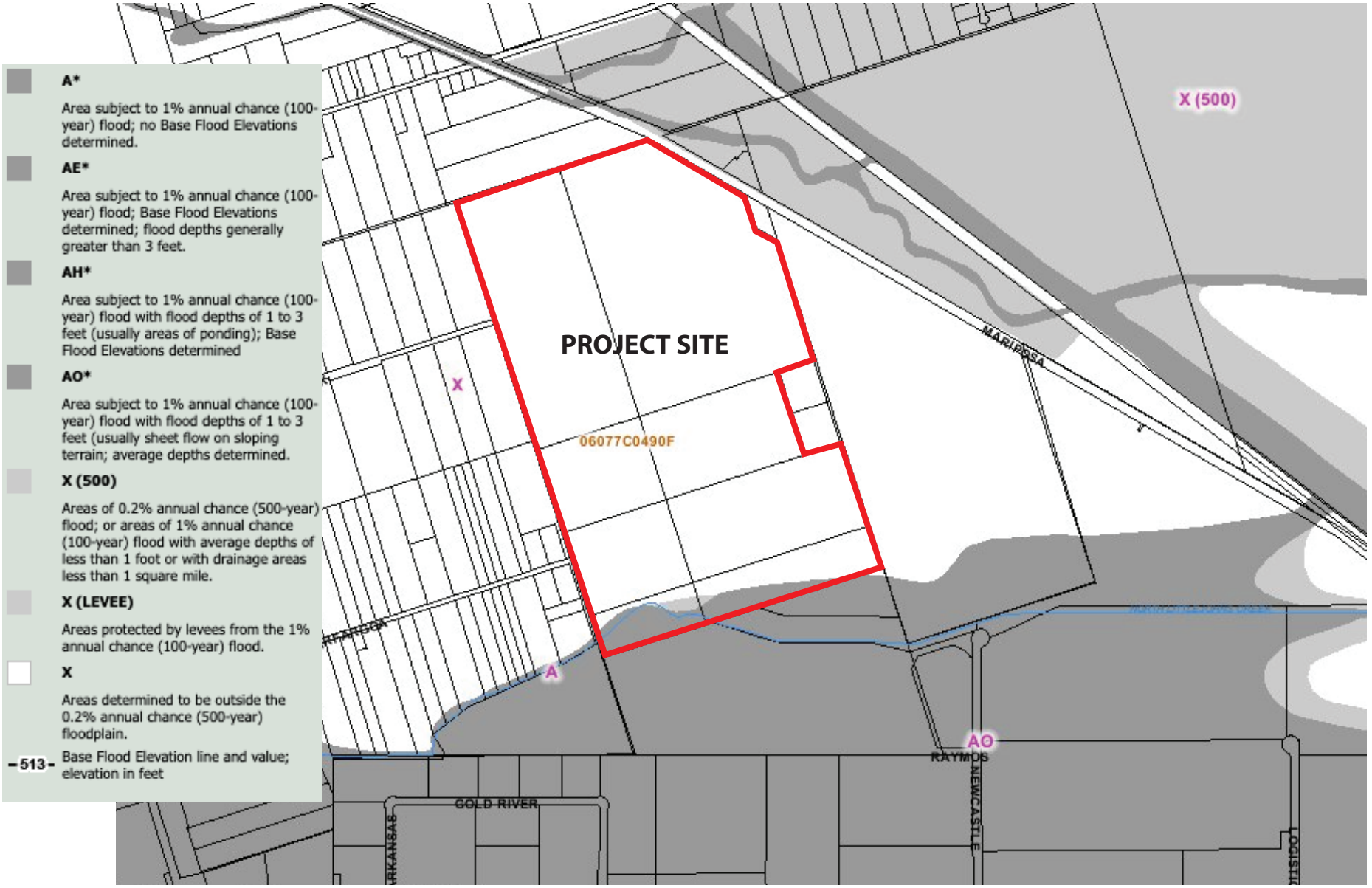
Impact HYDRO-5: Consistency with Water Quality and Groundwater Management Plans

The project would be required to comply with water quality provisions in the City's Storm Water Management Program and Storm Water Quality Control Criteria Plan, including post-construction BMPs. These provisions are designed to ensure the City complies with the conditions of its NPDES MS4 permit. In turn, compliance with the permit conditions would ensure consistency with the water quality objectives and standards of the Basin Plan.

As noted, the Groundwater Sustainability Plan for the Eastern San Joaquin Groundwater Subbasin has been submitted to DWR, and the public comment period has ended. The project, as described above, is not expected to place significant demands on groundwater supplies. It is expected that future development would comply with any provisions in the Groundwater Sustainability Plan related to development impacts on sustainable groundwater management. Project impacts related to water quality and groundwater management plans would be less than significant.

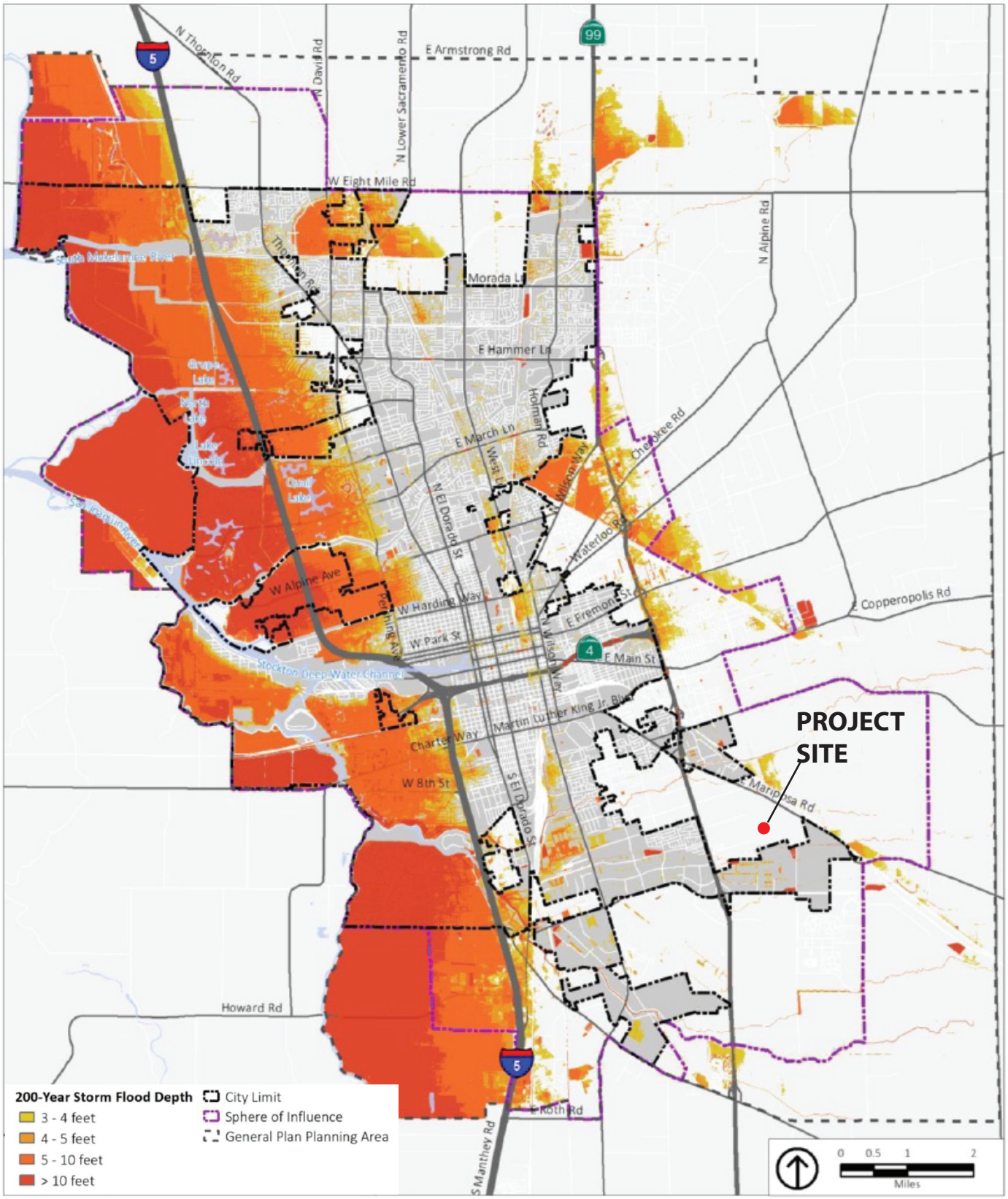
Level of Significance: Less than significant

Mitigation Measures: None required



SOURCE: San Joaquin County Flood Zone Viewer

Figure 12-1
100-YEAR FLOOD PLAIN



SOURCE: Stockton 2040 General Plan Update, City of Stockton

BaseCamp Environmental

Figure 12-2
200-YEAR FLOOD PLAIN

13.0 LAND USE, POPULATION, AND HOUSING

This chapter focuses on land use issues as they pertain to community effects and applicable land use plans and policies, such as the Stockton General Plan 2040 and the Stockton Airport Land Use Compatibility Plan. A significant issue related to land use that has received more attention from the State recently has been environmental justice and impacts of projects on disadvantaged communities. Chapter 20.0, Other CEQA Issues, discusses environmental justice and potential project impacts on disadvantaged communities in the area.

ENVIRONMENTAL SETTING

Existing Land Uses

Project Site

The project site is in largely agricultural use. The northern portion of the site is currently planted as a walnut orchard. The southern portion of the site is open land that has been used for row crop in the past. The central portion of the site, divided into shallow ponds, is not currently in use but was historically used for aquaculture. There are two residences in the southern portion of the project site, one at the east end of Marfargoa Road and one adjacent to North Littlejohns Creek.

The Stockton General Plan designates the entire site for Industrial use (Figure 13-1). The entire project site is in unincorporated San Joaquin County and is not presently zoned by the City. Table 13-1 shows the existing County General Plan designations for the parcels, along with their current County zoning (Figure 13-2).

Project Vicinity

The project site is in an area of southeastern Stockton on the urban fringe. Land uses in this area are a mix of light industrial, logistical, and institutional development interspersed with land in agricultural and rural residential use. Most land in this area is under the jurisdiction of the City or the County, but the O.H. Close Youth Correctional Facility and the State of California Health Care Facility, south of Arch Road, are under the jurisdiction of the California Department of Corrections and Rehabilitation. Across SR 99, approximately two miles southwest of the project site, is the Stockton Metropolitan Airport, which is owned and operated by San Joaquin County.

TABLE 13-1
GENERAL PLAN DESIGNATIONS AND ZONING FOR PROJECT SITE

APN	General Plan Designation	Zoning
179-220-10	Agriculture-Urban Reserve	AG-40
179-220-11	Agriculture-Urban Reserve	AG-40
179-220-12	Agriculture-Urban Reserve	AG-40
179-220-13	Agriculture-Urban Reserve	AG-40
179-220-16	Agriculture-Urban Reserve	AG-40
179-220-17	Agriculture-Urban Reserve	AG-40
179-220-18	Agriculture-Urban Reserve	AG-40
179-220-19	Agriculture-Urban Reserve	AG-40

Notes: AG-40 – General Agriculture, 40-acre minimum (County)

West of the project site is land occupied by rural residences along Marfargoa Road and rural residences and auto salvage businesses along Clark Road, along with vacant land. Land north of the project site is occupied by a commercial business, a rural residence, and vacant land.

Three rural residences are adjacent to and east of the project site. One of the residences is adjacent to Mariposa Road. The other two residences are on adjoining parcels near the center of the east line of the project site and are accessible by an unpaved driveway along the eastern boundary. Further to the east is predominantly agricultural land, as noted in Chapter 5.0, Agricultural Resources.

South of the project site is vacant land, with one adjacent parcel incorporated within the City of Stockton. Across North Littlejohns Creek is currently vacant land that is part of the Norcal Logistics Center site. Substantial warehouse and light industrial development has occurred on this site. Also in this location is the Hoggan property, an approximately 21-acre vacant parcel recently annexed to the City on which warehouse development is proposed.

The Mariposa Lakes Specific Plan was approved by the Stockton City Council in 2008, along with a development agreement. The Mariposa Lakes Specific Plan proposes a mixed-use development of approximately 3,810 acres of unincorporated lands north of Mariposa Road across from the project site. The Specific Plan area is bounded by SR 4 (Farmington Road) on the north, Kaiser Road on the east, and Mariposa Road and the BNSF Railroad on the south and the west. No development has occurred within the Specific Plan area, and the status of the Specific Plan is currently inactive.

Disadvantaged Unincorporated Communities

SB 244, enacted in 2011, deals with a specific community known as a disadvantaged unincorporated community (DUC). A DUC is an unincorporated community that includes 12 or more registered voters and has an annual median income that is less than 80% of the statewide annual median household income.

The project site is within the unincorporated Mariposa Road Community (Figure 13-3), a DUC designated in the City of Stockton's Municipal Service Review. The Mariposa Road Community is bounded approximately by Mariposa Road, SR 99, and North Littlejohns Creek. It consists of 223 parcels totaling approximately 1,112 acres (City of Stockton 2020). Current land uses in this DUC are a mix of residential, commercial, industrial, and agricultural. Water is provided to this area by California Water Service and the City of Stockton. Sewer system services to this area are provided by the City of Stockton through Morrison Gardens Sanitary District facilities. However, connections to the public treatment system are limited in this DUC; therefore, there are deficiencies in sewer services. Roadside ditches are used to manage stormwater for the community. The Montezuma Fire Protection District provides fire protection services to this area, which has access to fire hydrants (City of Stockton 2020).

LAFCo, in reviewing applications for annexation, must consider impacts of the proposed annexation on nearby DUCs. This is discussed in more detail later in this chapter.

Population, Housing, and Employment

As of January 1, 2020, the population of Stockton was estimated at 318,522, an increase of 9.2% from its 2010 population as recorded by the U.S. Census Bureau (California Department of Finance 2020). Table 13-2 below shows population and growth trends in Stockton, San Joaquin County, and the State of California from 2010 to 2020. The U.S. Census Bureau is currently conducting the 2020 U.S. Census; results are not anticipated to be available until next year.

TABLE 13-2
POPULATION OF STOCKTON, SAN JOAQUIN COUNTY, AND CALIFORNIA

Jurisdiction	Population April 1, 2010	Population January 1, 2020	Population Growth 2010-2020
Stockton	291,707	318,522	9.2%
San Joaquin County	685,306	770,385	12.4%
State of California	37,253,956	39,782,870	6.8%

Source: California Department of Finance 2020.

As of January 1, 2020, Stockton had an estimated 101,235 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 5.9% in 2019, the most recent year such data were available. This marked a decrease from 6.1% in 2018 and from a peak of 16.5% in 2010 (EDD 2020a). By comparison, the unemployment rate in California in 2019 was 4.0% (EDD 2020b). Unemployment rates in 2020 have increased dramatically because of business closures and labor force reductions from the COVID-19 pandemic and actions to contain its spread. While there has been a recent decrease in the unemployment rate, the employment situation in the Stockton area remains uncertain.

REGULATORY FRAMEWORK

Stockton General Plan 2040

The City of Stockton General Plan 2040, formally named the Envision Stockton 2040 General Plan, was adopted in 2018. It provides a guide to development within the City limits and on lands within its Planning Area to the year 2040, including goals, policies, and implementation programs designed to guide future development and provide for orderly expansion of the City. The Stockton General Plan 2040 addresses all aspects of development, including land use, transportation, housing, economic development, public facilities and infrastructure, and open spaces, among other topics.

The Stockton General Plan 2040 is based on a vision to promote investment in the Downtown and historically underserved areas, preserve and enhance neighborhood character, and improve community health and safety. Within this general vision, the Stockton General Plan 2040 represents a substantial change in the policy framework for future development in Stockton compared to the prior General Plan. The fundamental shift is from emphasizing growth in "outfill" areas at the periphery of Stockton to focusing new construction and redevelopment in existing "infill" neighborhoods – developed neighborhoods with vacant land. This change is reflected in the General Plan land use map, the proposed transportation network to serve future development, and the goals, policies, and actions described in the Stockton General Plan 2040 (City of Stockton 2018a).

The project site is outside the City limits; however, it is within both the City's Sphere of Influence and the Planning Area of the Stockton General Plan 2040. The Stockton General Plan 2040 designates the properties as Industrial (Figure 13-1). The Industrial designation applies to a wide variety of industrial uses, including uses with nuisance or hazardous characteristics, warehousing, construction contractors, light manufacturing, offices, retail sales, service businesses, public and quasi-public uses, and other similar

and compatible uses. The maximum floor-area ratio – the ratio between building floor space and land within the building site – allowed under the Industrial designation is 0.6.

The following Stockton General Plan 2040 policies and implementing actions are relevant to this project (City of Stockton 2018a):

- Action LU-6.2.B: Do not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life. [See also Chapter 5.0, Agricultural Resources.]

- Action LU-6.5-A: Require preparation of a fiscal impact analysis for large development projects and proposed annexations to ensure a full accounting of infrastructure and public service costs and to confirm whether revenue enhancement mechanisms are necessary to ensure net fiscal balance or better, and require appropriate fiscal mitigations, when necessary, to ensure the City's ongoing fiscal health and continued viability of the City's General Fund.

- Action TR-1.3.A: Protect the Airport and related aviation facilities from encroachment by ensuring that all future development within the [Airport Influence Area] is consistent with the policies adopted by the San Joaquin County Airport Land Use Commission, except in cases where the City Council concludes that project approval would provide for the orderly development of the Airport and the areas surrounding it while protecting the public health, safety, and welfare by minimizing the public's exposure to excessive noise and safety hazards. [See also Chapter 11.0, Hazards.]

- Action TR-1.3.C: Within the [Airport Influence Area], require that new development, or an expansion of an existing use that requires a building permit, file an avigation easement with the City.

San Joaquin County General Plan

San Joaquin County adopted an update to its General Plan in 2016. Like the Stockton General Plan 2040, the County General Plan provides a guide to development, in this case for the unincorporated lands of the County. The County General Plan designates the project site as Agricultural-Urban Reserve. As described in Chapter 5.0, Agricultural Resources of the County General Plan the Agricultural-Urban Reserve designation typically applies to lands within a city's Sphere of Influence; the cities have more site-specific plans for urbanization in these areas, such as the City's Industrial designation applied to the project site. County lands west of the project site are designated Low Density Residential. County lands to the north are designated Rural and General Industrial.

The County General Plan supports focused growth within incorporated cities and calls for annexation to a city prior to development of County lands currently outside city limits. County 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."

City of Stockton Development Code

Stockton Municipal Code Title 16, also known as the City of Stockton Development Code, is designed to implement the Stockton General Plan 2040. It establishes zoning districts that specify allowable land uses, either by right or with a discretionary permit. It also sets forth development regulations in each district, including height of structures, yard widths, and infrastructure standards, among others. The Development Code applies to land within the Stockton city limits, so the City does not presently zone the project site.

As part of the project, in anticipation of annexation to the City, the entire project site would be pre-zoned IL (Limited Industrial). The IL zone generally allows light manufacturing uses whose operations are conducted indoors and that may generate more nuisance impacts than acceptable in commercial zoning districts. Stockton Municipal Code Section 16.20.020 has a table indicating allowable land uses within the IL zoning district, which include warehouses "by right" (i.e., without the need for a use permit). Stockton Municipal Code Section 16.24.130 sets forth development standards for land uses and development within the IL zoning district, including prohibitions on outdoor manufacturing and screening of loading areas and ground-mounted equipment. Section 16.80.170 contains development standards that apply to industrial uses that are located on two or more acres, including setbacks, private easements, landscaping, parking, and signs.

San Joaquin County Development Code

San Joaquin County Code Title 9, also known as the San Joaquin County Development Code, serves the same function as the City's Development Code but applies to lands in unincorporated San Joaquin County. It establishes zoning districts with allowable land uses and development regulations for each district. The parcels within the project site are currently zoned AG-40 (Agriculture-General, 40-acre minimum parcel size) (Figure 13-2). 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. County development regulations will no longer apply to the site after it is annexed to the City.

San Joaquin Local Agency Formation Commission (LAFCo)

The San Joaquin LAFCo is the responsible agency for proposed reorganizations for cities and special districts within San Joaquin County; as such, it would review and decide on the proposed annexation of the project site and its proposed detachment from the Montezuma Fire District. As an agency with approval authority over the project, LAFCo

is a Responsible Agency under CEQA and would use this EIR in its decision-making process.

LAFCo's review encompasses the consistency of the project with State statutes and policies, particularly the Cortese-Knox-Hertzberg Local Government Reorganization Act, as well as its own adopted policies. In determining the appropriateness of a proposed annexation, LAFCo considers if the project would constitute a logical expansion of a city boundary and if a proposed annexation area would be provided with public utilities and services in an efficient manner. LAFCo's policies with respect to proposed annexations are specified in its Change of Organization Policies and Procedures, adopted in 2007 and subsequently amended (San Joaquin LAFCo 2012).

Stockton Sphere of Influence Plan/Municipal Service Review

One of the responsibilities of a LAFCo is to determine the Sphere of Influence of local governmental agencies. A Sphere of Influence designates the probable physical boundary and service area of a local agency. As noted, the project site is within the City of Stockton's Sphere of Influence.

The Cortese-Knox-Hertzberg Act requires a Municipal Service Review to be prepared prior to or concurrent with an update of a Sphere of Influence. The Municipal Service Review evaluates existing and future service conditions and reviews the advantages and disadvantages of various government service structure options. A Municipal Service Review provides information upon which the LAFCo can base its action on a Sphere of Influence determination, as well as future actions on annexation requests (San Joaquin LAFCo 2012). San Joaquin LAFCo policy states that an annexation shall be approved only if the Municipal Service Review and the Sphere of Influence Plan demonstrates that adequate services can be provided when needed by the inhabitants of the annexed area (San Joaquin LAFCo 2012).

The City's latest updated Municipal Services Review was reviewed and approved by LAFCo in 2020. In accordance with the Cortese-Knox-Hertzberg Act, written determinations were provided for the following issue areas (City of Stockton 2020):

- Growth and population projections for the affected area,
- Disadvantaged Unincorporated Communities,
- Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies,
- Financial ability of agencies to provide services,
- Status of, and opportunities for, shared facilities,
- Accountability for community service needs, including governmental structure and operational efficiencies, and

- Any other matter related to effective or efficient service delivery, as required by commission policy.

LAFCo's Policies and Procedures call for Municipal Service Reviews and Sphere of Influence plans to present information on future projections and plans tied to 5- to 10-year and 30-year horizons (San Joaquin LAFCo 2012). The City has divided the buildout period into two timeframes: zero to 10 years (2020 to 2030), referred to as the 10-year horizon, and 11 to 20 years (2031 to 2040). The project site is currently outside the 10-year horizon for future development, but it is within the 20-year horizon (City of Stockton 2020). The project applicant intends to submit a request for amendment of the City's Municipal Service Review to include the project site within the 10-year planning horizon, in conjunction with the proposed reorganization.

SB 244 - Disadvantaged Unincorporated Communities

SB 244 requires a LAFCo to make certain determinations when a proposed annexation is adjacent to a disadvantaged unincorporated community (DUC). SB 244 prohibits LAFCo from approving an annexation adjacent to a DUC unless 1) an application to annex the adjacent community has been filed in the past five years, or 2) the LAFCo finds, based upon written evidence, that a majority of the residents within the adjacent community are opposed to annexation.

Stockton Metropolitan Airport Land Use Compatibility Plan (ALUCP)

The ALUCP for Stockton Metropolitan Airport establishes compatibility of land uses within safety zones of the airport. Chapter 11.0, Hazards and Hazardous Materials, discusses the ALUCP regarding land uses, including height restrictions and compatible development in designated safety zones, which are shown on Figure 11-1. The project site is within Compatibility Zone 7b. New development under the Stockton General Plan 2040 would require notification of the Airport Land Use Commission and be subject to Stockton Municipal Code Chapter 16.28, which requires that land uses be consistent with the ALUCP.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on land use, population, and housing 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.

Impact LUP-1: Division of Communities

As noted, the project site is in an area of southeastern Stockton on the urban fringe. Land uses in this area are a mix of light industrial, logistical, and institutional development interspersed with land in agricultural and rural residential use. The area immediately surrounding the project site is predominantly a combination of vacant parcels, agricultural lands, and commercial and rural residential development, the latter to the north and west of the site. The City's Municipal Service Review has designated the Mariposa Road DUC in this area. However, the DUC has no focal point of development that would constitute a community, as the word is commonly understood. In addition, most residential development in the DUC is concentrated north and west of the project site.

The Stockton General Plan 2040 has designated most of the area southeast of Stockton, including the project site, for industrial development. The project would contribute to this pattern of industrial development, which has been established south and east of the project site. No existing residential areas in the vicinity would be divided by the project. The project would have no impact on this issue.

Level of Significance: No impact

Mitigation Measures: None required

Impact LUP-2: Conflict with Applicable Plans, Policies, and Regulations

Stockton General Plan

The project site abuts the City of Stockton and is proposed to be annexed to the City. Once the site is annexed, it would be subject to the City's land use plans and ordinances. County land use designations and zoning would become inapplicable upon annexation of the project site to the City.

As has been noted, the project would be consistent with the Industrial designation for the project site by the Stockton General Plan 2040. The project site would be pre-zoned by the City, and the pre-zoning would take effect upon project site annexation. The proposed pre-zoning is consistent with the existing Stockton General Plan designation of Industrial for the project site. The project would comply with all applicable provisions of the Stockton Development Code, including development standards.

This EIR analyzes the potential environmental effects of the project within each technical chapter. For issues where significant impacts are identified, the EIR describes mitigation measures to avoid or minimize any potentially significant environmental effects that are identified with the proposed development. While most project impacts can be mitigated to a level that would be less than significant, significant and unavoidable environmental impacts have been identified for air quality, agricultural lands, greenhouse gas emissions, and transportation. These impacts had been analyzed in the GPEIR, which evaluated how General Plan policies would affect the environment, and the project would not have new or more severe impacts than those identified in the GPEIR. The proposed project would not substantially conflict with Stockton General Plan 2040 policies designed to protect the environment.

General Plan Action LU-6.5-A requires large development projects to prepare a fiscal impact analysis to ensure a full accounting of infrastructure and public service costs and to assess adequacy of City resources to serve the project. As part of the annexation application, a City Service Plan will be prepared and submitted to LAFCo in compliance with LAFCo procedures and the General Plan action. The City Service Plan will describe existing conditions related to City public services and will determine revenues and costs associated with serving proposed development on the project site. A preliminary draft of this plan submitted for City staff review indicates that the City would have adequate resources to provide services to the project site should annexation be approved. The project would be consistent with General Plan Action LU-6.2.B, as it would be consistent with General Plan designations and do not adversely impact the City's fiscal viability, infrastructure, and services.

San Joaquin LAFCo

The San Joaquin LAFCo has adopted policies with which proposed annexations must be consistent. One of these policies states that development of existing vacant or non-prime agricultural lands within a city or its Sphere of Influence should be encouraged before annexation of existing open space lands outside of a city's jurisdiction or its Sphere of Influence. For another project in the area, the City's Community Development Department had prepared and submitted to LAFCo an inventory of vacant and developable land within the existing City limits. The largest identified vacant parcel is 76 acres in size and, even at that size, the parcel is unsuitable to accommodate the proposed project. Directing the proposed project to another site would not promote the planned orderly, efficient development of the area. The general project area in southern and southeastern Stockton is the main area designated for larger industrial and warehouse development. The only other major industrial area is the Port of Stockton, which is substantially developed.

As noted in Chapter 5.0, Agricultural Resources, a portion of the project site is classified as Farmland of Statewide Importance, and Stockton clay soil on the project site is considered prime agricultural soil. The project would need to comply with LAFCo policies that discourage premature agricultural land conversions. This property would be subject to the City's Agricultural Lands Mitigation Program and the SJMSCP, which would reduce the impacts of converting the land to urban uses. In addition, the project

site is within the City's Sphere of Influence, but it is not within the 10-year planning horizon. As noted, the City is expected to include the project site within the 10-year planning horizon when the final version of its Municipal Service Review is prepared.

The project would be consistent with the LAFCo policy requiring a Municipal Service Review and Sphere of Influence Plan to demonstrate that adequate services can be provided with the timeframe needed by the inhabitants of the annexed area. The Municipal Service Review prepared by the City indicates that adequate public services can be provided to both properties within the timeframes required. As discussed in Chapter 17.0, Utilities and Energy, the City can accommodate wastewater, water, and storm drainage demands of the project, and the project would be required to design infrastructure consistent with City plans and specifications.

As noted, SB 244 prohibits LAFCo from approving an annexation adjacent to a DUC unless an application to annex the adjacent community has been filed in the past five years, or the LAFCo finds that a majority of the residents within the adjacent community are opposed to annexation, based upon written evidence. In March 2021, a survey of registered voters residing within the Mariposa Road Community regarding annexation to the City of Stockton was conducted by CV Strategies on behalf of the project applicants. The results of the survey indicate that a majority of the registered voters within the DUC (at least 56.9%) are opposed to annexation (Souza, electronic mail). The survey results would provide written evidence for a finding by LAFCo that a majority of the residents within the adjacent Mariposa Road Community would be opposed to annexation. As such, no further action related to the project would be required under SB 244.

Other Plans, Policies and Regulations

As described in Chapter 11.0, Hazards and Hazardous Materials, the project site is within Compatibility Zone 7b of the ALUCP for the Stockton Metropolitan Airport. The Airport Land Use Commission would review the project, which would ensure consistency with General Plan Action TR-1.3.A. However, development proposed on the project site does not appear to conflict with the land use development standards for this zone. As noted, the project potentially allows for a structure with a height of 100 feet, which is the maximum height allowed in Compatibility Zone 7b without necessarily triggering airspace review. It is expected that the project would comply with General Plan Action TR-1.3.C, which requires new development within an Airport Influence Area that requires a building permit to file an avigation easement with the City.

Overall, the project is expected to comply with or be consistent with all applicable plans, policies, and regulations adopted for the purpose of avoiding or mitigating environmental effects. Project impacts would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact LUP-3: Inducement of Population Growth

The project proposes new warehouse development. This development would provide employment opportunities, which may influence people currently residing outside Stockton to relocate closer to or within the city and surrounding area to take advantage of these opportunities. Therefore, the project may have a potential influence on local population growth and may place demands on housing in the area.

Jobs generated by the proposed project are expected to be filled mainly by existing residents in the Stockton area. While the unemployment rate in the Stockton-Lodi Metropolitan Statistical Area has decreased until recently, it has remained above the statewide unemployment rate. The annual average unemployed labor force in the Metropolitan Statistical Area was estimated at 19,200 in 2019 (EDD 2020a), indicating that substantial local labor was available for jobs generated by the project even before the COVID-19 pandemic and its employment impacts. Both area unemployment and job availability associated with the project would fluctuate over time, making any clear determination of project impacts on the labor market speculative.

As noted, the proposed project would be consistent with the Stockton General Plan, which provides guidance for development based on predicted growth, including anticipated growth in both jobs and the resident population. The project would be responsible for a portion of industrial development and job growth resulting from General Plan implementation, along with the expected population growth. Project impacts on population growth, therefore, are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact LUP-4: Displacement of Housing and People

The project site has single-family residences that would likely be demolished because of project development. This demolition would result in a limited reduction of the housing stock and the displacement of residents, assuming the single-family residences are occupied prior to demolition. However, the number of displaced residents, if any, would be small, and replacement housing is available in the Stockton area for any displaced residents. Project impacts on displacement of housing or people would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

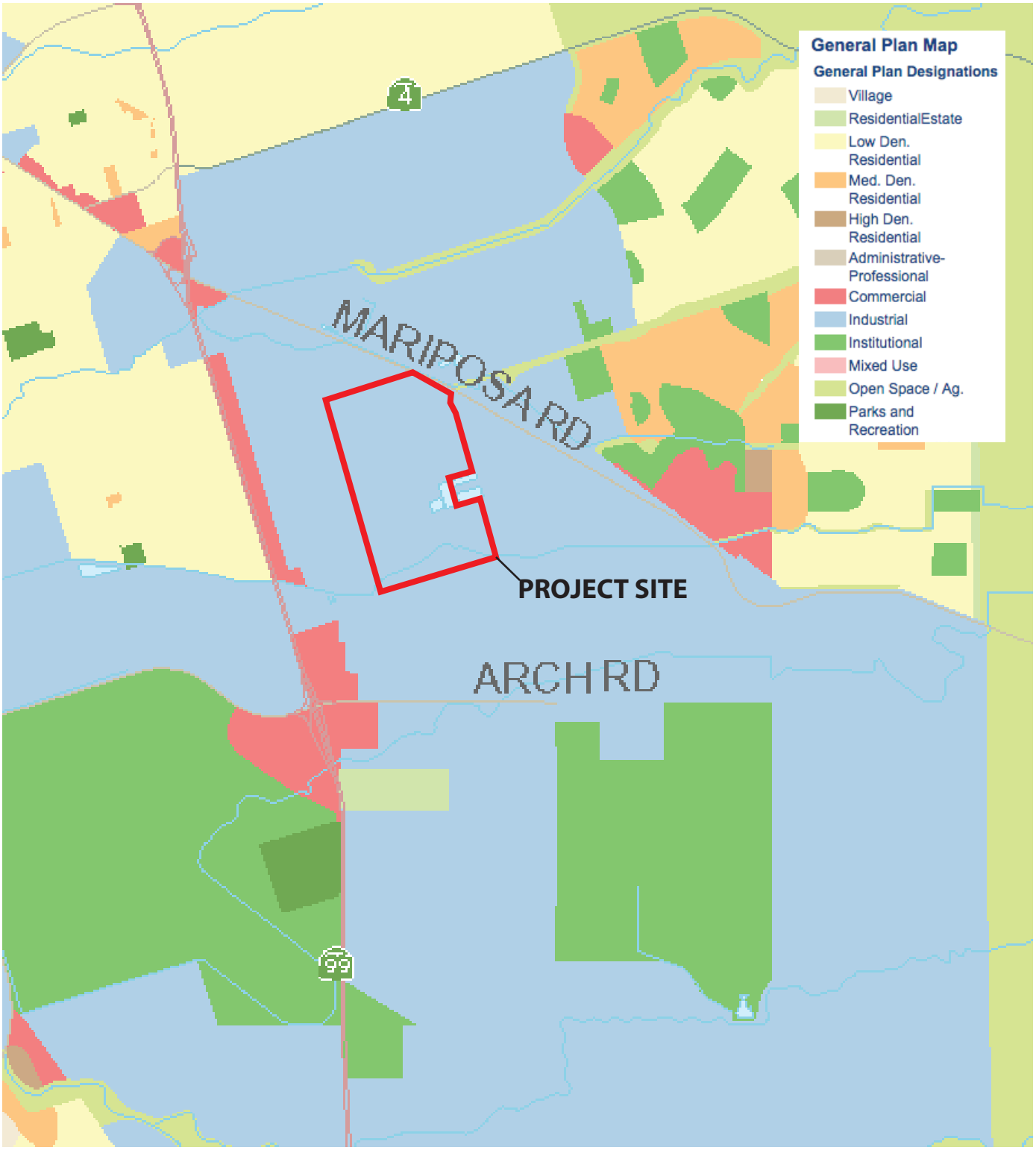


Figure 13-1
STOCKTON GENERAL PLAN DESIGNATIONS

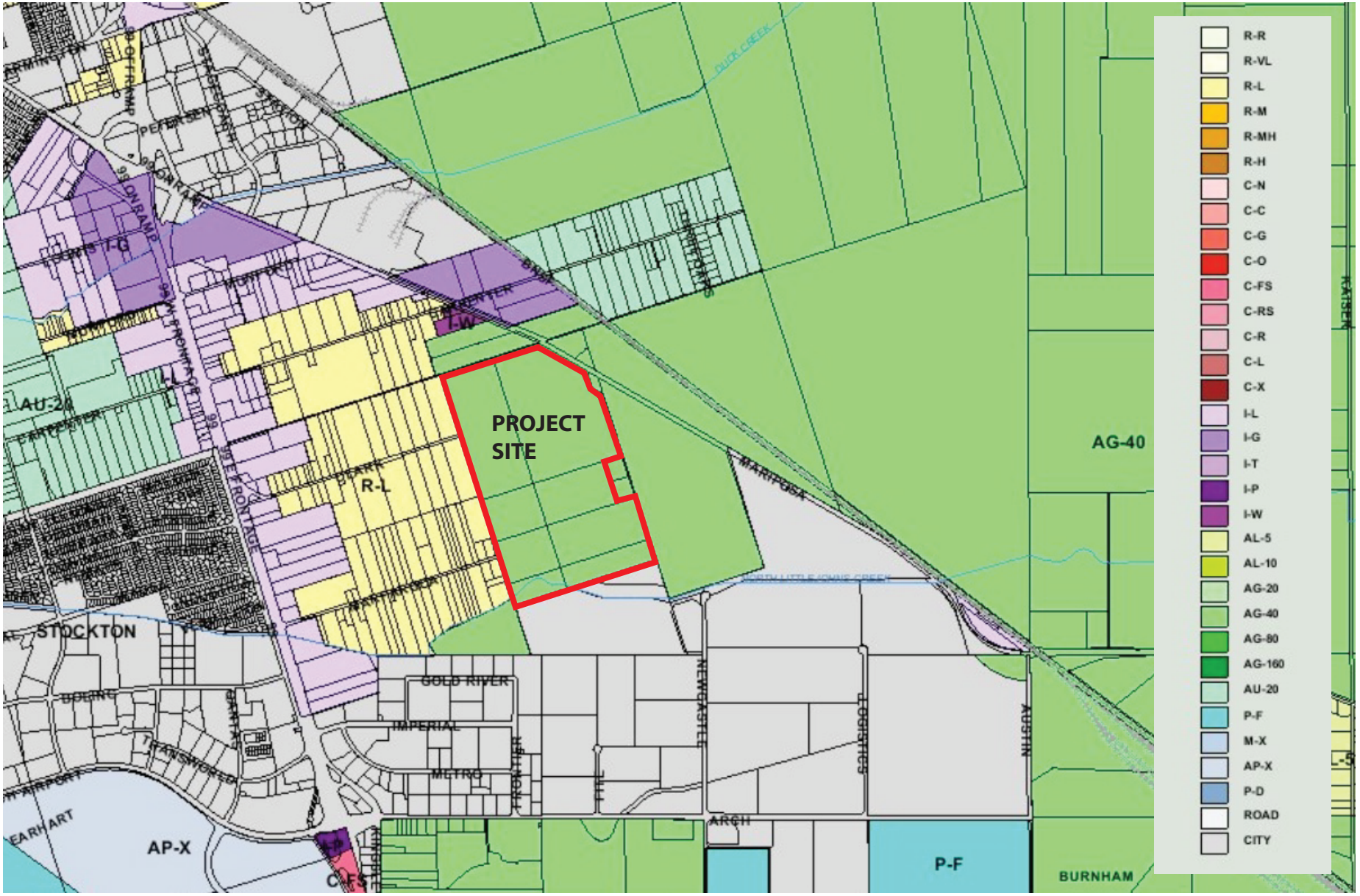


Figure 13-2
COUNTY ZONING DESIGNATIONS

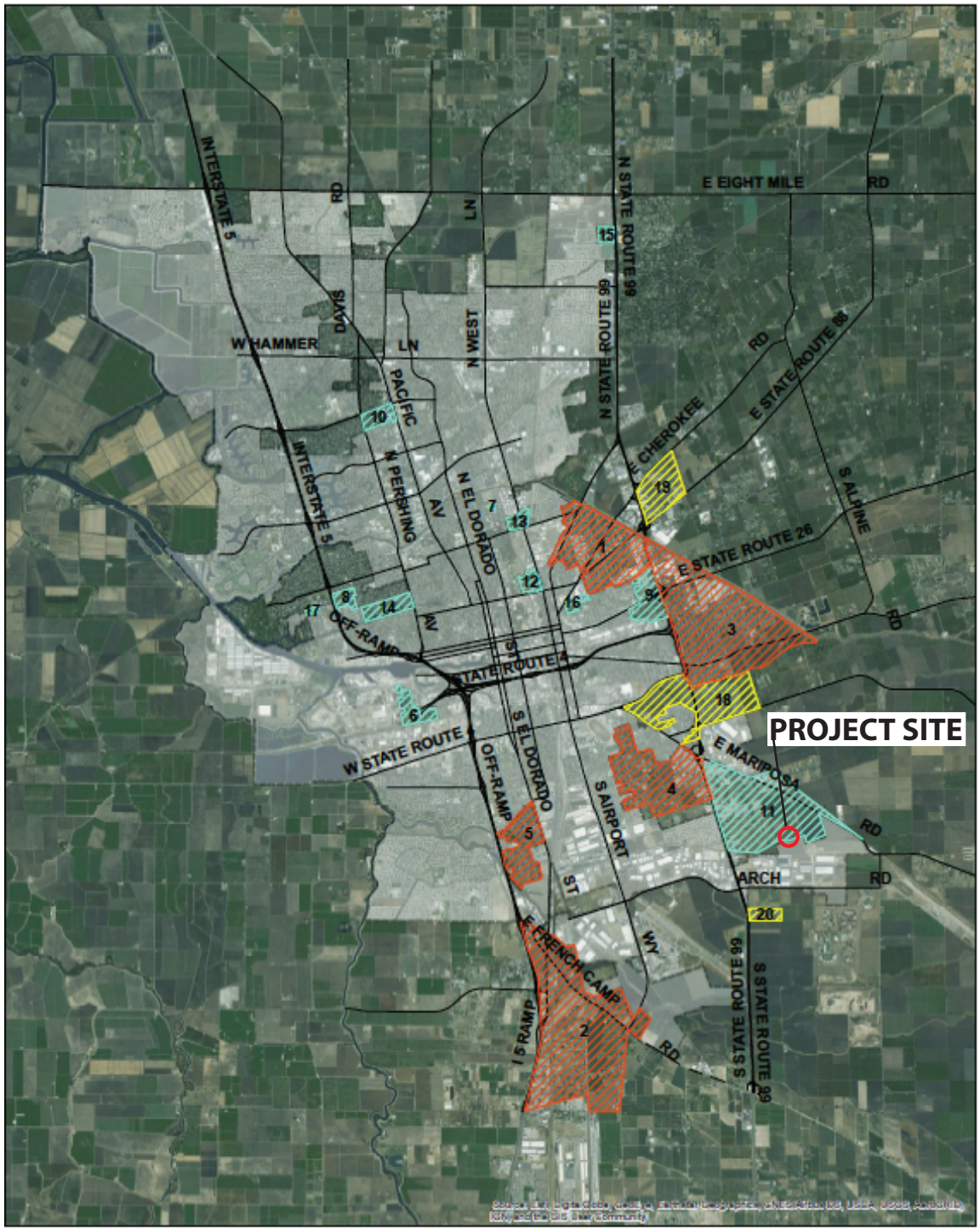


Figure 4-1:
Disadvantaged Unincorporated Communities

Map date: October 21, 2016
Source: City of Stockton; San Joaquin County; United States Census, 2000.

DUCs (CDP)
1. August
2. French Camp
3. Garden Acres
4. Kennedy
5. Taft Mosswood

DUCs (Island)
6. Boggs Tract
7. Sperry Tract
8. East Interstate 5 Community
9. Fremont St. Community
10. Holt Ave/Pershing Ave Community
11. Mariposa Road Community
12. North Oaks Community
13. West Lane Community
14. Pershing Ave Community
15. Waller-Childress Community
16. Rose Terrace
17. West Interstate 5 Community

DUCs (Fringe)
18. Charter Way Community
19. State Route 88 Community
20. Sunny Road Community
City Limits

0 0.75 1.5 3 Miles

N

Figure 13-3
DISADVANTAGED UNINCORPORATED COMMUNITIES

14.0 NOISE

Information for this chapter primarily comes from a noise study conducted for the project by J.C. Brennan and Associates, Inc., which is available in Appendix F of this EIR. The noise study included continuous hourly noise measurements during a 24-hour period in the northwest portion of the project site and short-term measurements in the southeast portion. Existing and future traffic noise levels were estimated using the Federal Highway Administration Traffic Noise Prediction Model (FHWA RD77-108), with inputs provided by the KD Anderson & Associates traffic impact study for the project (see Chapter 16.0, Transportation, and Appendix G of this EIR).

ENVIRONMENTAL SETTING

Noise Background

Noise is typically defined as airborne sound that is loud, unpleasant, unexpected, or undesired. Perceptions of noise are highly subjective from person to person. The effects of noise on people can be placed in three categories: 1) subjective effects of annoyance, nuisance, and dissatisfaction; 2) interference with activities such as speech, sleep, and learning; and 3) physiological effects such as hearing loss or sudden startling. Environmental noise typically produces effects in the first two categories; workers in industrial plants can experience noise in the last category.

Noise is measured using the decibel (dB) scale. The dB scale uses the hearing threshold as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Changes in dB levels correspond closely to human perception of relative loudness. The decibel scale is logarithmic, so two sound levels 10 dB apart would differ in acoustic energy by a factor of 10.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels, expressed as dBA. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is twice as loud as a 60-dBA sound, and half as loud as an 80-dBA sound. There is a strong correlation between dBA and the way the human ear perceives sound; for this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this chapter are in terms of A-weighted levels but are expressed as dB, unless otherwise noted.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state, A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} shows very good correlation with community response to noise and is the foundation for other composite noise descriptors such as the Day-Night Average Level (L_{dn}). The L_{dn} is based upon the average hourly L_{eq} over a 24-hour day, with a +10-dB weighting applied to noise occurring between 10:00 p.m. and 7:00 a.m. The nighttime weighting is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures.

Existing Noise Conditions

The project site contains a walnut orchard, a former aquaculture facility and other agricultural fields, along with a few rural residences. Noise currently generated on the project site is mainly associated with use of agricultural equipment. Noise is also generated by traffic on the adjacent Mariposa Road. Lesser noise sources include minor traffic at the east end of local roads (Clark Road and Marfargoa Road) and commercial activities in the vicinity.

As a means of determining the typical background noise environment in the project vicinity, continuous hourly noise measurements were conducted at one location for a 24-hour period, while short-term measurements were taken at another, as previously noted. Table 14-1 shows the results of the noise measurements. Figure 14-1 shows the locations where the noise measurements were taken.

TABLE 14-1
EXISTING AMBIENT NOISE CONDITIONS

Site	Location	L_{dn} (dBA)	Average Measured Hourly Noise Levels (dBA)			
			Daytime (7am-10pm)		Nighttime (10pm-7am)	
			L_{eq}	L_{max}	L_{eq}	L_{max}
A	Northwest portion of site	56.0	50.0	68.0	50.0	65.0
ST-1	Southeast portion of site	NA	49.2	59.2	NA	
ST-1	Southeast portion of site	NA	49.0	61.3	NA	

NA – not applicable
Source: J.C. Brennan and Associates 2021.

Existing traffic noise levels were determined using the Federal Highway Administration Traffic Noise Prediction Model. Traffic volumes were based upon inputs from the project traffic impact study. Truck mix percentages were based upon overall traffic counts and vehicle classification conducted for the area roadways. Table 14-2 provides the results of the analysis.

TABLE 14-2
EXISTING TRAFFIC NOISE LEVELS

Roadway	Segment	Traffic Noise Level 100 ft. from Centerline (L_{dn})	Distance to Noise Contours (feet)		
			60 dB L_{dn}	65 dB L_{dn}	70 dB L_{dn}
SR 99	North of Mariposa Road	81 dB	2,356	1,094	508
	South of Mariposa Road	80 dB	2,153	999	464
Mariposa Road	SR 99 to Farmington Road	65 dB	229	106	49
	Carpenter Road to SR 99	63 dB	166	77	36
	Project Site to Carpenter Road	63 dB	155	72	33
	East of Project Site	63 dB	155	72	33
	East of Austin Road	62 dB	144	67	31
Arch-Airport Road	Qantas Road to SR 99	65 dB	320	149	69

Source: J.C. Brennan and Associates 2021.

Noise-Sensitive Land Uses

According to guidelines issued by the California Office of Noise Control, residential land uses are considered sensitive to elevated noise levels. Other sensitive uses include schools, libraries, churches, hospitals, and the like. Commercial, industrial, and recreational uses are substantially less sensitive to noise (Office of Noise Control 1976). Based on this definition, the nearest noise-sensitive receptors to the project site are adjacent rural residences to the immediate east of the site. Other rural residences west and north of the site along Mariposa Road are relatively close. Other nearby land uses are agricultural or commercial, which are less sensitive to noise.

Groundborne Vibration

Groundborne vibration is not a common environmental problem. It is typically associated with transportation facilities, although it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, trucks, and buses on rough roads, heavy earth-moving equipment, and construction activities such as blasting and pile driving. The effects of groundborne vibration include perceptible movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings (FTA 2006).

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to annoyance and damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

REGULATORY FRAMEWORK

Stockton General Plan

The City of Stockton has incorporated noise standards in Table 5-1 of the Safety Element in the Stockton General Plan 2040. These standards were originally developed by the EPA and subsequently adapted by the State. Under the standards incorporated by the General Plan, an exterior noise environment of 50-60 dBA L_{dn} is "normally acceptable" for residential uses, and noise levels of up to 70 dBA L_{dn} are “conditionally acceptable.” For other sensitive land uses such as schools, libraries, churches, hospitals and the like, an exterior noise environment of up to 70 dBA is considered “normally acceptable.” Commercial, industrial, and recreational uses are substantially less sensitive to noise.

The above composite noise standards are appropriate tools for assessing the acceptability of prevailing noise conditions. They do not recognize the impact of “intrusive” noise sources or sources which involve intermittent, temporary, or similar noise events which are well above ambient levels.

Stockton Municipal Code

Chapter 16.60 - Noise Standards

Stockton Municipal Code Chapter 16.60 incorporates the City’s Noise Control Ordinance. Section 16.60.040 states that new or expanded commercial, industrial, and other land use-related noise sources shall mitigate their noise levels such that they do not adversely impact noise-sensitive land uses (e.g., residences) and do not exceed City noise standards.

Table 14-3 shows the City noise standards that would apply to the project. The Stockton Municipal Code specifies other noise standards applicable to industrial land uses. The maximum sound level produced by industrial land uses or by other permitted noise-generating activities within an industrial (IL, IG, or PT) or public facilities (PF) zone shall not exceed 80 dB, and the L_{eq} from these land uses shall not exceed 70 dB during daytime or nighttime hours as measured at the property line of any other adjoining IL, IG, PT, or PF zone.

TABLE 14-3
EXTERIOR HOURLY NOISE LEVEL STANDARDS
FOR STATIONARY NOISE SOURCES

	Outdoor Activity Areas	
Noise Level Descriptor	**Day (7:00 a.m. to 10:00 p.m.)**	**Night (10:00 p.m. to 7:00 a.m.)**
Hourly L_{eq}, dB	55	45
Maximum level, dB	75	65

Note: Each of the noise level standards specified above shall be increased by 5 dBA for simple tone, noise consisting primarily of speech or music, or recurring impulsive noises.
Source: Stockton Municipal Code Section 16.60.040.

TABLE 14-4
MAXIMUM ALLOWABLE NOISE LEVEL STANDARDS,
TRANSPORTATION NOISE SOURCES

	Maximum Allowable Noise Exposure (dB L_{dn})	
Land Use	**Outdoor Activity Areas**	**Indoor**
Residential	65	45
Child care	-	45
Educational facilities, libraries, museums	-	45
Live-work facilities	65	45
Lodging	65	45
Medical services	-	45
Multi-use (with residential)	65	45

Notes: Noise standard shall be applied at the property line of the receiving land use. Each of the noise level standards specified above shall be increased by 5 dBA for simple tone, noise consisting primarily of speech or music, or recurring impulsive noises.
Source: Stockton Municipal Code Section 16.60.040.

Table 14-4 shows City noise standards that are applicable to transportation noise standards. These standards show the maximum allowable noise exposure from transportation sources (i.e., traffic) for sensitive land uses. Transportation-related projects that include the development of new transportation facilities or the expansion of existing transportation facilities shall be required to mitigate their noise levels so that the resulting noise does not adversely impact noise-sensitive land uses and does not exceed the standards in Table 14-4.

Section 16.60.020 states that the following activities are exempt from the noise standards in Chapter 16.60: emergency activities, warning devices, outdoor play/school ground activities (between 7:00 a.m. and 10:00 p.m.), railroad activities, State or federal pre-exempted activities, public health and safety activities, and maintenance of residential real property. Construction activities within the daytime hours of 7:00 a.m. and 10:00 p.m. are also considered to be exempt from the noise control provisions of the Municipal Code.

Section 16.60.030 deems the following activities as violations of the Noise Control Ordinance: construction noise between the hours of 10:00 p.m. and 7:00 a.m., loading and unloading operations between the hours of 10:00 p.m. and 7:00 a.m., public nuisance noise, and stationary non-emergency signaling devices, among other activities. Regarding construction noise, Section 16.60.030 also includes restrictions on construction noise. This section prohibits operating or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling, or repair work between the hours of 10:00 p.m. and 7:00 a.m. so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities.

Per Section 16.60.050, the Community Development Director or other review authority, as applicable, shall require the preparation of an acoustical study in instances where it has been determined that a project may expose existing or proposed noise-sensitive land uses to noise levels exceeding the noise standards specified above. This determination must be based on the existing and future 65 dB L_{dn} transportation-related noise contours contained in the noise section of the City's General Plan, the proximity of new noise-sensitive land uses to known noise sources, and/or the knowledge that a potential for adverse noise impacts exists (e.g., as determined in a project-level environmental document prepared in compliance with CEQA). Also, per Section 16.60.060, applicants for projects requiring discretionary approval shall submit evidence that allows the City to determine whether the proposed project complies or will comply with the City's Noise Control Ordinance.

Section 16.32.100 - Vibration

Stockton Municipal Code Section 16.32.100 includes qualitative benchmarks for reducing vibration effects within Stockton. Land uses that generate vibrations may not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities. Such uses also may not generate vibrations that cause discomfort or annoyance to reasonable persons of normal sensitivity or that endangers the comfort, repose, health, or peace of residents whose property abuts the use. Vibrations from temporary construction and

demolition activities are exempt from the provisions of this section, as are vehicles that leave the subject parcel (e.g., trucks, trains, and aircraft).

Stockton Metropolitan Airport Land Use Compatibility Plan

As described in Chapter 11.0, Hazards, the nearest public airport is Stockton Metropolitan Airport, approximately 1.75 miles southwest of the Hoggan property. One of the purposes of the ALUCP, described in Chapter 11.0, Hazards, is to protect the public from the adverse effects of airport noise. The ALUCP established noise contours around Stockton Metropolitan Airport (Figure 14-2), based upon aircraft activity forecasted in the Stockton Metropolitan Airport Master Plan (Coffman Associates 2016). The compatibility of land uses with these noise contours is set forth in noise criteria in the ALUCP. The outermost noise contour (60 dB), as delineated in the Stockton Metropolitan Airport ALUCP, does not extend to the project site.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on noise if it 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, or
- For a project located within the vicinity of a private airstrip or an airport land use plan, or within two miles of a public or public use airport if no plan has been adopted, expose people residing or working in the project area to excessive noise levels. As noted, this impact will not be analyzed in this EIR.

One means of determining a potential noise impact is to assess a person's reaction to changes in noise levels due to a project. The information in Table 14-5 below is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed based on test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dBA, as this is the usual range of voice and interior noise levels.

Another means of determining a potential noise impact is Table 5-1 of the Stockton General Plan 2040 Safety Element, which provides specific guidance for assessing increases in ambient noise as follows: If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA.

TABLE 14-5
SUBJECTIVE REACTIONS TO CHANGES IN NOISE LEVELS

Change in Level (dBA)	Subjective Reaction	Factor Change in Acoustical Energy
1	Imperceptible (except for tones)	1.3
3	Just Barely Perceptible	2.0
6	Clearly Noticeable	4.0
10	About Twice (or Half) as Loud	10.0

Source: Egan 1988.

TABLE 14-6
GROUNDBORNE VIBRATION THRESHOLDS

Guidelines for:	Maximum Peak Particle Velocity (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Structure and Condition		
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5
Human Response		
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Severe	2.0	0.4

Source: Caltrans 2013.

Caltrans has prescribed a methodology for evaluating groundborne vibration impacts from construction based on potential damage to structures and human annoyance, from both transient sources (e.g., blasting, drop balls) and continuous/frequent intermittent sources (e.g., impact and vibratory pile drivers, vibratory compaction equipment). Table 14-6 presents thresholds for impacts related to groundborne vibration, based on the Caltrans methodology.

Impact NOISE-1: Increase in Noise Levels in Excess of Standards – Traffic

The potential traffic noise levels associated with the project were determined using the Traffic Noise Prediction Model. Traffic volumes as estimated in the traffic impact study under Existing Plus Approved Projects (EPAP) conditions without and with the project were modified to determine traffic noise levels under the same conditions. Truck mix percentages were based upon overall traffic counts and vehicle classification conducted for the area roadways.

TABLE 14-7
TRAFFIC NOISE LEVELS – EPAP CONDITIONS

Roadway	Segment	Traffic Noise Level 100 ft. from Centerline (dB L_{dn})		
		EPAP No Project	**EPAP Plus Project**	**Change**
SR 99	North of Mariposa Road	82	82	0
	South of Mariposa Road	81	81	0
Mariposa Road	SR 99 to Farmington Road	67	68	+1
	Carpenter Road to SR 99	65	**69**	**+4**
	Project Site to Carpenter Road	65	**69**	**+4**
	East of Project Site	65	66	+1
	East of Austin Road	64	64	0
Arch-Airport Road	Qantas Road to SR 99	70	71	+1

Source: J.C. Brennan and Associates 2021.

Table 14-7 shows the traffic noise impact analysis results under EPAP conditions without and with the proposed project. As shown in Table 14-7, the project will result in changes in traffic noise levels varying between 0 dB and an increase of 4 dB L_{dn}. Traffic noise levels on the two Mariposa Road segments would increase by 4 dB, which exceeds the 3-dB impact threshold set in the City of Stockton Noise Element. Because of this, project impacts on traffic noise levels under EPAP conditions are considered potentially significant.

The noise study modeled traffic speed on the segments of Mariposa Road showing the greatest noise level change at 45 miles per hour (mph). While most of development along these segments appears to be commercial or light industrial, there are at least three residences along these segments which could be adversely affected by the projects noise level increase.

The noise study evaluated potential mitigation measures that would reduce traffic noise levels on the Carpenter Road segments by 2 dB L_{dn}. The measures considered included reducing speed limits along Mariposa Road by 10 mph and the construction of noise barrier walls between the affected residences and Mariposa Road traffic lanes. Although these measures might limit noise levels on the Carpenter Road segments to only 2 dB L_{dn}, which would be below the 3-dB significance threshold, these measures are not considered feasible. As discussed in more detail in the technical report, the appropriateness and acceptability of speed limit reductions would, if desirable, need to be determined outside of the CEQA process and in accordance with applicable State and local standards and practices. It is doubtful and contrary to prevailing acoustical mitigation practice that an adequate reduction in noise could be provided with barrier walls. Neither mitigation measure would reduce traffic noise impacts to a level that would be less than significant. This impact is considered Significant and Unavoidable.

Level of Significance: Significant

Mitigation Measures: None available

Significance After Mitigation: Significant and unavoidable

Impact NOISE-2: Increase in Noise Levels in Excess of Standards – Other Project Noise

Operation of proposed warehousing uses would generate new noise. Noise generated by loading dock activities includes truck arrivals and departures from the unloading area, trucks backing into the docks (including backup beepers), air brakes, and other related unloading noise. To assess loading dock activity noise impacts at the nearest potentially affected noise-sensitive land uses, the noise study used reference noise levels of 80 dB L_{max} and 60 dB L_{eq} at a distance of 50 feet, a methodology consistent with the analysis used in the Norcal Logistics Center EIR.

Loading docks are generally a distance of 100-feet from the nearest residences or residentially zoned property. The resulting noise levels would be 54 dB L_{eq} and 74 dB L_{max}. The noise levels would comply with the daytime noise level standards of 55 dB L_{eq}

and 75 dB L_{max} (see Table 14-3 above). However, the noise levels would not comply with the nighttime noise level standards of 45 dB L_{eq} and 65 dB L_{max}. Therefore, impacts are considered potentially significant.

The noise study recommends sound walls 10 feet in height be placed at specific locations along the project site boundary where residences are close to potential activity areas. Figure 14-3 shows the recommended locations based on the conceptual plan for site development. This figure is from Figure 3 of the project noise study. Installation of sound walls would reduce the noise impacts on residences of project operations of the type and location shown on the conceptual plan to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

NOISE-1: Sound walls 10 feet in height shall be required where existing residential uses or residentially zoned areas are located adjacent to the project site. Figure 3 of the project noise study (Figure 14-3 of this EIR) shows the locations of the recommended sound walls based on the proposed conceptual plan. Where openings in sound walls occur for access or emergency access, solid gates shall be installed. 10-foot sound walls are expected to provide a 10 dB reduction in noise levels. Site plan modifications, and/or additional noise analysis by a qualified acoustical consultant may warrant changes to these requirements, assuming that compliance with City noise standards is maintained.

Significance After Mitigation: Less than significant

Impact NOISE-3: Increase in Noise Levels in Excess of Standards – Construction

Noise from project construction activities would temporarily add to the noise environment in the project vicinity during the construction period. Activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet, as indicated in Table 14-8. Noise would also be generated during the construction phase by increased truck traffic on area roadways, associated with transport of heavy materials and equipment to and from construction sites.

TABLE 14-8
CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	**Maximum Level, dB at 50 feet**
Backhoe	78
Compactor	83
Compressor (air)	78

Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: FHWA 2006.

Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours; noise during daytime is allowed by the Stockton Municipal Code. The truck traffic noise increase would be of short duration and would likely occur primarily during daytime hours. Nevertheless, given the proximity of residences, construction noise impacts are considered potentially significant. Mitigation provided below would reduce exposure of sensitive land uses to construction noise to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

NOISE-2: Construction activities associated with the project shall adhere to the requirements of the City of Stockton Municipal Code with respect to hours of operation. The applicant shall ordinarily limit construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No construction shall occur on Sundays or national holidays without a written permit from the City. All construction equipment shall be in good working order and shall be fitted with factory-equipped mufflers.

Significance After Mitigation: Less than significant

Impact NOISE-4: Groundborne Vibration

The project would not involve potential groundborne vibration sources other than operation of construction equipment. In most cases, vibration induced by typical construction equipment does not result in adverse effects on people or structures. Noise from construction equipment typically overshadows any meaningful groundborne vibration effects on people (Caltrans 2013).

As noted in the noise study, the nearest noise-sensitive land uses to the project site are two adjacent rural residences to the east. Using the methodology prescribed by Caltrans, the ground vibration produced by a large bulldozer would produce a peak particle

velocity of approximately 0.089 inches per second at the residences. The predicted peak particle velocity is above the "Barely Perceptible" threshold peak particle velocity of 0.04 inches per second, but it is below the "Distinctly Perceptible" threshold of 0.25 inches per second (see Table 14-6). It is also below the threshold of potential damage to older residential structures, which is 0.5 inches per second. Potential vibration impacts would be intermittent and short-term. On this basis, project impacts related to groundborne vibration would be less than significant.

Level of Significance: Less than significant

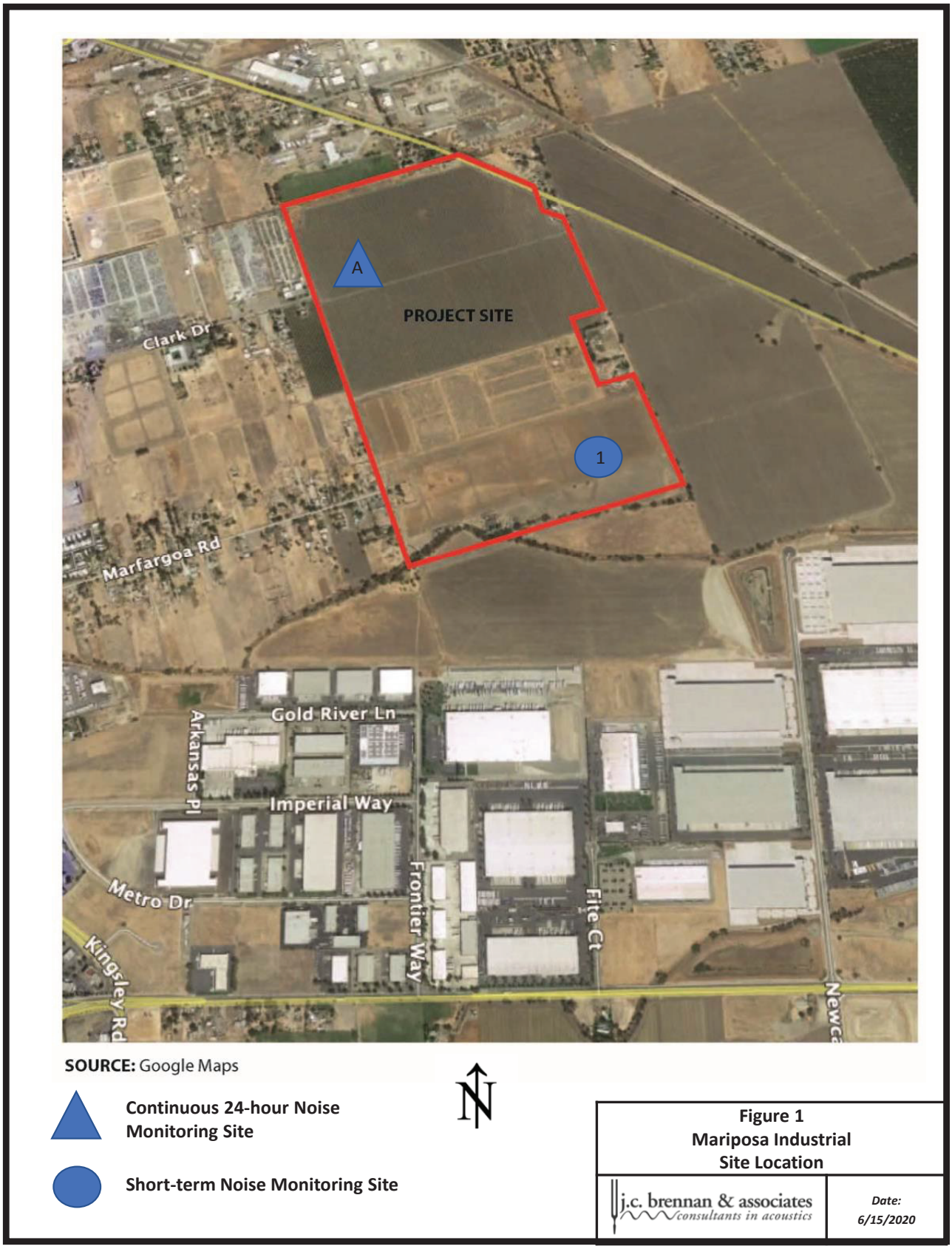
Mitigation Measures: None required

Impact NOISE-5: Airport and Airstrip Noise

As noted, the outermost noise contour (60 dB) of the Stockton Metropolitan Airport, as delineated in the ALUCP, does not extend to the project site. Because of this, the project would not expose persons working on the project site to excessive airport-related noise. There are no private airstrips in the vicinity, so there would be no noise affecting the project site from airstrips. The project would have no impact related to airport and airstrip noise.

Level of Significance: No impact

Mitigation Measures: None required


A
PROJECT SITE
1
Clark Dr
Marfargoa Rd
Gold River Ln
Arkansas Pl
Imperial Way
Metro Dr
Kingsley Rd
Frontier Way
Fite Ct
SOURCE: Google Maps
Continuous 24-hour Noise Monitoring Site
Short-term Noise Monitoring Site
Figure 1
Mariposa Industrial
Site Location
j.c. brennan & associates
consultants in acoustics
Date:
6/15/2020

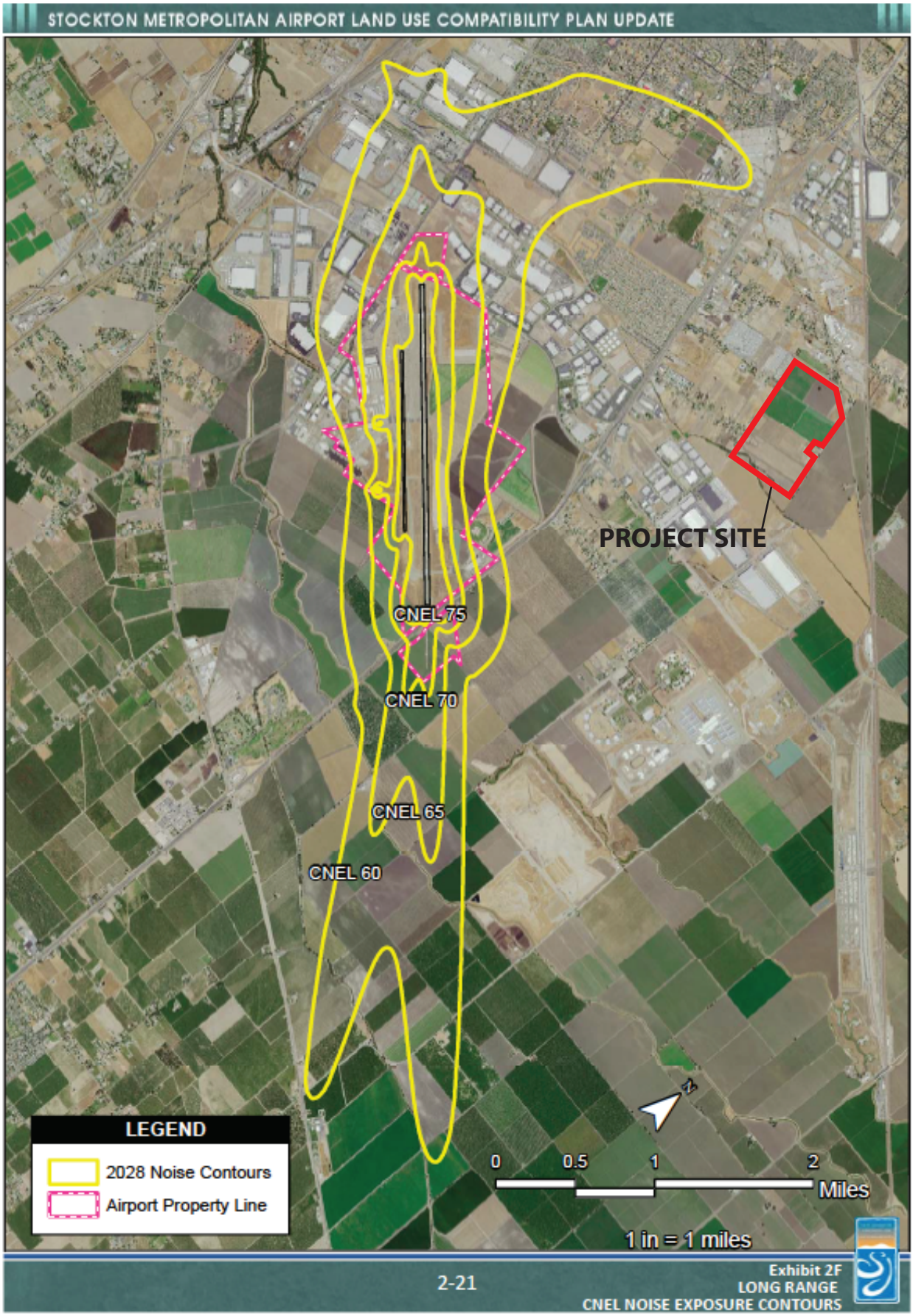


Figure 14-2
STOCKTON METROPLITAN
AIRPORT NOISE CONTOURS

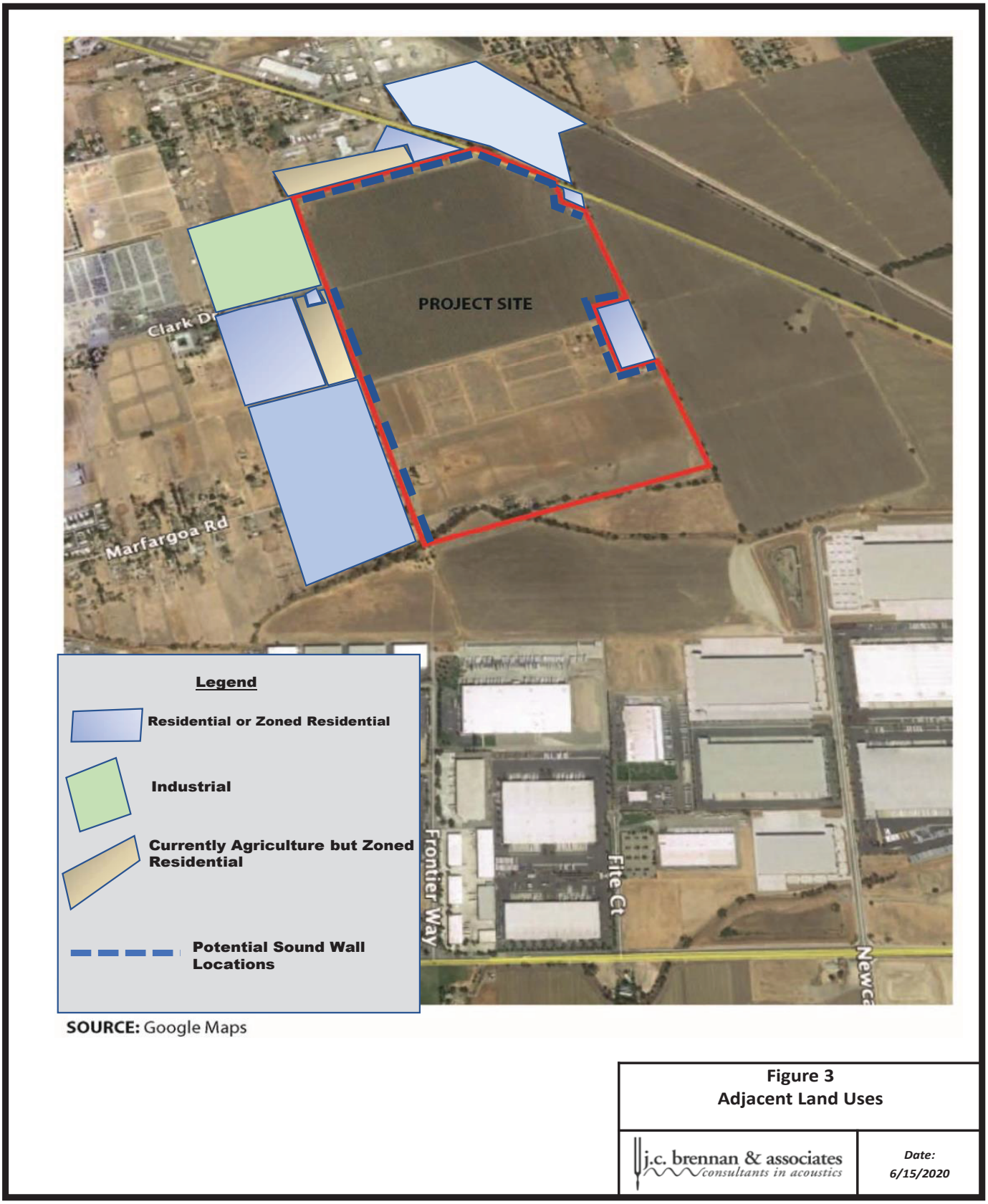


Figure 3
Adjacent Land Uses

j.c. brennan & associates
consultants in acoustics

Date:
6/15/2020

15.0 PUBLIC SERVICES AND RECREATION

ENVIRONMENTAL SETTING

Fire Protection

The project site is currently within the Montezuma Fire District, which serves approximately 10 square miles of San Joaquin County unincorporated area, mostly adjacent to and southeast of Stockton. The Stockton Metropolitan Airport is also within its service area. The Fire District provides fire protection, suppression, and prevention; hazardous materials-related services; and basic emergency medical service. It has two stations: Station 181 at 2405 South B Street, and Station 182 at the Stockton Metropolitan Airport (City of Stockton 2018b) near the airport terminal. A 2011 Municipal Service Review of rural fire districts stated that the Montezuma Fire District stations are in good condition, and response times to emergency calls are better than the average response time of the studied rural fire districts (San Joaquin LAFCo 2011). The project proposes to detach the site from the Montezuma Fire District concurrently with the proposed annexation of the site to the City of Stockton.

Upon annexation, the project site would be within the service area of the Stockton Fire Department. The Fire Department provides fire protection, fire prevention, and paramedic emergency medical services to the City of Stockton. The Department has 182 firefighters, of which 81 are trained as Paramedics and 101 are certified as Emergency Medical Technician level (EMTs0. Department staff are distributed among 12 stations located throughout the Stockton metropolitan area; at each stations, at least one member must be a Paramedic.

The Stockton General Plan 2040 states that the City strives to have 1.23 sworn firefighters per 1,000 population. (City of Stockton 2018a). The closest Stockton Fire Department station to the project site is Station 12 at 4010 East Main Street, approximately four miles to the north of the project, east of SR 99. Station 12 is staffed with a captain, an engineer, and a firefighter, and the station is equipped with one engine and a grass fire rig (City of Stockton 2019). Station 12 is central to and serves most residential development within the City east of SR 99. In 2020, the latest year for which data are available, the Fire Department responded to 59,645 emergency calls, of which 36,305 were for emergency medical service and 5,064 were for fires, with the remaining calls for other types of emergencies. The average citywide response time to a standard structure fire call is 3-4 minutes, while the average response time for emergency medical service calls is four minutes (City of Stockton 2019). The Stockton General Plan 2040 sets a standard of a response time of four minutes or less travel time for the arrival of the first arriving engine company at a fire suppression incident (City of Stockton 2018a). The response time from Station 12 to the project site is an estimated 10-12 minutes (see

below). The City requires that projects pay a Public Facility Fee to cover capital costs for new or expanded fire facilities.

The Stockton Fire Department is experiencing increased demand for fire protection and related services in the south Stockton industrial areas as a result of ongoing industrial and other development. City departments, including Fire, Community Development and Finance together with industrial project proponents are engaged in planning for financing, construction and staffing of a new fire station in the area, including the proposed project site. Development and implementation of the plan will involve a multi-year process helping the Department meet increasing service demands and reduce response times (Chief Edwards, pers. comm.).

All public fire protection agencies in San Joaquin County, including the Stockton Fire Department, operate under a master mutual aid agreement, under which other fire agencies may be called upon to assist should the resources of one agency be considered inadequate for any given call (San Joaquin County 2016b). The nearest fire stations to the project site that are not part of the Stockton Fire Department are the two Montezuma Fire District stations and the Collegeville Rural Fire Department station approximately 3.5 miles to the east.

Police Protection

Law enforcement services for the project site are currently provided by the San Joaquin County Sheriff's Department, which serves unincorporated San Joaquin County. The Sheriff's Department facility is at 7000 Michael Canlis Boulevard in French Camp. The facility houses all the divisions of the Department, including investigation, patrol, and custody, along with the Coroner's Office.

The Stockton Police Department would be responsible for law enforcement services for the project site upon annexation. The Police Department is headed by a Chief of Police and two Deputy Chiefs. It is further organized into five divisions: Field Operations, Special Operations, Investigations, Administrative Services, and Technical Services, each commanded by a Captain. As of September 2017, the Police Department had 712 staff members, including 485 sworn police officers, 41 police telecommunicators, and 186 civilian personnel. The service ratio of sworn officers to 1,000 population is 1.537 (City of Stockton 2019). The City's goal is 1.5 sworn officers per 1,000 residents (City of Stockton 2018a), so the City currently meets this standard.

The Police Department's Main Precinct, at 22 East Market Street approximately five miles northwest of the project site, is where field services are located. Central Services, located at 22 East Weber Street, houses investigations and support services. The service area of the Police Department, entirely within City limits, is organized into six Community Policing Districts. The project site is adjacent to the Park Community Policing District, which covers southeastern Stockton. The average response time to in-progress, life-threatening emergencies is between three and five minutes (City of Stockton 2019). The Stockton General Plan states that the City strives for an average law

enforcement response time of five minutes or less for Priority One calls - calls where a threat to persons may exist (City of Stockton 2018a).

According to staff, the Police Department has outgrown its existing facilities and significant renovations to increase capacity will likely be required, given the number of new officers proposed under Measure A. The current space allotted for the Police Department is inadequate; in particular, the main facility on East Market Street needs renovations and repair, and the firing range at 3040 Navy Drive needs expansion or relocation. There is a current project underway to create a Master Space Plan for the main facility, as well as the Police Administration and Support facility at 22 East Weber Avenue. Limited funding will require a phased approach to execution of this plan over several years (City of Stockton 2018a). The City requires that projects pay a Public Facility Fee to cover capital costs for new or expanded police facilities.

Schools

The project site is within the boundaries of the Stockton Unified School District and would remain so upon annexation. The Stockton Unified School District provides education from transitional kindergarten to 12th grade, along with Head Start, adult, and special education programs. In general, students from transitional kindergarten to 8th grade attend elementary school, and those in grades 9 to 12 attend high school. As of the 2019-2020 school year, the District enrolled 41,679 students (California Department of Education 2020).

The Stockton Unified School District operates 54 schools within the Stockton area – 39 elementary schools, six high schools, and nine specialty schools (City of Stockton 2018b). As noted in Chapter 11.0, Hazards, the nearest District school is Nightingale Charter School on 1721 Carpenter Road, approximately 2.5 miles west of the project site. The Stockton Unified School District requires payment of development impact fees from development projects to cover capital costs for new or expanded school facilities, in accordance with State law (see below).

Parks and Recreational Services

The City of Stockton, through its Community Services Department, provides park and recreational services within City limits. The City owns and operates 66 parks, which are divided into three categories: neighborhood, community, and specialty parks. In addition, the City owns and operates accessible open space, special purpose facilities, and trails (City of Stockton 2018b). The nearest City Park to the project site is Ernie Shropshire Park, on Logan Lane approximately two miles west of the project site. Shropshire Park, a neighborhood park, is equipped with picnic tables, tot lots, a tennis court, a basketball court, and barbecue facilities.

San Joaquin County, through its Parks and Recreation Department, owns and operates nine parks in the unincorporated Stockton area (City of Stockton 2018b). As described in the San Joaquin County General Plan, the parks fall into three categories: neighborhood, community, and regional. The nearest County park to the project site is Kennedy Park

and Community Center on South D Street, approximately two miles to the northwest. Along with a community center, Kennedy Park has ball fields, a basketball court, a swimming pool, and day-use picnicking. The County also operates a Regional Sports Complex adjacent to Stockton Metropolitan Airport, southwest of the project site. This facility has a four-field softball complex and four soccer fields, along with concession stands and a picnic shelter (San Joaquin County 2016b).

The City requires payment of Public Facility Fees for non-residential development for community recreational centers. However, it exempts such development from Quimby Act fees (see below).

Other Public Services

Libraries in San Joaquin County and the City of Stockton have merged to become the Stockton-San Joaquin County Public Library system. The library system has 15 branches in nine communities; seven of these branches are in Stockton. The nearest library branch to the project site is the Maya Angelou Branch Library at 2324 Pock Lane in Stockton, approximately 2.5 miles to the northwest. This library offers computer workstations and printers for general and Internet use, a reference collection for in-depth research, and a circulating collection of library materials. The City requires that projects pay a Public Facility Fee to cover capital costs for new or expanded library facilities.

Public health care in San Joaquin County is available through the San Joaquin General Hospital at 500 West Hospital Road in French Camp, approximately 4.5 miles southwest of the project site. This 236-bed hospital is a general acute care facility providing a full range of inpatient services including general medical/surgical care, high-risk obstetrics, and neonatal intensive care. It also functions as the primary base hospital, which is designated by the County Emergency Medical Service Agency and is responsible for directing the advanced life support and pre-hospital care system assigned to it by the County (San Joaquin County 2016b). In addition to the main hospital, comprehensive outpatient facilities are available at the California Street Clinic on 1414 North California Street in Stockton, approximately 5.5 miles northwest of the project site, and at a clinic on the main campus in French Camp.

The Superior Court of California, County of San Joaquin, has jurisdiction over all felonies, misdemeanors, civil cases of all amounts, and other legal proceedings in San Joaquin County and its incorporated cities. These proceedings are conducted at the Stockton Courthouse, the Juvenile Justice Center in French Camp, and branch courts in Manteca and Lodi. The nearest courthouse to the project site is the Stockton Courthouse on 180 East Weber Avenue.

State

SB 50

SB 50, enacted in 1998, created the present School Facility Program, which is a State/local match program for the funding of new kindergarten-12th grade school facilities and the modernization of existing facilities. SB 50 established a base fee for both residential and commercial/industrial development, the proceeds from which provide capital improvement funding for schools. This base has been adjusted for inflation every two years. School districts must establish the nexus between the development and the need for school facilities via a fee justification study to impose the biannual increase. Fees are levied and collected at the time the building permit is issued. District certification of the payment of the applicable fee is required before a city or county can issue the building permit.

The Stockton Unified School District is eligible to levy Level 1 development impact fees on new residential and commercial development. Development impact fees are $5.51 per square foot of single-family residential development, $3.36 per square foot of multi-family residential development, and $0.54 per square foot of commercial/industrial development (City of Stockton 2018b).

California Government Code Sections 65995 to 65998 (School Facilities)

California Government Code Section 65996 specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is the payment of a school impact fee prior to issuance of a building permit. Sections 65995 to 65998 set forth provisions for the payment of school impact fees by new development by "mitigating impacts on school facilities that occur (as a result of) the planning, use, or development of real property" [Section 65996(a)]. The legislation goes on to say that the payment of school impact fees is deemed to provide full and complete school facilities mitigation under CEQA [Section 65996(b)]. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

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.

Local

Stockton Municipal Code

Chapter 3.52 of the Stockton Municipal Code was adopted to authorize the City of Stockton to impose a transaction and use tax per Measure W, which was approved by Stockton voters in 2004. Section 3.52.040 imposes a one-quarter-cent retail tax upon all retail sales within Stockton. Per Section 3.52.010(e), revenue from the tax increase will provide funding to maintain the City's current level of police and fire protection services and undertake necessary capital projects to support these services.

Chapter 15.12 of the Stockton Municipal Code outlines the standards and regulations of the Stockton Fire Code. Section 15.12.010 incorporates the California Fire Code, 2013 Edition, by reference and adopts these documents as the Fire Code of the City of Stockton.

Section 16.72.260 of the Stockton Municipal Code establishes a public facilities fee on the issuance of permits for development within the city. Subsection B.1 defines public facilities as City offices, fire stations, libraries, police stations, community recreation centers, street improvements, and water and sewage facilities. Per Subsection C, revenue from building permits will be used to pay for design and construction of designated public facilities, program development, and overall maintenance.

City of Stockton Measure M

Measure M, the Library and Recreation Special Tax, is a one-quarter-cent special transactions and use sales tax that passed during the November 2016 General Election, receiving more than the two-thirds vote needed for approval. The Measure M tax will be implemented for 16 years and will be used to fund library and recreation services in the City.

Stockton General Plan 2040

The following Stockton General Plan 2040 policies and implementing actions are relevant to this project (City of Stockton 2018a):

- Action LU-6.1.G: Maintain adequate staffing levels to support achieving the City's service level goals for police and fire protection.
- Action SAF-1.2.A: Update the City's Design Guidelines and Development Code to require new and retrofitted development to support effective police and fire protection response and services by using the following principles of crime prevention through environmental design:
    - Delineate private and public spaces
    - Enhance visibility

- Control property access
- Ensure adequate property maintenance

- Action SAF-2.2.A: Require new development to provide adequate access for emergency vehicles and evacuation routes. [See also Chapter 11.0, Hazards.]

- Action LU-6.3.A: Require development to mitigate any impacts to existing sewer, water, stormwater, street, fire station, park, or library infrastructure that would reduce service levels.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on the environment related to public services and recreation if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or generate a 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, or other public facilities,

- 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, or

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact PSR-1: Fire Protection Services

Project site annexation and development would generate new demand for fire protection services from the Stockton Fire Department. Demands for service from nearby industrial areas are currently served by the Stockton Fire Department, and further development including the project can be served by the Fire Department. Without additional facilities and staffing, the Fire Department has indicated that response times to the project site would likely remain in the range of 10-12 minutes due to the traffic typically found on the main routes providing access to the project area, South Airport Way and SR 99 (Phil Simon, electronic mail). This would be a substantially greater response time than the target set in the Stockton General Plan 2040.

Response times by themselves are not considered an environmental impact requiring analysis and mitigation under CEQA. In *City of Hayward v. Board of Trustees of the California State University* (2015), the court ruled that "…the obligation to provide adequate fire and emergency medical services is the responsibility of the city…The need for additional fire protection services is not an *environmental* impact that CEQA requires a project proponent to mitigate" [emphasis in original]. However, in reviewing annexation applications, LAFCo requires a city to demonstrate that it can adequately meet service needs of the area proposed for annexation. In reviews of annexation applications by the City of Stockton for other proposed developments in the project vicinity, LAFCo has expressed concerns about Fire Department response times that have resulted in interagency agreements intended to improve fire service. As LAFCo is a Responsible Agency for this project, the issue of response times is discussed in this EIR.

As noted in the Environmental Setting section above, the Department is under increasing strain to meet citywide service demands, which, in the south Stockton industrial areas, is associated with continuing industrial and other development. The Fire Department is presently engaged, together with other City departments, the project proponents and other industrial developers, in planning the siting, financing, construction and staffing of a new fire station in the general project vicinity. These efforts will allow the Department to meet increasing service demands and while reducing relatively long response times (Chief Edwards, pers. comm.).

The project itself would not specifically trigger a requirement for new or expanded fire protection facilities that would result in potentially significant environmental effects. The project would, however, be required to participate in the funding of new fire stations by paying Public Facility Fees to the City. Public Facility Fees are intended to be used for future construction of Fire Department facilities required by urban expansion. Future fire stations would be subject to CEQA review as required.

The Stockton Fire Department notes that most of the new concrete tilt-up warehousing being developed in this area of the city are being designed with Early Suppression Fast Response (ESFR) fire sprinkler systems. The purpose of the ESFR systems is to allow for high-bay storage of a variety of commodities up to five feet below roof deck. They are considered the best engineered fire protection system that the National Fire Protection Association recognizes, capable of flowing up to 100 gallons per minute per nozzle. Their design purpose is to completely extinguish the fire rather than controlling the spread of fire. Testing results from nationally recognized testing agencies have proven this.

The Fire Department states that the ESFR fire sprinkler system is recommended to reduce risk associated with delayed response times (Phil Simon, electronic mail). An ESFR system would reduce the adverse physical impacts of a fire on the proposed structures while fire equipment and personnel arrive on the scene. The project applicant has indicated that ESFR systems will be incorporated into project buildings in coordination with the Stockton Fire Department, which would review and approve such systems prior to their installation and would verify their installation.

As discussed above, the Stockton Fire Department is capable of providing fire protection services to the project. The Department, other departments and the project proponents are engaged in efforts to reduce response times to the project area, and the project will be subject to ESFR requirements. As a result, the project's effects on fire protection services will be less than significant.

Level of Significance: Less than significant

Impact PSR-2: Police Protection Services

Project development would generate new demand for police protection services. Demand for service at nearby industrial areas is currently served by the Stockton Police Department; such service can be readily extended to the project site. Policing demands would likely be reduced by the provision of private on-site security by future tenants.

As noted, the Police Department has outgrown its existing facilities and significant renovations to increase capacity will likely be required in the future. The project would be required to pay Public Facility Fees to the City that would be applied to future construction or renovation of Police Department facilities required by urban expansion. With payment of these Public Facility Fees, impacts on police protection services would be less than significant, particularly since the project would not affect response times or other aspects of police service. Future new or expanded police facilities would be subject to CEQA review to determine potential environmental impacts and mitigation for identified significant impacts.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact PSR-3: Schools

The project site is within the boundaries of the Stockton Unified School District. The project would involve warehouse development, which does not directly generate new student load. Project development would generate new employment opportunities, which could attract employees with children to the Stockton area, leading to new demands for educational services. As discussed in Chapter 13.0, Land Use, most of the jobs generated by project site development are expected to be filled by residents of the Stockton area. The project is not expected to have a direct effect on population growth such that new or expanded school facilities would be needed.

The developer would be required to pay SB 50 development impact fees to the Stockton Unified School District. The fees would be applied to the costs of new facilities required to accommodate any additional student population generated indirectly by project development. Under the California Government Code, the payment of school impact fees is considered adequate mitigation for CEQA purposes. Project impacts on schools would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact PSR-4: Parks and Recreational Services

The project would not involve any direct effects on parks or recreational facilities. Since the project is unlikely to generate a substantial population increase, it would not generate a substantial direct demand for new or expanded parks or recreational facilities or services. As noted, Public Facilities Fees are placed on non-residential development for community recreational centers but not for parkland. Project impacts on recreational facilities are considered less than significant.

Level of Significance: Less than significant

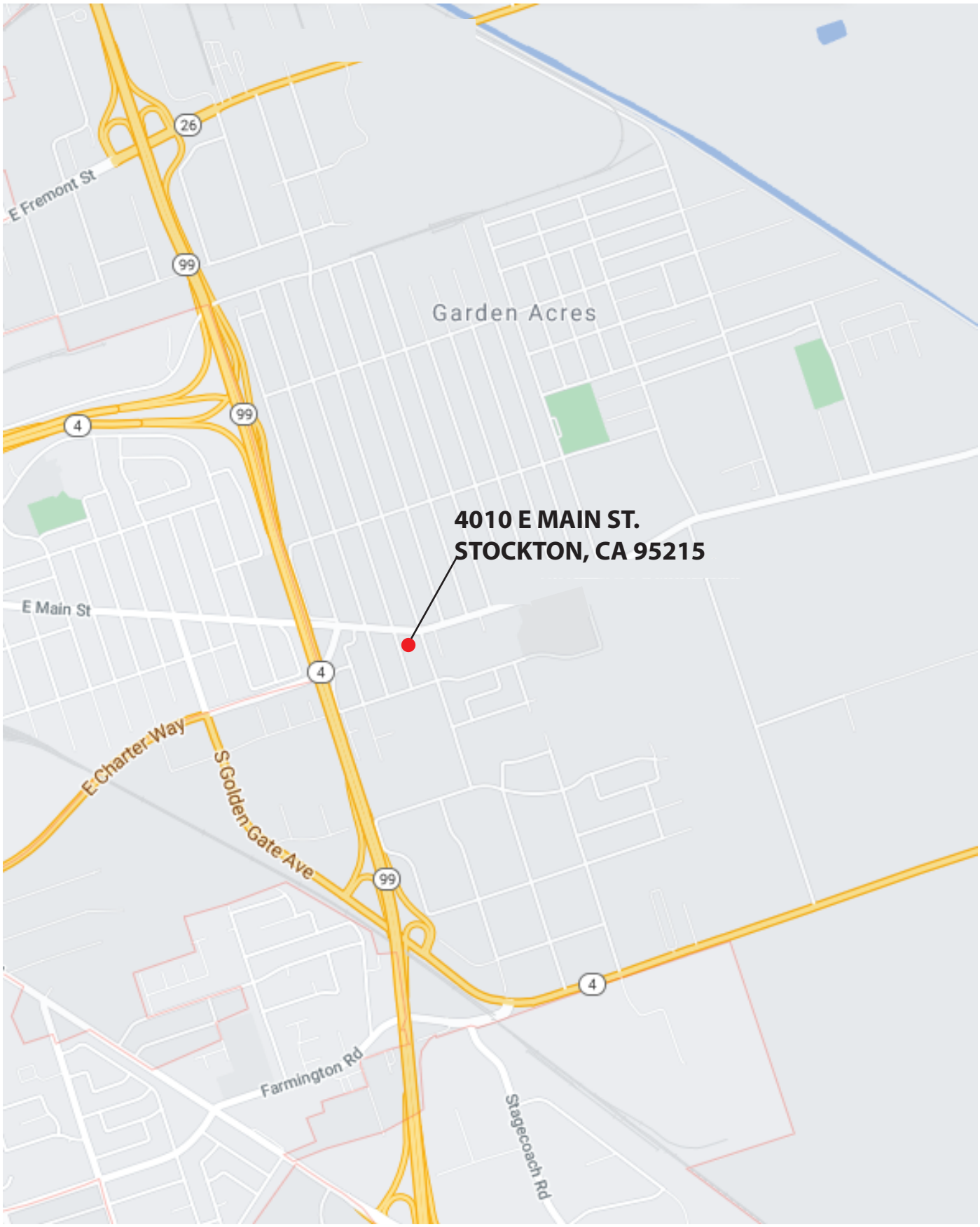
Mitigation Measures: None required

Impact PSR-5: Other Public Facilities

Since the project is unlikely to generate a substantial population increase, it would not generate a demand for additional library, public hospital, or courthouse services. No new or expanded facilities to provide these public services would be required. Project impacts on other public facilities would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required



BaseCamp Environmental

Figure 15-1
STOCKTON FIRE STATION ON MAIN STREET

16.0 TRANSPORTATION

This addresses the potential transportation impacts of the proposed project using a study provided by KD Anderson & Associates which is available in Appendix G. The study was prepared in accordance with the City of Stockton Transportation Impact Analysis Guidelines and with information from Caltrans. Transportation impacts under cumulative conditions are described and analyzed in Chapter 18.0, Cumulative Impacts.

This traffic impact 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 (Figures 16-1, 16-2 and 16-3) as well as an analysis of the Vehicle Miles Traveled associated with the project. The limits of the study area were identified through discussions with City of Stockton staff.

State Office of Planning and Research (OPR) guidelines for SB 743 implementation favor the use of Vehicle Miles Traveled (VMT) as the primary metric for transportation impact analysis and restrict the use of traffic "levels of service" (LOS) as an indicator of environmental impact significance under CEQA. The LOS effects of a project, despite SB 743 requirements, however, remain an important transportation system management tool, and LOS information needs to be communicated to City decision-makers and the public in the context of the overall environmental impact analysis presented in this EIR as well as other CEQA documents.

For the purposes of this EIR, the potential LOS effects of the project are quantified and described in terms of their consistency with the City's most current General Plan transportation planning standards. Where the project's effects are not consistent with City standards, the EIR includes recommendations for physical improvements that would reduce or eliminate the inconsistency. It should be noted that these recommendations are presented by the EIR preparer, the transportation consultant and City staff; the recommendations are not binding and should not be construed as mandatory requirements or mitigation measures that require special findings under CEQA Guidelines 15091-15093 or treatment in the project Mitigation Monitoring/Reporting Plan

ENVIRONMENTAL SETTING

Streets and Roads

The following roadways provide access to the project site or would be potentially affected by the project:

- *State Route 99 (SR 99)* is a north-south state highway that traverses the Central Valley connecting Stockton with Sacramento to the north and with Modesto, Merced, Fresno, and Bakersfield to the south. Near the project site, three travel

lanes are provided in each direction, with auxiliary lanes present at some locations. Twelve interchanges are provided along the 12-mile length of SR 99 within and adjacent to the Stockton City limits. According to 2021 Caltrans data, average daily traffic volumes on SR 99 range between 80,000 and 95,000 in the vicinity of the project site. The speed limit on SR 99 near the project site is 65 miles per hour.

- *Mariposa Road* is a west-northwest-to-east-southeast roadway connecting Charter Way in south Stockton with Escalon-Bellota Road north of Escalon. It is classified in the Stockton General Plan as an arterial roadway. Adjacent to the project site, Mariposa Road is a two-lane roadway. Mariposa Road crosses a railroad track with a grade-separated railroad crossing located just east of the intersection with Austin Road. Limited pedestrian and no bicycle facilities are provided along the roadway within the project study area. The portion of Mariposa Road southeast of Carpenter Road, which includes the segment adjacent to the project site, has a posted speed limit of 55 miles per hour.

- *Austin Road* is a north-south roadway that extends south from its intersection with Mariposa Road, southeast of the project site. Austin Road intersects Arch Road and passes through Manteca before terminating at Caswell Memorial State Park along the Stanislaus River in southern San Joaquin County. It passes adjacent to and east of the CDCR facilities south of Arch Road, and it is west of the entry into the BNSF intermodal facility. Austin Road is a two-lane roadway with no pedestrian or bicycle facilities.

- *Arch Road/Arch-Airport Road/Sperry Road* is an east-west roadway with several names. It is classified in the Stockton General Plan as an arterial roadway. The roadway extends from French Camp Road near the Interstate 5/French Camp Road interchange in the west to the BNSF Intermodal Facility east of Austin Road. East of its interchange with SR 99, the roadway is named Arch Road. Arch Road varies in segments from two to four lanes. Arch Road is currently undergoing improvements, with some segments being widened to provide additional travel capacity. In some cases, the widened portions are not yet striped to accommodate additional traffic. Sidewalks are provided along some portions of Arch Road, including portions on the north side from Logistics Drive to approximately 100 feet east of Fite Court, and on the south side from Logistics Drive to Newcastle Road. There are no bicycle facilities on Arch Road/Arch-Airport Road in the project study area.

- *Crosstown Freeway* is an east-west freeway that traverses downtown Stockton. The eastern terminus of the Crosstown Freeway is SR 99. The western terminus of the Crosstown Freeway is Navy Drive, approximately 1.4 miles west of Interstate 5. The Crosstown Freeway is part of SR 4, which continues west to Interstate 80 in the San Francisco Bay Area and continues east into the Sierra Nevada foothills. The portion of the Crosstown Freeway immediately west of SR 99 is eight lanes wide. It is six to eight lanes wide through downtown Stockton and reduces to four lanes in width west of Interstate 5.

- *Carpenter Road* is a west-southwest-to-east-northeast, two-lane roadway that extends from SR 99 East Frontage Road to approximately 0.9 miles east-northeast of Mariposa Road. It connects with Mariposa Road at an unsignalized intersection approximately one-third of a mile west-northwest of the project site. West of SR 99, a discontinuous portion of Carpenter Road extends west-southwest to Airport Way. Carpenter Road is classified in the City of Stockton General Plan as a collector roadway.

- *Munford Avenue* is a west-southwest-to-east-northeast two-lane roadway that extends from SR 99 East Frontage Road to Mariposa Road. It connects with Mariposa Road at a signalized intersection approximately 0.8 mile west-northwest of the project site. West of SR 99, a discontinuous portion of Munford Avenue extends approximately 0.4 mile west-southwest of SR 99.

- *SR 99 East Frontage Road* runs parallel to and east of SR 99. North of Arch Road, this roadway curves to the east, becoming Munford Avenue, and terminates at Mariposa Road. South of Arch Road, the roadway becomes Kingsley Road, terminating approximately 1.5 miles south of Arch Road. SR 99 East Frontage Road is a two-lane roadway with limited pedestrian facilities and no bicycle facilities in the project study area.

- *Stagecoach Road* is a north-south two-lane roadway with a southern terminus at a signalized intersection with Mariposa Road and a northern terminus at Farmington Road. The southwest leg of the intersection of Mariposa Road and Stagecoach Road is a gated driveway for Oldcastle Infrastructure, a local business.

- *Farmington Road* is an east-west roadway with an overcrossing of SR 99. In the immediate vicinity of SR 99, it is two lanes wide. Approximately one-quarter mile east of SR 99, Farmington Road intersects with Golden Gate Avenue. East of this intersection, Farmington Road is two to four lanes wide, with a center two-way, left-turn lane along portions of the roadway. Farmington Road continues east into the Sierra Nevada foothills as SR 4. Approximately one-half mile west-southwest of SR 99, Farmington Road intersects with Mariposa Road. To the west-southwest of Mariposa Road, the roadway continues as 8th Street. Discontinuous portions of 8th Street extend to the southwest portion of Stockton.

- *Golden Gate Avenue* is a northwest-to-southeast roadway with an interchange on SR 99. The roadway is four lanes wide southeast of SR 99 and two lanes wide northwest of SR 99. The southeastern terminus of Golden Gate Avenue is at Farmington Road, approximately one-quarter mile southeast of SR 99. Approximately one-third of a mile northwest of SR 99, Golden Gate Avenue transitions to a north-northwest – south-southeast alignment. This portion of Golden Gate Avenue has a north-northwest terminus at the Crosstown Freeway. Discontinuous portions of Golden Gate Avenue are present north of the Crosstown Freeway.

- *Fremont Street* is a west-southwest-to-east-northeast roadway with an interchange on SR 99. In the immediate vicinity of SR 99 and extending west-southwest to Wilson Way, Fremont Street is four lanes wide. West of Wilson Way, discontinuous portions of Fremont Street are two lanes wide, traverse downtown Stockton, and terminate west of I-5. East-northeast of SR 99, Fremont Street is two lanes wide and is designated SR 26. SR 26 extends to the northeast into the Sierra Nevada foothills.

- *Qantas Lane* is a north-south roadway that begins at Boeing Way to the north. South of Arch-Airport Road, Qantas Lane becomes SR 99 West Frontage Road located on the west side of SR 99. North of Arch-Airport Road, Qantas Lane is a two-lane roadway, while four travel lanes are provided south of Arch-Airport Road. Further south of Arch-Airport Road, Qantas Lane transitions to a two-lane roadway (one lane in each direction). Limited pedestrian facilities and no bicycle facilities are provided along Qantas Lane within the project study area.

Existing Traffic Conditions

Existing traffic conditions on study intersections, roadway segments and ramp junctions were analyzed based on Level of Service (LOS). LOS measures the quality of traffic movement on roadways and through intersections. LOS is represented by letter designations from A to F, with A representing the best movement conditions and F representing the worst.

The State of California has recently added Section 15064.3 to the CEQA Guidelines, which states that VMT is the preferred method for evaluating transportation impacts, rather than the commonly used LOS (see below). The following impact analysis conforms to this guidance by incorporating VMT analysis. Capacity-related concerns are nonetheless addressed, not as potentially significant effects on the environment, but rather as to their consistency with City LOS standards.

Intersections

Figure 16-1 shows the 13 existing intersections analyzed by the traffic study. Current intersection delay and LOS are summarized in Table 16-1 below. All intersections currently operate during morning (AM) and evening (PM) peak hours above City LOS standards, the minimally acceptable level, with limited exceptions, being LOS D for City streets and intersections. SR 99 intersections also meet the minimally acceptable LOS standards for Caltrans facilities, which are at the transition between LOS C and LOS D. See the Regulatory Framework section below for more detailed information on City and Caltrans LOS standards.

TABLE 16-1
EXISTING INTERSECTION LEVEL OF SERVICE

No.[1]	Intersection	Control[2]	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec)	LOS	Delay (sec)
1	Golden Gate Ave. & SR 99 SB Ramps	Signal	B	13.3	B	15.2
2	Golden Gate Ave. & SR 99 NB Ramps	Signal	B	13.6	B	13.9
3	Mariposa Rd. & 8th Street/Farmington Rd.	Signal	C	34.0	C	32.4
4	Mariposa Rd. & SR 99 West Frontage Rd.	Signal	B	17.8	B	17.1
5	Mariposa Rd. & SR 99 SB Ramps	Signal	A	9.5	B	10.1
6	Mariposa Rd. & SR 99 NB Ramps	Signal	A	9.1	A	9.0
7	Mariposa Rd. & Stagecoach Rd.	Signal	B	18.4	B	17.3
8	Mariposa Rd. & Munford Ave.	Signal	B	11.7	B	17.7
9	Mariposa Rd. & Carpenter Rd.	Unsig.	A	1.8	A	2.4
10	Mariposa Rd. & Austin Rd.	Signal	B	15.1	B	16.6
11	Arch Rd. & Austin Rd.	Signal	C	28.8	C	27.2
12	Arch-Airport Rd. & Qantas Lane	Signal	B	16.9	B	17.2
13	Arch Rd. & SR 99	Signal	B	18.4	B	17.0

Notes: NB – northbound, SB – southbound
[1] See Figure 16-1
[2] Signal – signalized light control; Unsig.- unsignalized stop sign control
Source: KD Anderson and Associates 2021.

Roadway Segments

Current daily traffic volumes and associated roadway segment LOS are summarized in Table 16-2 below. All 12 study roadway segments currently operate above City and Caltrans LOS standards except for Mariposa Road from SR 99 to 8th St./Farmington Road, which is inconsistent with City LOS standards. The traffic impact study recommends widening the portions of this roadway segment that are one lane in each direction to two lanes in each direction to improve LOS to an level consistent with City standards.

TABLE 16-2
EXISTING ROADWAY SEGMENT LEVEL OF SERVICE

Roadway Segment	Number of Lanes	Daily Volume	LOS
SR 99 – North of Crosstown Freeway	8	95,000	C
Crosstown Freeway – West of SR 99	8	104,900	C
SR 99 – Crosstown Freeway to Golden Gate Ave.	8	94,000	C
SR 99 – Golden Gate Ave. to Mariposa Rd.	8	92,300	C
Mariposa Rd. – SR 99 to 8th St./Farmington Rd.	2	16,295	**E**
Mariposa Rd. – Carpenter Rd. to SR 99	2	10,034	C
Mariposa Rd. – Project site to Carpenter Rd.	2	9,042	B
Mariposa Rd. – Southeast of project site	2	9,042	B
Mariposa Rd. – East of Austin Rd.	2	8,149	A
SR 99 – Mariposa Rd. to Arch-Airport Rd.	6	80,600	C
Arch-Airport Rd. – Qantas Lane to SR 99	6	26,889	A
SR 99 – South of Arch-Airport Rd.	6	85,000	C

Bold indicates unacceptable LOS.
Source: KD Anderson and Associates 2021.

Ramp Junctions

Figure 16-3 shows the 13 ramp junctions and weave areas on SR 99 that were analyzed in the traffic study. Table 16-3 presents a summary of existing AM and PM peak hour LOS at the ramp junctions in the traffic study. All of the ramp junctions and weave areas operate above City and Caltrans LOS standards except for the southbound SR 99 weave area between Fremont Street and the Crosstown, which operates at LOS F during the AM peak hour. Improvements that would make LOS consistent with City and Caltrans standards at this weave area were considered not feasible, due to existing land use adjacent to SR 99 and the spacing of the two interchanges. As a result, no improvements were recommended by the traffic impact study.

TABLE 16-3
EXISTING SR 99 RAMP JUNCTION LEVEL OF SERVICE

No.[1]	Ramp Junction	AM Peak Hour LOS	PM Peak Hour LOS
201	SB weave – Fremont Street to Crosstown Freeway	**F**	C
202	NB weave – Crosstown Freeway to Fremont Street	B	C
203	NB at Crosstown Freeway Off-Ramp	A	A
204	Golden Gate Ave. SB Off-Ramp	A	A
205	Golden Gate Ave. NB On-Ramp	B	C
206	SB weave – Golden Gate Ave. to Mariposa Rd.	B	B
207	NB weave – Mariposa Rd. to Golden Gate Ave.	B	B
208	Mariposa Rd. SB On-Ramp (Slip)	B	B
209	Mariposa Rd. NB Off-Ramp	C	C
210	Arch-Airport Rd. SB Off-Ramp	A	A
211	Arch-Airport Rd. NB On-Ramp	B	C
212	Arch-Airport Rd. SB On-Ramp	B	B
213	Arch-Airport Rd. NB Off-Ramp	C	C

Notes: NB – northbound, SB – southbound
Bold indicates unacceptable LOS.
[1] See Figure 16-2.
Source: KD Anderson and Associates 2021.

Truck Routes

The City of Stockton *Truck Routes* map and *STAA Truck Routes* map describe truck routes in the Stockton area designated specifically for use by STAA design vehicle trucks (see Chapter 3.0, Project Description). The traffic impact study identified the following STAA-designated truck routes in the vicinity of the project site:

- Mariposa Road from Martin Luther King Jr. Boulevard to Munford Avenue
- Munford Avenue from Mariposa Road to 3730 Munford Avenue
- Arch Road from Interstate 5 to Austin Road
- Golden Gate Avenue from SR 99 to Martin Luther King Jr. Boulevard (City designated)
- Martin Luther King Jr. Boulevard from Golden Gate Avenue to Interstate 5 (County designated)

- Fremont Street from Windsor Avenue to Cardinal Avenue (County designated)
- Cardinal Avenue from Fremont Street to 207 N. Cardinal Avenue (County designated)
- Qantas Lane from Arch-Airport Road to Boeing Way (City designated)
- Boeing Way from Qantas Lane to Airport Way (City designated)
- Newcastle Road north of Arch Road

In addition, Mariposa Road from Martin Luther King Jr. Boulevard to east-southeast of Austin Road is a designated truck route for flammable liquid transportation.

Public Transportation

The San Joaquin Regional Transit District (SJRTD) is the primary provider of public transportation service in the Stockton metropolitan area, offering fixed-route and flexible fixed-route services in the Stockton metropolitan area. Fixed route services are provided by standard service buses that provide connections to most areas of Stockton, along with intercity service to Lodi and an interregional commuter subscription service to Sacramento and the Bay Area. SJRTD also offers Metro Hopper, nine flexible fixed-route bus lines that can deviate from their route up to one mile, which increases transit coverage to approximately 75 percent of the Stockton metropolitan area for elderly and disabled customers certified under the Americans with Disabilities Act (San Joaquin County 2016b). County Hopper provides the same service on six routes that go from Stockton to other County communities. In addition, SJRTD provides curb-to-curb paratransit ("dial-a-ride") bus service for passengers who, due to their disability or age, are unable to access fixed route services, as well as a general dial-a-ride service to areas not currently served by SJRTD or other local transportation providers.

There are no standard bus routes, Metro Hopper routes, or County Hopper routes in the project vicinity. The closest bus routes are along SR 99 approximately one mile to the west. SJRTD Routes 385 and 390 and Express Route 44 provide limited service to the Main Post Office near the SR 99/Arch Road interchange. County Hopper Route 91 connects Stockton with Manteca and Ripon, and County Hopper Route 95 connects Manteca and Escalon to Stockton. Both Hopper routes use SR 99 near the project site.

Bicycle and Pedestrian Systems

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. The City of Stockton Bicycle Master Plan, adopted in 2017, presents a description of existing and future bicycle facilities near the project site. There are no existing bikeways in the vicinity of the project site. There are also no sidewalks, trails, or other pedestrian pathways in the project vicinity.

Other Transportation Facilities

As described in Chapter 11.0, Hazards, Stockton Metropolitan Airport is a public airport approximately two miles southwest of the project site. Stockton Airport offers scheduled passenger air service, along with general aviation and air cargo services. Issues related to land uses near Stockton Airport are discussed in Chapter 11.0 and in Chapter 14.0, Noise.

The BNSF Railway Intermodal Facility is southeast of the project site and is accessed from Arch Road. Owned and operated by the BNSF Railway Company, the intermodal facility occupies approximately 425 acres. It contains two loading and unloading tracks, each approximately 7,700 feet in length and with a combined capacity to hold approximately 150 intermodal railcars. Three storage tracks accommodate 230 intermodal railcars and have more than 800 container and trailer parking spaces (Kilcarr 2001). The facility also has 900 container and trailer parking spaces, various support mechanical facilities, and administration and maintenance buildings. The BNSF intermodal facility has a capacity of 300,000 lifts per year using four rubber tire gantry cranes (DMJM+Harris and BNSF 2001).

REGULATORY FRAMEWORK

California Department of Transportation (Caltrans)

Caltrans is the primary State agency responsible for transportation issues. One of its duties is the construction and maintenance of the State highway system. Caltrans has established standards for roadway traffic flow and has developed procedures to determine if State-controlled facilities require improvements. For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. For projects that would not physically affect facilities but may influence traffic flow and LOS, Caltrans may recommend measures to mitigate these traffic impacts.

The nearest Caltrans facilities to the project site are SR 99, the on- and off-ramps at the SR 99/Arch Road interchange, and the on- and off-ramps at the SR 99/Mariposa Road interchange. For all its facilities, Caltrans maintains a minimum LOS at the transition between LOS C and LOS D, based on the facility and its measure of effectiveness (e.g., delay at intersections, traffic density on roadway segments) (City of Stockton 2018a).

State CEQA Guidelines Section 15064.3

The State of California has recently added Section 15064.3 to the CEQA Guidelines, which is meant to incorporate SB 743 into CEQA analysis. SB 743 was enacted in 2013 with the intent to balance congestion management needs and the mitigation of the environmental impacts of traffic with statewide GHG emission reduction goals. SB 743 directed the Governor's Office of Planning and Research (OPR) to develop an alternative mechanism for evaluating transportation impacts and to amend the CEQA guidelines to

provide a transportation impact analysis framework that prioritizes reducing GHG emissions, replacing the prior focus of minimizing automobile delay.

Section 15064.3 states that VMT is the preferred metric for evaluating transportation impacts, rather than the commonly used LOS. The VMT metric measures the total miles traveled by vehicles associated with a project by multiplying the number of vehicle trips by the length of vehicle trips. Unlike LOS, VMT accounts for the total transportation environmental impact, including use of non-vehicle travel modes such as public transit and bicycling. Section 15064.3(b) sets forth the criteria for analyzing transportation impacts using the preferred VMT metric:

- VMT exceeding an applicable threshold of significance may indicate a significant impact. The City's General Plan has a threshold of significance related to VMT, which is discussed later in this chapter.

- Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing "high-quality transit corridor" should be presumed to cause a less-than-significant transportation impact. There are no transit stops or transit corridors near the project site.

- Projects that decrease VMT in the project area compared to existing conditions should be presumed to cause a less-than-significant transportation impact. Because of proposed development, the project is expected to increase VMT in the project area.

While a quantitative analysis of VMT is preferred, a qualitative analysis may be used if existing models or methods are not available to estimate VMT for the project being considered.

In 2019, OPR issued a Technical Advisory on evaluating transportation impacts under CEQA by using VMT as the metric. Among the issues discussed in the Technical Advisory are potential significance thresholds that could be used to determine the significance of a project impact on transportation. OPR recommended that a proposed residential project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. For office projects, a proposed project exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact. For retail projects, a net increase in total VMT may indicate a significant transportation impact (OPR 2019). OPR made no VMT threshold recommendations for industrial/warehouse projects.

Since December 2018, vehicle delay as expressed in LOS cannot be used solely as a threshold of significance for purposes of CEQA analysis. On December 28, 2019, the OPR adopted revised CEQA Guidelines, which included changes to the questions in the Transportation section of the Environmental Checklist presented in Appendix G of the Guidelines based on VMT methodology. The use of VMT in CEQA analysis became mandatory for CEQA lead agencies on July 1, 2020.

Regional Transportation Plans

Regional transportation plans applicable to Stockton have been prepared by SJCOG. SJCOG is a joint powers authority comprised of San Joaquin County and the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon, and Lathrop. The primary role of SJCOG is to foster intergovernmental coordination within San Joaquin County. SJCOG is overseen by a Board of Directors which allocates funding for transportation improvements. The Board also establishes regional transportation policies and programs. SJCOG has prepared several transportation plans, which are described below.

Regional Transportation Plan/Sustainable Communities Strategy

SJCOG adopted the most recent version of its Regional Transportation Plan in 2018. As the designated metropolitan planning organization representing San Joaquin County, SJCOG is required by both federal and State law to prepare a long-range transportation planning document known as a Regional Transportation Plan. The most recently adopted Regional Transportation Plan sets forth how the SJCOG region will meet its transportation needs for the period from 2017 to 2042, considering existing and projected land use patterns and forecasted population and job growth. It identifies and prioritizes expenditures of anticipated funding for transportation projects of all transportation modes, as well as transportation demand management measures and transportation systems management (SJCOG 2018b).

Roadways projects near the project site that are part of the 2018 Regional Transportation Plan include the widening of Mariposa Road from Stagecoach Road to Jack Tone Road, widening of an existing BNSF grade separation on Mariposa Road, and the widening of Arch Road from Fite Court to SR 99. Other transportation projects in the vicinity include improvements to Stockton Metropolitan Airport and rail improvements between Escalon and Stockton.

The Regional Transportation Plan includes a Sustainable Communities Strategy, as required by SB 375, which links land use and transportation strategies with the intent of meeting specified per capita GHG reduction targets for emissions from cars and light trucks. Chapter 10.0, Greenhouse Gas Emissions, provides a detailed discussion of the Sustainable Communities Strategy.

Regional Congestion Management Plan

The SJCOG adopted the latest version of its Regional Congestion Management Plan (RCMP) in 2018. The RCMP is designed to coordinate land use, air quality and transportation planning to reduce potential congestion from traffic generated by development. State statute requires all State highways be designated as a part of the RCMP. SJCOG's RCMP has also designated a local roadway and intersection network on which traffic congestion would be monitored and programs to reduce congestion would be targeted. Once an intersection is listed, it cannot be removed. A Regional Transportation Impact Fee is imposed on new development to support improvements to the regional transportation network.

The segments of Arch Road and Austin Road near the project site were added to the RCMP roadway network in 2016. Mariposa Road to the north is also part of the network, as is SR 99 to the west per State statute. The SR 99 ramps at the Arch-Airport Road interchange are part of the RCMP intersection network, along with the Austin Road/Arch Road and Austin Road/Mariposa Road intersections (SJCOG 2018c).

Regional Bicycle, Pedestrian, and Safe Routes to Schools Master Plan

In 2012, SJCOG developed the Regional Bicycle, Pedestrian, and Safe Routes to School Master Plan. This regional plan for San Joaquin County serves as a guide to planning, developing, and managing a regional bicycle and pedestrian network. Additionally, the plan identifies bikeways and pedestrian projects of regional significance and includes an implementation and funding strategy to help agencies involved in the implementation of the plan.

Regional Transit Systems Plan

SJCOG adopted the Regional Transit Systems Plan in 2016. The plan is a long-range transit plan that looks at bus and rail transit needs and their costs, and details a financial forecast of anticipated funding through 2024. The plan was prepared in collaboration with the bus/transit operators in San Joaquin County, including SJRTD. Future improvements anticipated in the Regional Transit Systems Plan include expansion of Metro Hopper to replace traditional dial-a-ride service, MLK and Crosstown Miner bus rapid transit expansion, a restructure of SJRTD commuter service, increased service to the Bay Area Rapid Transit system, and providing a cost-effective vanpool program.

Interregional STAA Study for I-5 and SR-99

In 2013, the Interregional Truck Operations on I-5 and SR 99 and STAA Routes Improvement Study was released. The study, prepared for both SJCOG and the Sacramento Area Council of Governments, noted that the Surface Transportation Assistance Act of 1982 authorized motor carrier operation of 48-foot and longer semi-trailers on National Network highways, along with other roads designated by the State. Local stakeholder dissatisfaction and possible lack of knowledge regarding the status, use, and planning of STAA routes along the Interstate 5 and SR 99 corridors provided the impetus for this study.

The study recommended working more closely with land use and transportation planning agencies to include STAA standards in planning documents, as well as more consistent efforts to sign local STAA-compliant routes (SACOG/SJCOG 2013). The segment of Arch Road from SR 99 to the BNSF Intermodal Facility has been designated a STAA route, while the segment of Mariposa Road adjacent to the project site has been designated a truck route for flammable liquid transportation but not a STAA route.

Travel Demand Management Plan

SJCOG adopted its Travel Demand Management Plan in 2010. Development of this plan was tailored to establish an equitable and working framework between SJCOG and its member agencies to address demand management and facility-based demand management strategies to relieve peak period congestion on RCMP roadways. Strategies may include, but are not limited, transit passes or subsidies, bike racks and lockers, rideshare programs, parking cash-out, preferential parking, and telecommute/flex schedules. Although not related to the Travel Demand Management Plan, SJVAPCD Rule 9410 requires similar actions and recommends similar strategies for employers of 100 or more (see Chapter 6.0, Air Quality).

Park-and-Ride Lot Master Plan

The Park-and-Ride Lot Master Plan was adopted in 2007. The plan describes the existing park-and-ride lots in San Joaquin County, their condition, and their current level of use. It also identifies future needs for park-and-ride based on expected growth and commute patterns, transit services, and potential high-occupancy-vehicle improvements in the county. There are no park-and-ride lots on or near the project site, and none are planned.

City of Stockton

City of Stockton Transportation Impact Analysis Guidelines

The City of Stockton has issued Transportation Impact Analysis Guidelines for traffic impact studies. The Guidelines affirm LOS D as the minimally acceptable LOS for City streets and intersections. They also state that the project's impacts on road segments with an existing LOS of E or F (i.e., already inconsistent with City standards) would be considered substantially impacted if project traffic would increase traffic volumes by greater than five percent. Impacts at intersections with an inconsistent LOS would be considered substantially impacted if project traffic would increase average delay at the intersection by greater than five seconds.

As noted, the State has adopted VMT as the preferred metric for evaluating transportation impacts rather than LOS. However, the City bases its transportation plans on LOS. Because of this, the LOS metric is used in this analysis to describe traffic conditions. To date, the City has not formally adopted any VMT thresholds, including the baseline VMT per capita. However, Stockton General Plan Action TR-4.3A states that the City shall establish a threshold of 15% below baseline VMT per capita to determine a significant transportation impact under CEQA. The 15% threshold in General Plan Action TR-4.3A is similar to thresholds for residential and office land use types recommended by the OPR in its Technical Advisory and is used in the traffic impact study to determine the significance of VMT impacts associated with the project.

City of Stockton Public Facility Fees

The City has established Public Facility Fees to be imposed on residential and non-residential development to defray the costs of new or improved streets that may be necessary to serve the new development. Among the facilities that would be supported by these fees are street improvements and traffic signals. These fees are revised periodically by the City Council based on findings that, among other matters, identify the purpose to which the fee is to be allocated and demonstrate a reasonable relationship between the fee and purpose for which it is charged.

City of Stockton Bicycle Master Plan

In 2017, the City adopted an update to its Bicycle Master Plan, which was originally adopted in 2007. The 2007 Plan, developed and adopted as part of the City's General Plan update at that time, provided a comprehensive system of bicycle lanes on arterial streets, bicycle routes on residential streets, and bicycle paths. The 2017 update reorients the selection and prioritization of investments in bicycle facilities and describes the highest priority projects to improve connectivity, safety, and mode shift and access. As noted, no existing bicycle facilities are in the immediate vicinity of the project site. A Class II bike lane is proposed along Arch Road from SR 99 to beyond Austin Road; no other bicycle facilities are proposed in the vicinity.

Stockton Municipal Code

Stockton Municipal Code Section 16.64.100 sets forth bicycle parking requirements and development standards for non-residential land uses. Bicycle parking facilities in parking lots shall be provided at a minimum of one employee bicycle parking space for each 25,000 square feet of gross floor area. For this project, a minimum of approximately 123 bicycle parking spaces would be required. Each bicycle parking space shall include a stationary parking device of a design approved by the City. Bicycle spaces shall be conveniently located and generally within proximity to the main entrance of a structure, and they shall not interfere with pedestrian access.

Stockton General Plan 2040

As noted, Stockton General Plan Action TR-4.3A states that the City shall establish a threshold of 15% below baseline VMT per capita to determine a significant transportation impact under CEQA. In addition, the following Stockton General Plan 2040 policies and implementing actions are relevant to this project (City of Stockton 2018a):

- Policy TR-1.1: Ensure that roadways safely and efficiently accommodate all modes and users, including private, commercial, and transit vehicles, as well as bicycles and pedestrians and vehicles for disabled travelers.
- Action TR-1.1.A: Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of

sensitive receptors and vulnerable road users, like pedestrians and bicyclists. [See also Chapter 14.0, Noise.]

- Action TR-1.1.B: Maintain and periodically update a schedule for synchronizing traffic signals along arterial streets and freeway interchanges to facilitate the safe and efficient movement of people and goods and to provide signal priority for transit vehicles at intersections.

- Action TR-1.1.C: Require roadways in new development areas to be designed with multiple points of access and to address barriers, including waterways and railroads, in order to maximize connectivity for all modes of transportation.

- Action TR-1.3.A: Protect the [Stockton Metropolitan] Airport and related aviation facilities from encroachment by ensuring that all future development within the Airport Influence Area (AIA) is consistent with the policies adopted by the San Joaquin County Airport Land Use Commission (ALUC), except in cases where the City Council concludes that project approval would provide for the orderly development of the Airport and the areas surrounding it while protecting the public health, safety, and welfare by minimizing the public's exposure to excessive noise and safety hazards. [See also Chapter 11.0, Hazards.]

- Action SAF-5.1.A: Require new development to provide adequate access for emergency vehicles and evacuation routes, including by designing roadway systems to provide multiple escape routes in the event of a levee failure. [See also Chapter 11.0, Hazards.]

- Action TR-2.2.B: Obtain input from local and regional transit operators on major new development projects to ensure projects are designed to support transit and provide adequate transit service and access.

- Action TR-3.1.C: Preserve right-of-way for transit and bicycle uses when designing new roadways and improving existing roadways.

- Policy TR-4.3: 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 Stockton General Plan 2040 notes that while the City strives to maintain LOS D or better for peak hour intersection and daily roadway segment operations, exceptions to this standard are permissible in Downtown Stockton and other areas to support other goals, such as encouraging safe travel by other modes of transportation than the car. The Stockton General Plan 2040 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 "Eighth Street, Airport Way to Mariposa Road – LOS E". Consistent with the City General Plan, a LOS E standard was applied to the intersection of Mariposa Road and 8th Street/Farmington Road by the traffic impact study.

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact on transportation if it would:

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

The traffic analysis was conducted using near-term background conditions and long-term future background conditions. Future background conditions are based on the City of Stockton General Plan. The traffic study analyzed traffic operating conditions under the following five scenarios:

- Existing Conditions
- Existing Plus Approved Projects (EPAP) No Project
- EPAP Plus Project
- Cumulative No Project
- Cumulative Plus Project

EPAP conditions are near-term background conditions that include existing traffic levels and traffic associated with approved but unconstructed land use development projects in the vicinity of the project site. The traffic study uses the EPAP No Project condition as the baseline condition to assess the significance of changes in traffic resulting from the project.

Cumulative conditions are a long-term background condition which includes future year forecasts of traffic volumes, based on development of surrounding land uses consistent with the Stockton General Plan 2040. Chapter 18.0, Cumulative Impacts, contains the traffic analysis under cumulative conditions.

As noted, the use of VMT in CEQA analysis, rather than LOS, became mandatory for CEQA lead agencies on July 1, 2020. Stockton General Plan Action TR-4.3A established a significance threshold for VMT impacts. If a project results in a reduction of 15 percent of VMT per capita or more from current land use designations, it is not considered to have a significant impact. However, CEQA Guidelines Appendix G notes that a

potentially significant impact may occur if a project conflicts with a program, plan, ordinance, or policy that addresses the circulation system. Since many local plans and policies still refer to LOS, this EIR evaluates potential conflicts with these plans and policies as they relate to LOS.

The distance between the driveway intersections for the proposed project driveway is less than 1,000 feet, which is often considered to be 1,000 feet between intersections. The KD Anderson transportation analysis finds the distance between the two intersections to be adequate. Both of the intersections would be "T" intersections rather than four-leg intersection, and neither intersection would have southeastbound-to-northeastbound left-turn movements. The absence of a need for vehicle storage for these left-turn movement at one intersection results in additional storage being available for the left-turn movement at the other intersection.

Impact TRANS-1: Motor Vehicle Transportation Plans - Intersections

Traffic impacts were evaluated under EPAP conditions without and with the project. Table 16-4 presents LOS at the study intersections under EPAP No Project and EPAP Plus Project conditions during AM and PM peak hours. More detailed information is available in the traffic impact study in Appendix G of this EIR.

Under EPAP Plus Project conditions, four intersections were determined to operate at an LOS that is inconsistent with City standards:

- *#3. Mariposa Road and 8th Street/Farmington Road*. This intersection would operate at LOS F with 109.3 seconds of delay during the AM peak hour, and LOS F with 145.8 seconds of delay during the PM peak hour. LOS F is considered inconsistent with City standards. Compared to EPAP No Project conditions, the project-related increase in delay would be greater than five seconds. This increase conflicts with City policy, and therefore improvements are recommended.

  The traffic impact study recommends an improvement at this intersection that is described below. With this improvement, this intersection with the project would be at LOS D during the AM peak hour and LOS E during the PM peak hour. The resulting LOS would be consistent with City policy, which includes a General Plan exception that would apply to this intersection (see Regulatory Framework above).

- *#9. Mariposa Road and Carpenter Road*. This intersection would operate at LOS A with 3.7 seconds of delay during the AM peak hour, and LOS F with 63.9 seconds of delay during the PM peak hour. LOS F is inconsistent with City standards. Compared to EPAP No Project conditions, the project-related increase in delay would be greater than five seconds. This increase conflicts with City policy, and therefore improvements are recommended.

  The traffic impact study recommends an improvement at this intersection that is described below. With this improvement, this intersection with the project would

be at LOS A during the AM peak hour and LOS D during the PM peak hour. The resulting LOS would be consistent with City policy.

- *#12. Arch-Airport Road and Qantas Lane.* This intersection would operate at LOS E with 61.7 seconds of delay during the AM peak hour, and LOS C with 28.4 seconds of delay during the PM peak hour. LOS E is considered inconsistent with City standards. However, LOS would also be inconsistent with City standards under EPAP No Project conditions, and the project-related increase in delay would not be greater than five seconds. Therefore, based on General Plan policy, this small increase is consistent with City standards, and no improvements are recommended.

TABLE 16-4
INTERSECTION LOS - EPAP CONDITIONS

No.[1]	Intersection	EPAP No Project LOS		EPAP Plus Project LOS	
		AM Peak	PM Peak	AM Peak	PM Peak
1	Golden Gate Ave. & SR 99 SB Ramps	B	B	B	B
2	Golden Gate Ave. & SR 99 NB Ramps	B	C	B	C
3	Mariposa Rd. & 8th Street/Farmington Rd.	**F**	**F**	**F**	**F**
4	Mariposa Rd. & SR 99 West Frontage Rd.	B	B	B	B
5	Mariposa Rd. & SR 99 SB Ramps	B	B	B	B
6	Mariposa Rd. & SR 99 NB Ramps	B	A	B	B
7	Mariposa Rd. & Stagecoach Rd.	B	B	B	B
8	Mariposa Rd. & Munford Ave.	B	B	B	C
9	Mariposa Rd. & Carpenter Rd.	A	A	A	**F**
10	Mariposa Rd. & Austin Rd.	C	D	C	D
11	Arch Rd. & Austin Rd.	D	D	D	D
12	Arch-Airport Rd. & Qantas Lane	**E**	C	**E**	C
13	Arch Rd. & SR 99	**F**	**E**	**F**	**E**
14	Mariposa Rd. & Northwest Project Driveway	-	-	A	A
15	Mariposa Rd. & Southeast Project Driveway	-	-	B	C

Notes: NB – northbound, SB – southbound
Bold indicates unacceptable LOS.
[1] See Figure 16-1
Source: KD Anderson and Associates 2021.

- *#13. Arch Road and SR 99.* This intersection would operate at LOS F with 194.4 seconds of delay during the AM peak hour, and LOS E with 73.6 seconds of delay during the PM peak hour. Both LOS E and F are considered inconsistent with City standards under City policy. However, LOS would also be inconsistent with City standards under EPAP No Project conditions, and the project-related increase in delay would not be greater than five seconds. Therefore, based on General Plan policy, this small increase is consistent with City standards, and no improvements are recommended.

In summary, two intersections would operate at an unacceptable LOS under EPAP Plus Project conditions, but improvements recommended below would bring LOS to a level that would be consistent with Stockton General Plan policies. The other two intersections would operate at an unacceptable LOS but increases caused by the project would be consistent with City standards and would not dictate the need for transportation improvements. Implementation of the recommended improvements would eliminate any potential conflicts between the project with the applicable transportation programs, plans, ordinances, policies.

Level of Significance: Not applicable under LOS analysis

Transportation Improvement Recommendations:

TRANS-1: The project applicant should contribute fair-share costs to an improvement on the Mariposa Road and 8th Street/Farmington Road intersection that would split the northeast-bound combined through/right-turn lane into an exclusive northeast-bound through lane and a "free" northeast-bound-to-southeast-bound right-turn lane. Existing pavement width is considered adequate to accommodate this improvement.

TRANS-2: The project applicant should contribute fair-share costs to an improvement on the Mariposa Road and Carpenter Road intersection that would widen the northeast-bound Carpenter Road approach to include an exclusive northeast-bound-to northwest-bound left-turn lane, and a combined through/right-turn lane. (See also Mitigation Measure AIR-1 in Chapter 6.0, Air Quality.)

Impact TRANS-2: Motor Vehicle Transportation Plans - Roadway Segments

Table 16-5 presents LOS along the study roadway segments under EPAP No Project and EPAP Plus Project conditions. More detailed information is available in the traffic impact study in Appendix G of this EIR.

The EPAP model baseline condition recommended by the City, assumed that Mariposa Road would be widened to four lanes as a result of the buildout of the EPAP projects. Mariposa Road is currently two lanes in width throughout the project area. As a result, the EPAP No Project LOS for Mariposa Road shown in Table 16-5 reflects the assumed

Mariposa Road widening. The traffic impact study describes the number of lanes on all roadway segments.

The Mariposa Road widening is not yet programmed for construction and will require funding contributions from existing transportation improvement programs, from the approved projects making up the EPAP No Project scenario and from the proposed project. Contributions from the various funding sources will be the subject of negotiations between the project applicant and the City of Stockton and other agencies with jurisdiction.

The widening of Mariposa Road from SR 99to Austin Road is identified as a planned improvement in the recently updated San Joaquin County Regional Transportation Plan (RTP). The widening project would be eligible for funding from the various RTP funding sources. Widening of this portion of Mariposa Road to four lanes is also identified in the Stockton General Plan. Consistent with current City policy, the project would be required to install improvements along its Mariposa Road frontage; these improvements would involve a contribution to the overall widening project and not conflict with it. Like other new development projects, the project would be required to pay the established Regional Transportation Impact Fee (RTIF) that provides funding for the eligible RTP projects, including the Mariposa Road widening. The project would also be required to pay City of Stockton Public Facility Fees for transportation improvements. The Mariposa Road widening project is not presently among the projects listed on the Public Facility Fees Eligible Streets Improvement List.

Under EPAP Plus Proposed Project conditions, two roadway segments were determined to operate at an LOS that is inconsistent with City standards:

- *Mariposa Road – SR 99 to 8th Street/Farmington Road.* This roadway segment would operate at LOS F, which is considered inconsistent with City standards. Compared to EPAP No Project conditions, the project-related increase in volume would be greater than five percent. This would be considered a substantial increase in the segment's existing inconsistency with City standards, and transportation improvements are recommended.

  The traffic impact study recommends an improvement on this segment that is described below. With this improvement, this segment with the project would operate at LOS D. The resulting LOS would be consistent with City policy.

- *Arch-Airport Road – Qantas Lane to SR 99.* This roadway segment would operate at LOS E, which is considered inconsistent with City standards. However, LOS would also be inconsistent with City standards under EPAP No Project conditions, and the project-related increase in volume would not be greater than five percent. Therefore, based on Stockton General Plan policy, traffic increases caused by the project would be consistent with City standards, and no improvements are recommended.

TABLE 16-5
ROADWAY SEGMENT LOS – EPAP CONDITIONS

Roadway Segment	EPAP No Project LOS	EPAP Plus Project LOS
SR 99 – North of Crosstown Freeway	C	C
Crosstown Freeway – West of SR 99	C	C
SR 99 – Crosstown Freeway to Golden Gate Ave.	C	C
SR 99 – Golden Gate Ave. to Mariposa Rd.	C	C
Mariposa Rd. – SR 99 to 8th St./Farmington Rd.	**F**	**F**
Mariposa Rd. – Carpenter Rd. to SR 99	A	D
Mariposa Rd. – Project site to Carpenter Rd.	A	D
Mariposa Rd. – Southeast of project site	A	A
Mariposa Rd. – East of Austin Rd.	A	A
SR 99 – Mariposa Rd. to Arch-Airport Rd.	D	D
Arch-Airport Rd. – Qantas Lane to SR 99	**E**	**E**
SR 99 – South of Arch-Airport Rd.	C	C

Bold indicates unacceptable LOS.
Source: KD Anderson and Associates 2021.

In summary, one roadway segment would operate at an unacceptable LOS under EPAP Plus Project conditions, but improvements described below would bring LOS to a level that would be consistent with Stockton General Plan policies. The other roadway segment would operate at an unacceptable LOS, but criteria set by the City would not suggest the project to contribute to improvements. Implementation of the improvements would eliminate potential project conflicts with transportation programs, plans, ordinances and policies less.

Level of Significance: Not applicable under LOS analysis

Transportation Improvement Recommendations:

TRANS-3: The project applicant should contribute fair-share costs to an improvement on the segment of Mariposa Road from SR 99 to 8th Street/Farmington Road that would widen the portions of this roadway segment that are currently one lane in each direction to two lanes in each direction.

Impact TRANS-3: Motor Vehicle Transportation Plans - Ramp Junctions

Table 16-6 presents LOS at the study ramp junctions and weave areas on SR 99 under EPAP No Project and EPAP Plus Project conditions. These analyses do not consider the existence of ramp metering on some of the ramps, because ramp metering is not accounted for in the City's traffic model. Ramp metering typically smooths out traffic flows, improving traffic operations. As a result, the analysis is conservative in that it projects worst case operating conditions. More detailed information is available in the traffic impact study in Appendix G of this EIR.

TABLE 16-6
SR 99 RAMP JUNCTION LOS – EPAP CONDITIONS

		EPAP No Project LOS		**EPAP Plus Project LOS**	
No.[1]	**Ramp Junction**	**AM Peak**	**PM Peak**	**AM Peak**	**PM Peak**
201	SB weave – Fremont Street to Crosstown Freeway	**F**	C	**F**	C
202	NB weave – Crosstown Freeway to Fremont Street	C	D	C	D
203	NB at Crosstown Freeway Off-Ramp	A	A	A	A
204	Golden Gate Ave. SB Off-Ramp	A	A	A	A
205	Golden Gate Ave. NB On-Ramp	C	**F**	C	**F**
206	SB weave – Golden Gate Ave. to Mariposa Rd.	C	C	C	C
207	NB weave – Mariposa Rd. to Golden Gate Ave.	C	D	C	D
208	Mariposa Rd. SB On-Ramp (Slip)	C	B	C	B
209	Mariposa Rd. NB Off-Ramp	C	D	C	D
210	Arch-Airport Rd. SB Off-Ramp	A	A	A	A
211	Arch-Airport Rd. NB On-Ramp	C	**E**	C	**E**
212	Arch-Airport Rd. SB On-Ramp	B	C	B	C
213	Arch-Airport Rd. NB Off-Ramp	C	C	C	C

Bold indicates unacceptable LOS.
[1] See Figure 16-2.
Source: KD Anderson and Associates 2021.

Under EPAP Plus Project conditions, three ramp junctions were determined to operate at an LOS that is inconsistent with City standards:

- *#201 SR 99 Southbound Weave – Fremont Street to Crosstown Freeway*. This ramp junction would operate at LOS F during the AM peak hour, and LOS C during the PM peak hour. LOS F is considered inconsistent with City standards. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related increase in freeway and ramp volumes would not be greater than five percent. Therefore, traffic increases caused by the project would be consistent with City standards, and no improvements are recommended.

- *#205. SR 99 at Golden Gate Avenue Northbound On-Ramp Merge*. This ramp junction would operate at LOS C during the AM peak hour, and LOS F during the PM peak hour. LOS F is considered inconsistent with City standards. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related increase in freeway and ramp volumes would not be greater than five percent. Therefore, traffic increases caused by the project would be consistent with City standards, and no improvements are recommended.

- *#211. Sr 99 at Arch-Airport Road Northbound On-Ramp Merge*. This ramp junction would operate at LOS C during the AM peak hour, and LOS E during the PM peak hour. LOS E is considered inconsistent with City standards under City policy. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related increase in freeway and ramp volumes would not be greater than five percent. Therefore, traffic increases caused by the project would be consistent with City standards, and no improvements are recommended.

In summary, for all three ramp junctions whose operations are inconsistent with City standards under EPAP Plus Project conditions, LOS values would be the same even without the project, and the project-related change in volume would not be greater than five percent. Therefore, based on City General Plan policy, the project would not significantly conflict with transportation plans.

Level of Significance: Not applicable under LOS analysis

Transportation Improvement Recommendations: None

Impact TRANS-4: Motor Vehicle Transportation Plans - Truck Routes

As noted above, the proposed project would have no significant impacts on transportation facilities analyzed in the traffic study with recommended improvements. This includes facilities designated as truck routes. The traffic study included anticipated truck traffic in its analysis of impacts. Since the proposed project would have impacts on truck routes that are less than significant, the project would not conflict with transportation plans related to trucks, including the RCMP and the Interregional STAA Study for I-5 and SR-99. Impacts on truck routes would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact TRANS-5: Conflicts with Non-Motor Vehicle Transportation Plans

The traffic impact study indicated that the project would result in an increase in demand for public transit service. Currently, there is no direct public transit service to the project site. A recent Unmet Transit Needs Assessment conducted by SJCOG did not identify any transit needs in the project vicinity (SJCOG 2019). The frequency and proximity of future transit service is not known at this time, so demand for transit cannot be quantified. However, it is expected that SJRTD can accommodate the additional passengers the project would generate. Public transit impacts are considered less than significant.

The traffic impact study also noted that the project would result in an increase in demand for bicycle and pedestrian facilities. As noted, there are currently no bikeways in the area, and there are limited sidewalks. Sidewalk would be installed along the Mariposa Road frontages of the project site, which would incrementally improve the safety and convenience of pedestrian travel along that segment of Mariposa Road. The Stockton General Plan 2020 includes widening of Mariposa Road to four lanes in the future, and the project site frontage improvements would contribute to a more continuous system of bicycle and pedestrian improvements along Mariposa Road. The Stockton General Plan indicates a planned bike lane on Arch Road between SR 99 and Austin Road, and a planned bike lane on Mariposa Road between Dr. Martin Luther King, Jr. Boulevard and SR 99. The project would not interfere with the installation of these bike lanes. Impacts on bicycle and pedestrian facilities are considered less than significant.

The project would not conflict with plans that encourage alternative modes of transportation. It would not interfere with the installation of the future bikeway should that be implemented. Project impacts on non-vehicular transportation plans would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact TRANS-6: Consistency with CEQA Guidelines Section 15064.3(b)

As noted, CEQA Guidelines Section 15064.3(b) sets forth screening criteria for analyzing transportation impacts using the preferred VMT metric. The project does not meet these screening criteria. The project is not within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor, and the project can be expected to increase VMT in the area as there is currently no significant development on the project site. Therefore, further analysis of project VMT impacts is required.

The project proposes industrial land uses on the project site, which would be consistent with its Industrial land use designation in the Stockton General Plan 2040. Therefore, the traffic impact study assumes that vehicle travel associated with the proposed project would be the same as the Industrial land uses currently designated in the Stockton

General Plan 2040. That is, implementation of the project would result in no net change from travel associated with the current General Plan-designated land uses.

As noted, VMT is calculated by multiplying the number of vehicle trips by the length of vehicle trips. As a result, a certain percent change in the number of vehicle trips would cause an equivalent change in VMT. Therefore, for the proposed project, a comparison of vehicle trips is considered equivalent to a comparison of VMT. Because the project would result in no net change from travel associated with the current General Plan–designated land use, the project would result in no net change in VMT. However, since the project would result in substantial urban development beyond existing conditions, VMT is expected to increase. Because the project would not result in a 15 percent reduction in VMT per Stockton General Plan 2040 guidance, the project is considered to have a significant impact on VMT.

Project VMT would be reduced by required implementation of SJVAPCD Rule 9410. Rule 9410 requires employers with at least 100 employees to implement a trip reduction/transportation demand management program, or ETRIP. ETRIP requirements are consistent with a Commute Trip Reduction program recommended by the traffic impact study as a mitigation measure. The traffic impact study also recommends as mitigation the provision of "end-of-trip" facilities for bicycle riders, including showers, secure bicycle lockers, and changing spaces, and the implementation of an employer-sponsored vanpool or shuttle. These recommendations could also be part of an ETRIP under Rule 9410, but they are presented as mitigation below to ensure their incorporation.

The CalEEMod air quality modeling program, which produces VMT data, indicates that implementation of mitigation features that reduce air and GHG emissions, including Rule 9410 and the recommended mitigation, would reduce VMT of the proposed project by approximately 13.5% from “unmitigated” conditions (see Chapter 10.0, Greenhouse Gas Emissions, for an explanation of “unmitigated” and “mitigated” conditions). CalEEMod does not report VMT reductions associated with each mitigation feature, but because Rule 9410 is clearly related to trip reduction, it has a direct relationship to VMT and likely accounts for a significant portion of the “mitigated” VMT reduction.

However, even with mitigation, the total VMT associated with the project would not be reduced by the 15% indicated under both OPR and Stockton General Plan 2040 guidelines. Moreover, the traffic impact study notes that the following factors which would affect the ability to implement VMT reduction measures are not known:

- Hours of operation, including times of the day when work shift would change;
- The portion of work positions which would be full-time versus part-time;
- Feasibility of implementing flexible work schedules; and
- Degree to which working remotely is feasible.

Because the potential occupants of the project are not known, it is not possible to establish an enforceable commitment to reduce VMT by more than 15 percent. As a

result, this impact is considered significant and unavoidable, even with implementation of the mitigation measures described below.

Level of Significance: Potentially significant

Mitigation Measures:

TRANS-1: The project shall provide "end-of-trip" facilities for bicycle riders to encourage the use of bicycling as a viable form of travel to destinations, especially to work. End-of-trip facilities shall include showers, secure bicycle lockers, and changing spaces.

TRANS-2: The project shall implement an employer-sponsored vanpool or shuttle. A vanpool will usually service employees' commute to work, while a shuttle will service nearby transit stations and surrounding commercial centers. Employer-sponsored vanpool programs entail an employer purchasing or leasing vans for employee use, and often subsidizing the cost of at least program administration. Scheduling is within the employer's purview, and rider charges shall be set on the basis of vehicle and operating cost.

Significance After Mitigation: Significant and unavoidable

Impact TRANS-7: Safety Hazards

Project construction would involve movement of construction equipment onto and from the site and in-street construction to provide infrastructure and vehicle access. As discussed in Chapter 11.0, Hazards and Hazardous Materials, construction work on Mariposa Road would mainly occur on the edge of the roadway, which is not expected to require closure of the road or any major restriction on travel lanes. Should trenching or other excavation occur, the excavated area can be covered or backfilled such that emergency vehicles and evacuee vehicles can travel on Mariposa Road unobstructed. Contractors will be required to provide traffic safety control as warranted. Project impacts related to safety hazards would be less than significant.

Level of Significance: Less than significant

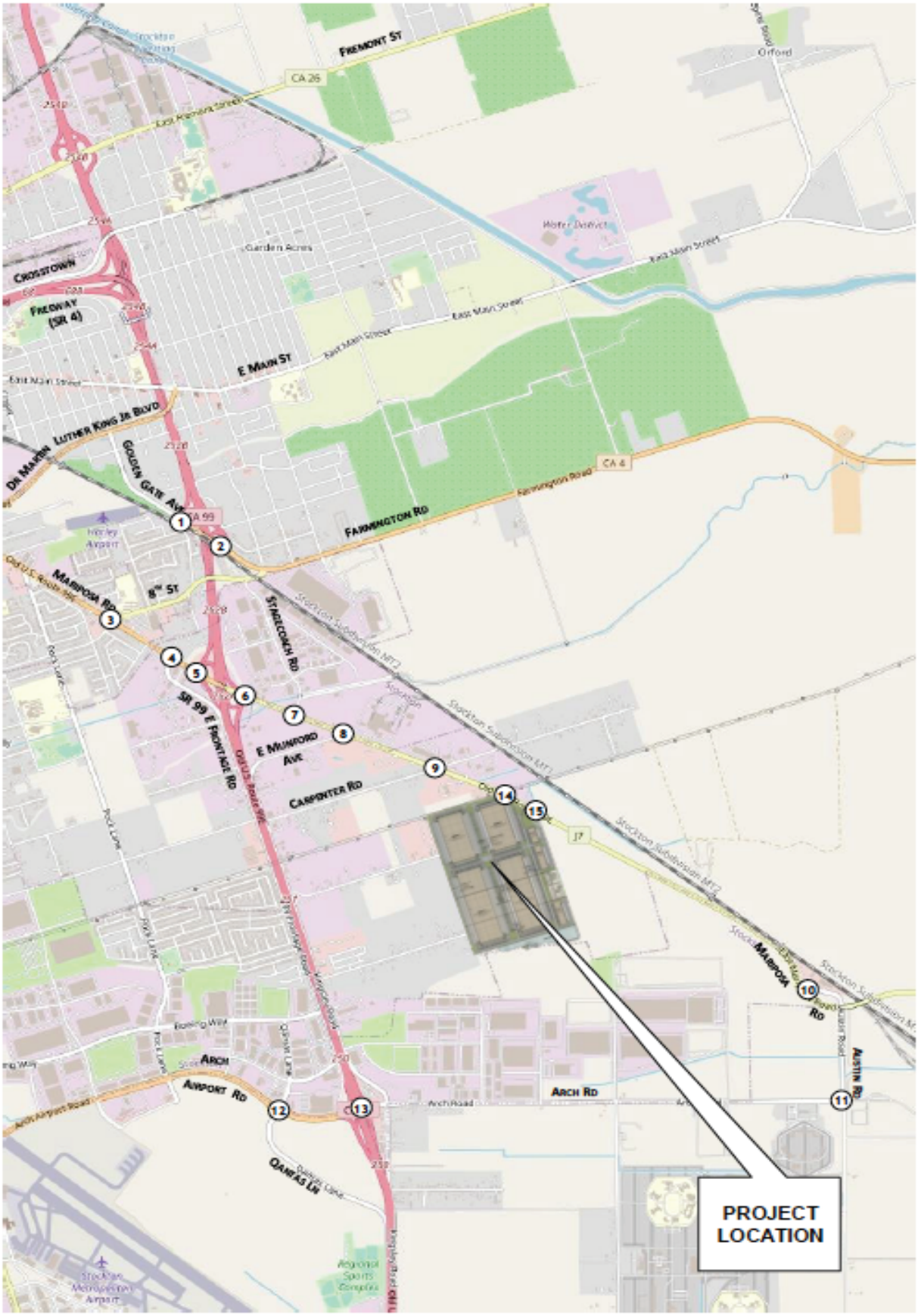
Mitigation Measures: None required

Impact TRANS-8: Emergency Access

As described in Chapter 3.0, Project Description, the project proposes to add two driveways from Mariposa Road. In addition, access to the project site for emergency vehicles only would be provided from Marfargoa Road and Clark Road. This would provide four access points for emergency vehicles to the project site. Project impacts on emergency access would be less than significant.

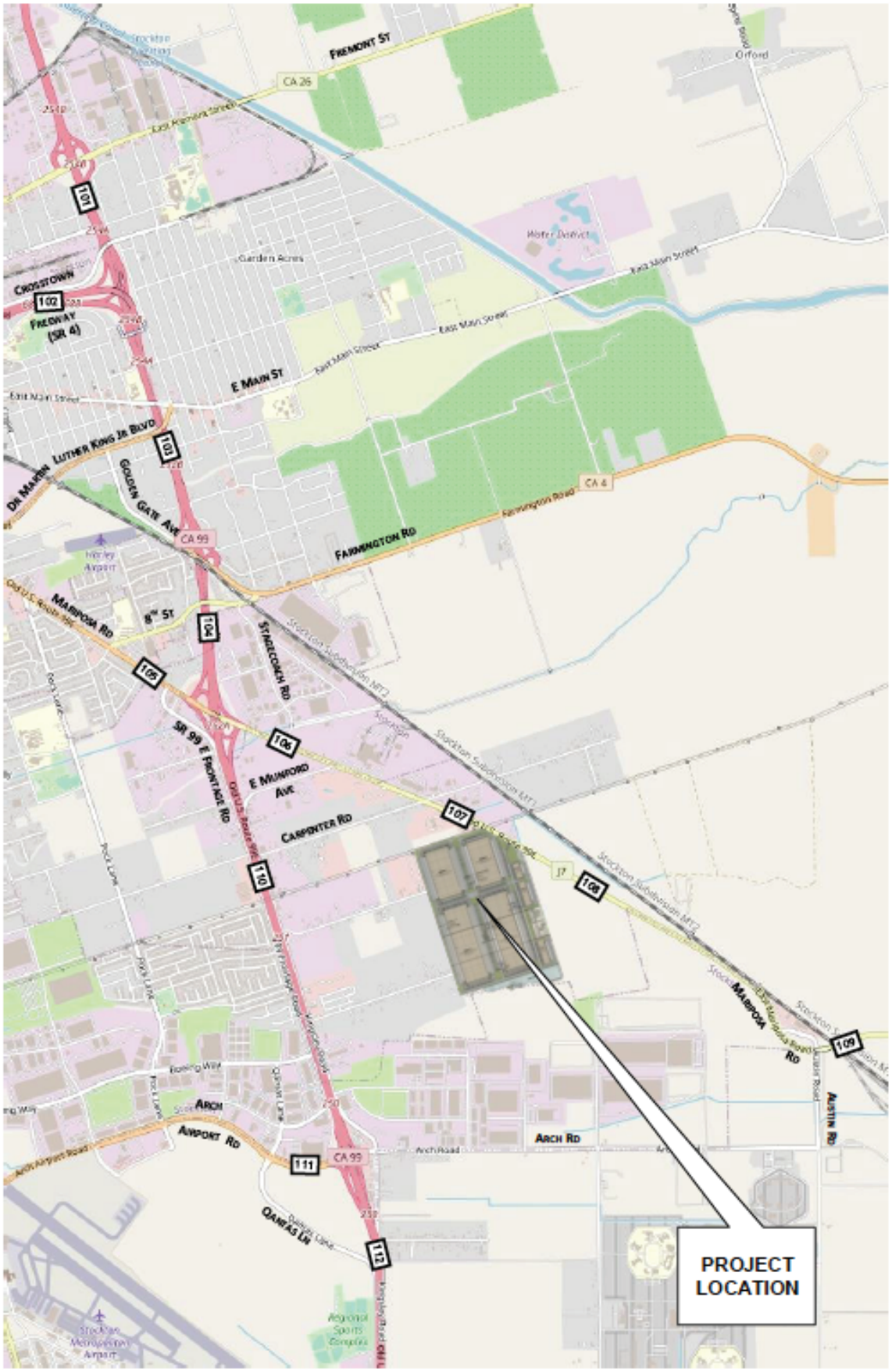
Level of Significance: Less than significant

Mitigation Measures: None required



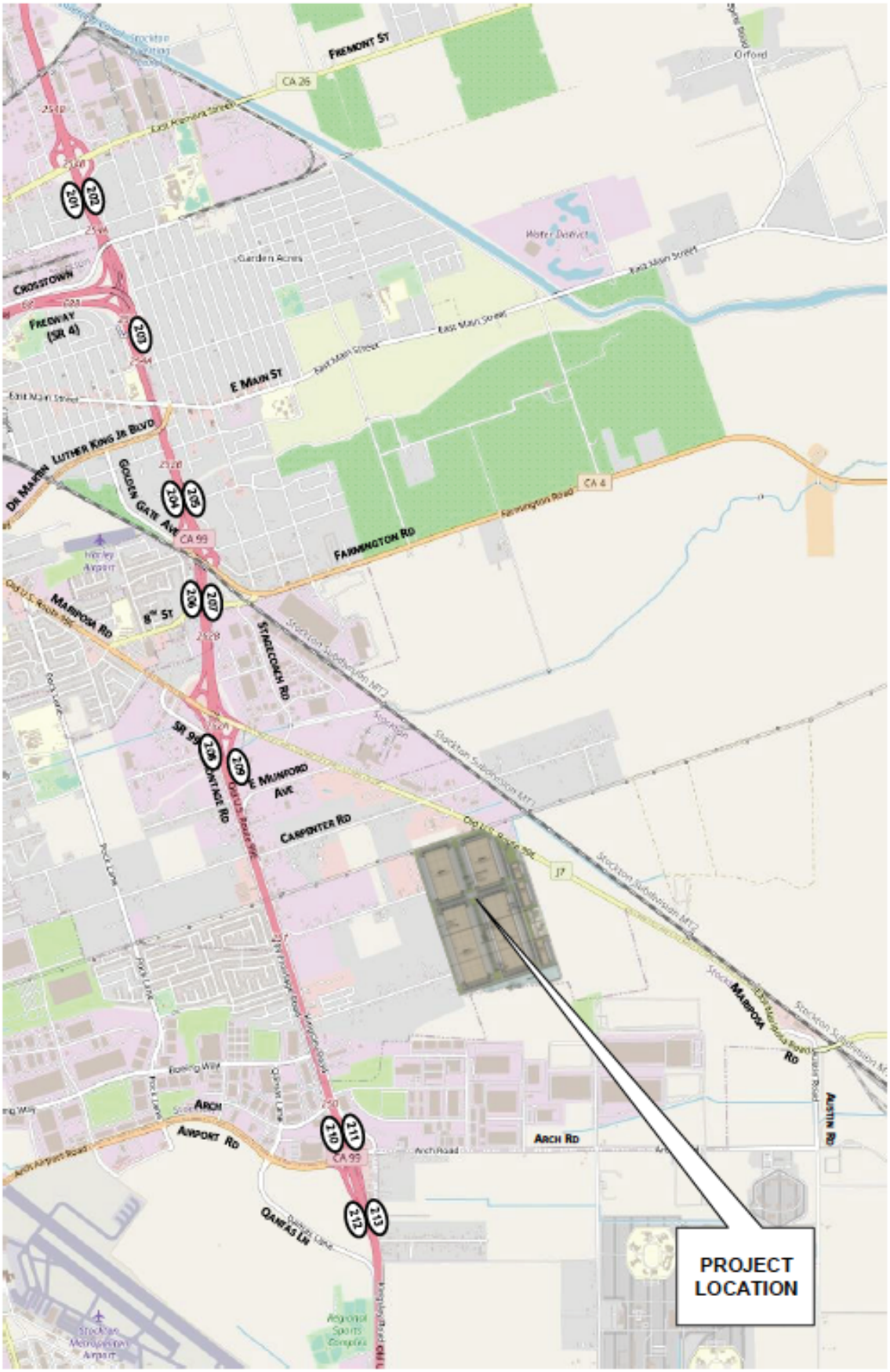
SOURCE: KD Anderson and Associates, Inc.

Figure 16-1
TRAFFIC STUDY INTERSECTIONS



SOURCE: KD Anderson and Associates, Inc.

Figure 16-2
TRAFFIC STUDY ROADWAY SEGMENTS



SOURCE: KD Anderson and Associates, Inc.

Figure 16-3
STUDY FREEWAY MERGE, DIVERGE AND WEAVE AREAS

17.0 UTILITIES AND ENERGY

ENVIRONMENTAL SETTING

Wastewater Systems

There are no wastewater systems on the project site, other than individual septic systems used by the existing residences. Upon annexation, future development on the project site would be served by the City of Stockton's wastewater collection and treatment system. Existing City wastewater lines are located adjacent to the site, as described below.

The City's wastewater collection system consists of 884 miles of gravity mains and 30 miles of force mains. These mains range in size from less than six inches to 72 inches in diameter. The gravity mains receive flows from approximately 554 miles of service laterals currently in use. The system also has 28 pump stations that range in capacity from 0.46 to 21.6 million gallons per day (mgd).

The system is subdivided into 10 existing sub-collection systems. The project site is within the service area of the City's Wastewater Collection System No. 8. A due diligence investigation by Kier and Wright Engineering found an existing 24-inch sanitary sewer main, oriented from south to north, located along the western boundary of the project site south of Marfargoa Road. At Marfargoa Road, this main terminates at a manhole, from where a 42-inch diameter main continues west along Marfargoa Road (Kier and Wright 2020).

Collected wastewater from all portions of the City flows to the City of Stockton's Regional Wastewater Control Facility, located on Navy Drive in southwest Stockton. The Regional Wastewater Control Facility provides secondary and tertiary treatment of wastewater, after which the treated effluent is discharged into the San Joaquin River in accordance with the terms of NPDES permit No. CA0079138 issued by the RWQCB. The NPDES permit includes recent California Code of Regulations Title 22 requirements related to reclaimed wastewater.

The Regional Wastewater Control Facility has a main treatment plant with a designed average dry weather flow capacity of 48 mgd, and a tertiary treatment plant with a designed average dry weather flow and permitted capacity of 55 mgd. Approximately 35 mgd of average dry weather flow was processed in 2005, but the amount has decreased to an estimated 27 mgd in 2017 due to water conservation measures associated with a recent drought and economic recession (West Yost 2017a).

Water Systems

There are no municipal water systems currently serving the project site. Individual wells serve existing residences in the area. The project site is currently within the boundaries of the Central San Joaquin Water Conservation District, which provides irrigation water to its agricultural customers. The District is provided with about 49,000 acre-feet of water per year from New Melones Reservoir though the Goodwin Tunnel Project. Check dams are located along the waterways within the District to allow diversion of irrigation water to adjacent farms (San Joaquin County 2016b).

Upon annexation, future development would be served by the City of Stockton's domestic water system. Municipal water service to the project area generally is provided by the City of Stockton through its Municipal Utilities Department. The City's water distribution system is separated into a northern and southern system, which are separated by the service area for Cal Water, a private water company. The project site is within the southern portion of the City's system, which serves the Stockton Metropolitan Airport and Arch Road areas.

The City's water supply is derived from both surface and groundwater. Surface water comprises approximately 73% of the water supply, and the other 27% is produced by municipal wells. Surface water is provided by direct withdrawals from the Delta through the City's Delta Water Supply Project (DWSP) and from purchases from the Stockton East Water District (SEWD) and the Woodbridge Irrigation District. The City operates a total of 32 municipal groundwater wells, seven of which are in South Stockton. Total available water to the City's water system in 2015 was 24,843 acre-feet (City of Stockton 2018b). The City has a total water right or "safe yield" capacity of 96,480 acre-feet (Brown and Caldwell 2016).

Water treatment is provided by SEWD's Water Treatment Plant, with 60 mgd capacity, and the DWSP water treatment facility, with 30 mgd capacity. The latter facility treats surface water from the Delta and from the Woodbridge Irrigation District. The City operates storage facilities with a total capacity of 33.7 million gallons, and it has pumping facilities with a total capacity of 88,592 gallons per minute (City of Stockton 2018b). Water for the southern City system is provided by the seven South Stockton wells, ranging in capacity from 900 to 2,500 gallons per minute (ESA 2014).

The City's water distribution system consists of 590 miles of distribution pipelines and transmission mains (Brown and Caldwell 2016). The Kier and Wright due diligence report indicates that the nearest water line to the project site is a 24-inch diameter line along the project frontage on Mariposa Road. Additional water lines serve existing industrial and other land uses south of North Littlejohns Creek (Kier and Wright 2020).

Storm Drainage

Storm water on the project site generally percolates into the ground. Based on a topographical survey conducted by Kier and Wright, the existing site, being solely agricultural, is not expected to discharge any storm water to adjacent parcels (Kier and Wright 2020). There are no constructed urban storm drainage systems currently serving

the project site; the nearest such facilities are served by City systems in the incorporated area south of North Littlejohns Creek. As has been noted, a ditch traverses the southern portion of the project site. The ditch conveys any runoff collected in this area to North Littlejohns Creek. The unincorporated community west of the site is not served by organized storm drainage systems.

The City's storm water drainage system includes 620 miles of 4-inch to 96-inch diameter storm drains and over 22,500 drain inlets. A total of 58 pump stations and 19 lift stations are used to pump drainage into receiving waters. In the vicinity of the project site, there are two pump stations located along Newcastle Road, with a third located downstream from the project site along North Littlejohns Creek (West Yost 2017b). However, the project proposes a stand-alone storm drainage system that would not connect to the City's system.

As discussed in Chapter 12.0, Hydrology and Water Quality, storm water quality is regulated by the SWRCB pursuant to the federal Clean Water Act and the NPDES program. The City of Stockton implements these regulations through the provisions of its Storm Water Management Program and Storm Water Quality Control Criteria Plan as required by its MS4 storm water permit. These requirements are reflected in the analysis of hydrology and water quality impacts in Chapter 12.0.

Solid Waste

The project site is currently within the boundaries of Allied Waste Sunset Disposal, one of five solid waste collectors providing service under franchise to San Joaquin County. The San Joaquin County Code requires that solid waste be collected from residential generators a minimum of once a week, and at least twice a week for commercial and industrial generators (San Joaquin County 2016b).

Upon annexation, the project site would be served by Waste Management, one of two franchises that serves the City of Stockton. In 2017, the City of Stockton generated approximately 348,714 tons of solid waste (CalRecycle 2019a). The City's solid waste is transported and disposed of primarily at three active sanitary landfills in San Joaquin County: the Forward Landfill on South Austin Road with available capacity to 2020, the North County Landfill on East Harney Lane with available capacity to 2048, and the Foothill Sanitary Landfill on North Waverly Road with available capacity to 2082 (City of Stockton 2018b). The latest information indicates that total capacity available at all three landfills is approximately 182.5 million cubic yards; however, some of the information is dated. The total maximum throughput permitted at all three landfills is 11,013 tons per day (CalRecycle 2019b).

There are 50 solid waste diversion programs in Stockton. These include composting; facility recovery, household hazardous waste collection and education programs, recycling, source reduction programs, and waste-to-energy. For 2015, the latest year for which data are available, target disposal rates in accordance with AB 939 (see below) for the City of Stockton were 6.9 pounds per day per resident and 21.0 pounds per day per

employee. Actual rates were 5.1 pounds per day per resident and 16.9 pounds per day per employee (City of Stockton 2018b), surpassing the target rates.

Communications Systems

AT&T provides telephone services to the Stockton area. Services are available to the project site from existing lines located on joint pole systems with electrical facilities along Mariposa Road and other roads. Utility lines extend the length of Clark Drive and Marfargoa Road as well as the driveway serving residences immediately east of the site. Comcast provides cable television services to the City of Stockton and vicinity. Existing cables are located aerially along Mariposa Road, Marfargoa Road, and Clark Road and underground along Mariposa Road. Fiber optic cable has been installed along Mariposa Road.

These state-regulated franchise utilities are obligated to extend services to new development as necessary. The Stockton Municipal Code requires the extension of services to any area annexed during the term of the franchise.

Energy

CEQA requires that an EIR includes a discussion of the potential energy impacts of a proposed project, with emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the CEQA Guidelines provides guidance for a discussion of energy impacts. Subjects may include identifying wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, maintenance, and/or removal that cannot be feasibly mitigated, and the pre-emption of future energy development or future energy conservation. The most recent revisions to the CEQA Guidelines include a new section in the Environmental Checklist in Appendix G that addresses energy.

Energy Usage

According to the latest information from the U.S. Energy Information Administration, California consumed 7,967 trillion British thermal units (BTUs) of energy in 2016. Only Texas consumed more energy. However, consumption per capita in California was 202 million BTUs, which was 48th among all states and the District of Columbia. Transportation accounted for approximately 39.8% of the energy consumed in California, followed by industrial with 23.2%, commercial with 18.9%, and residential with 18.1%. Natural gas accounted for approximately 2,200 trillion BTUs of the energy consumed in California, while motor gasoline (excluding ethanol) accounted for approximately 1,700 trillion BTUs (EIA 2020).

Electricity is a major energy source for residences and businesses in California. In 2016, electricity consumption in California totaled approximately 285,701 gigawatt-hours (CEC 2018a). In San Joaquin County, electricity consumption in 2016 totaled approximately 5,457 million kilowatt-hours (kWh) [5,457 gigawatt-hours], of which approximately 3,698 million kWh were consumed by non-residential uses and the

remainder by residential uses (CEC 2018b). As indicated above, natural gas is another major energy source. In 2016, natural gas consumption in California totaled approximately 12,750 million therms (CEC 2018a). In San Joaquin County, natural gas consumption in 2016 totaled approximately 195 million therms, of which approximately 115 million therms were consumed by non-residential uses and the remainder by residential uses (CEC 2018c).

Motor vehicle use accounts for substantial energy usage. The SJCOG estimated countywide VMT in 2015 was approximately 6.52 billion, which led to the consumption of approximately 511.36 million gallons of gasoline and diesel fuel (SJCOG 2018). Travel mileage in San Joaquin County is influenced by the County's relative jobs/housing imbalance and the resulting commute patterns, which involve relatively long commute trips to workplaces outside the County. Approximately 30% of the employed workforce living within San Joaquin County commute to out-of-county job sites (SJCOG 2018).

Energy Systems and Facilities

As of 2018, California ranked seventh in the U.S. in petroleum production, 14th in natural gas production, and fourth in production of electricity. California ranked first in the U.S. as a producer of electricity from solar, geothermal, and biomass resources, and fourth in conventional hydroelectric power generation. Almost one-third of California's electricity supply came from generating facilities outside the state (EIA 2020).

Electrical usage within most of the County, including Stockton, is served from a transmission network owned by PG&E. Principal elements of the PG&E network are several transmission lines ranging in voltage from 115 kilovolts (kV) to 500 kV; the highest voltage lines that are in the southwestern corner of the County. In the project vicinity, as noted in Chapter 8.0, Cultural Resources, three parallel electrical transmission lines by PG&E extend along the northern boundary of the project site. Two lines, suspended on steel lattice towers, extend beyond the project site to the east. A third line, on wood poles, connects with overhead lines along Mariposa Road. An extension of this third line cuts across the northeastern corner of the project site. Overhead lines serve the residences along the eastern boundary of the site. Electrical lines have been installed along the western boundary of the site, serving development in the vicinity of Marfargoa Road and Clark Road (Kier and Wright 2020).

Natural gas service in the City is provided by PG&E, the only provider of this service. PG&E provides natural gas to a 70,000-square mile service area in northern and central California, utilizing approximately 6,700 miles of gas transmission pipelines and 42,000 miles of gas distribution pipelines (PG&E website). Interregional gas mains are located along the SR 99 corridor, and branch lines extend to and through the cities, with service pipelines located primarily within city streets. An existing gas line extends to the west side of the project site near Marfargoa Road.

As with the communications systems, state-regulated energy franchise utilities are obligated to extend services to new development as necessary. The Stockton Municipal

Code requires the extension of services to any area annexed during the term of the franchise.

REGULATORY FRAMEWORK

State

SB 610

SB 610, enacted in 2001, amended the California Public Resources Code and the Water Code to expand requirements for documentation of available water supply in connection with land development approvals. Specifically, SB 610 requires land use agencies with authority over large development projects to document the availability of an adequate supply of potable water and to include this documentation in the EIR or Negative Declaration for the project. The required documentation is a Water Supply Assessment (WSA). The WSA evaluates the adequacy of the total projected water supplies of the agency providing water to a proposed project, including existing water supplies and future planned water supplies, to meet the existing and projected future water demands, including future water demands associated with a project. This evaluation is conducted under three hydrologic conditions: a normal precipitation year, a single dry year, and multiple dry years.

WSA requirements apply to projects involving more than 500 residential units, commercial projects employing more than 1,000 persons or having more than 500,000 square feet of floor area, and industrial projects employing more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area. The proposed project exceeds each of the industrial thresholds for WSA preparation.

California Water Code Sections 10910-10915 require that the land use agency request preparation of the WSA from the responsible public water system. For the proposed project, the City of Stockton is both the land use agency and the public water service provider through the City's Municipal Utilities Department. The City, with the assistance of engineering firm West Yost, has prepared a WSA for the project shown in Appendix H.

Solid Waste Regulations

The California Integrated Waste Management Act (AB 939), enacted in 1989 and subsequently amended, requires local jurisdictions to divert at least 50% of their solid waste from landfills by 2000. The 50% recycling of solid waste places the City in compliance with AB 939. More recent legislation, AB 341, increased the recycling requirement to 75% of solid waste by 2020. Beginning April 1, 2016, the State's Mandatory Organic Waste Recycling law (AB 1826) phases in requirements for

businesses, including multifamily properties of five or more units, based on the amount and type of waste the business produces weekly, with full implementation in 2019.

- January 1, 2017: Businesses that generate 4 cubic yards of organic waste per week arrange organic waste recycling services.
- January 1, 2019: Businesses that generate 4 cubic yards or more of commercial solid waste per week arrange organic waste recycling services.

Stockton Municipal Code Sections 8.28.020 through 8.28.070 is the City's Construction and Demolition Debris Waste Reduction Ordinance. The ordinance requires all permit applicants identify the debris the project will generate and recycle accordingly. Permit applicants for covered project are required to meet the waste diversion requirement of at least 50 percent of materials generated as discards by the project, regardless of whether the permit applicant performs the work or hires contractors, subcontractors, or others to perform the work.

California Energy Code

California has adopted comprehensive energy efficiency standards as part of its Building Standards Code, California Codes of Regulations, Title 24. Part 6 of Title 24, also known as the California Energy Code, contains energy conservation standards applicable to all residential and non-residential buildings throughout California, including schools and community colleges. These standards are occasionally updated. The California Energy Commission estimated that the implementation of the 2013 California Energy Code may reduce statewide annual electricity consumption by approximately 613 gigawatt-hours per year, electrical peak demand by 195 megawatts, and natural gas consumption by 10 million therms per year (CEC 2012). The City of Stockton has adopted the 2013 version of the California Energy Code as part of its building codes.

California Green Building Standards Code (CALGreen)

In 2009, the California Building Standards Commission adopted a voluntary Green Building Standards Code, also known as CALGreen. In January 2010, the Commission made CALGreen mandatory, effective January 1, 2011, and it has since been incorporated in the State's Building Standards Code, California Codes of Regulations, Title 24. Part 11. CALGreen sets forth mandatory energy efficiency measures for nonresidential structures, which essentially require compliance with the latest building energy efficiency measures adopted by the State. The City of Stockton has adopted the 2019 CALGreen.

Renewables Portfolio Standard

In 2002, California adopted a Renewables Portfolio Standard, and subsequently modified it in 2006 and 2011. Under the 2011 modifications, all electricity retailers in the state must generate 20% of electricity they sell from renewable energy sources (i.e., solar, wind, geothermal, hydroelectric from small generators, etc.) by the end of 2013, 25% by

the end of 2016, and 33% by the end of 2020. As of the end of 2017, California derived 30% of its electricity from renewable sources, which is within 3% of the 2020 target and within 20% of the 2030 target (CEC 2018a).

In 2015, SB 350 was signed into law, which increased the electricity generation requirement from renewable sources to 50% by 2030. Most recently, in 2018, SB 100 was enacted. SB 100 accelerated the schedule for 50% electricity generation from renewable sources to 2026 and set a goal of 60% electrical generation from renewable sources by 2030. It also set the goal that zero-carbon resources will supply 100% of electricity to California by 2045. The goals of SB 100 are consistent with the carbon neutrality goal of Executive Order B-55-18 (see Chapter 10.0, Greenhouse Gas Emissions).

City of Stockton

Wastewater Master Plan and Supplement

The City of Stockton adopted its 2035 Wastewater Master Plan in 2008. The plan describes the major elements of the wastewater collection system and treatment facilities needed to serve development anticipated in the 2035 General Plan. A supplement to the Wastewater Master Plan was prepared in 2017 based on anticipated development in the Stockton General Plan 2040. The supplement evaluated the future needs of the City's wastewater system overall and in specific areas. The wastewater system was divided into ten existing sub-collection systems and four future sub-collection systems. The project site is in System 8. According to the supplement, fewer trunk line upsizing projects and extensions into new service areas will be needed by 2040 than previously identified for the 2035 buildout (West Yost 2017a). The City is in the process of updating the Wastewater Master Plan.

Water Master Plan and Supplement

The City of Stockton adopted its Water Master Plan in 2008. The plan describes the major elements of the City's potable water system needed to serve development anticipated in the 2035 General Plan. A supplement to the Water Master Plan was prepared in 2017 based on anticipated development in the Stockton General Plan 2040. The supplement evaluated the future needs of the City's water system overall. According to the supplement, in the City service area, the average day water demands for 2040 would be 60% less than those estimated for the 2035 buildout. Required new storage would be less for 2040 than previously identified for 2035, and potentially no new booster capacity would be needed (West Yost 2017c). The City is in the process of updating the Water Master Plan.

Storm Drain Master Plan and Supplement

The City of Stockton adopted its Storm Drain Master Plan in 2008. The plan defines a process and criteria for future detailed sub-watershed storm drain planning in growth

areas within the City's 2035 General Plan boundary. A supplement to the Storm Drain Master Plan was prepared in 2017 based on anticipated development in the Stockton General Plan 2040. The supplement evaluated the future needs of the City's storm drainage system overall, including detention basins and pump stations (West Yost 2017b). The supplement did not compare storm drainage system requirements for buildout under the General Plan 2040 and buildout under the 2035 General Plan. The City is in the process of updating the Storm Water Master Plan.

Stockton General Plan 2040

The following Stockton General Plan 2040 policies and implementing actions are relevant to this project (City of Stockton 2018a):

- Action LU-5.1.C: Require landscape plans to incorporate native and drought-tolerant plants in order to preserve the visual integrity of the landscape, conserve water, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.
- Policy LU-5.4: Require water and energy conservation and efficiency in both new construction and retrofits.
- Action LU-5.4.A: Require all new development, including major rehabilitation, renovation, and redevelopment, to adopt best management practices for water use efficiency and demonstrate specific water conservation measures.
- Action LU-5.4.B: Require all new development, including major rehabilitation, renovation, and redevelopment, to incorporate feasible and appropriate energy conservation and green building practices, such as building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.
- Action LU-6.3.A: Require development to mitigate any impacts to existing sewer, water, stormwater, street, fire station, park, or library infrastructure that would reduce service levels. [See also Chapter 15.0, Public Services.]
- Action SAF-4.1.A: Require the construction and operation of new development to implement best practices that reduce air pollutant emissions, including through installation of Energy Star-certified appliances.
- Action CH-5.2.B: Continue to require recycling in private and public operations, including construction/demolition debris.

Significance Thresholds

According to Appendix G of the CEQA Guidelines, a project may have a significant impact related to utilities and energy if it would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects,
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years,
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments,
- 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
- Not comply with federal, state, and local statutes and regulations related to solid waste.

Recently, CEQA Guidelines Appendix G was updated to include questions regarding energy consumption and conservation. According to the updated Appendix G, a project may have a significant impact on the environment if it would:

- Result in potentially significant impacts 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.

Impact UTIL-1: Wastewater Services and Facilities

The proposed development on the project site would require wastewater service which would be provided by connection to the City's wastewater system. Wastewater service would include the installation of new on-site sewer lines and connection to existing City mains in the area. These improvements are not expected to have a significant environmental impact beyond the project footprint, as connections to the City's wastewater system would be made at the site boundary near Marfargoa Road. Existing sewer lines in the vicinity are adequately sized to collect wastewater from proposed development.

This analysis uses a flow factor for new industrial development of 3,000 gallons per day per acre (Ann Okubo pers. comm.). Based on this factor, it is estimated that development on the project site would generate 610,440 gallons of wastewater per day, or approximately 0.61 mgd. The Regional Wastewater Control Facility currently has approximately 21.0 mgd of main treatment plant capacity to serve additional development. The proposed project would involve an increase in sewage generation that would amount to approximately 2.9% of the City's available treatment capacity.

Proposed project wastewater infrastructure may vary to some extent from the Wastewater Master Plan. As noted, the City is currently updating the Wastewater Master Plan. It is expected that the project applicant and the City would harmonize the updated Wastewater Master Plan with the proposed development. In any case, it is not anticipated that potential environmental impacts would be different from those described above. Project impacts on the City's wastewater system would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact UTIL-2: Water Services and Facilities

The proposed project will require water service, which will be provided through connection to the City's water system. An on-site system will involve the installation of new on-site water lines, and the on-site system connected at two points to an existing 24-inch diameter City water main along Mariposa Road. Water improvements are not expected to result in a significant environmental impact; water improvements will extend outside the project footprint, if then, only at the points of connection in Mariposa Road.

The project water demand can be accommodated with existing available water supplies. of 2015, the City had 96,480 acre-feet of water per year available by right or from safe yield. Based upon the 2015 water demand of 26,319 acre-feet per year, the City had 70,161 acre-feet of water available to serve additional development (Brown and Caldwell 2016).

In accordance with SB 610, the City prepared a WSA for the project (see Appendix H). The WSA estimated that the project would demand approximately 283 acre-feet of potable water per year. It determined that the existing and future City surface water and groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands by the City's service area with the project, even during multiple dry years. Under the multiple dry-year condition, the City would still have approximately 47,365 acre-feet of water supply available after satisfying total demands. This also would be the case if the City's surface water supplies are limited under emergency water supply conditions due to water shortages brought on by drought (West Yost 2021). The proposed project would involve an increase in water demand, but the City would not be required to obtain additional supplies.

Proposed project water infrastructure may vary to some extent from the Water Master Plan. As noted, the City is currently updating the Water Master Plan. It is expected that

the project applicant and the City would harmonize the updated Water Master Plan with the proposed development. In any case, it is not anticipated that potential environmental impacts would be different from those described above. Project impacts on the City's water system and supplies would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact UTIL-3: Stormwater Services and Facilities

There is no substantial existing impervious area on the project site, which is primarily undeveloped land. Proposed development would result in the construction of extensive new rooftop, pavement, and other impermeable surfaces that would increase potential runoff from the project site.

Drainage from the project site would be collected by the proposed on-site storm drainage collection system and sent to a proposed detention basin at the southern end of the site. The collected runoff would be discharged from the detention basin to North Littlejohns Creek as capacity is available in the creek channel to accept it. Chapter 12.0 Hydrology and Water Quality discusses the potential impacts of this discharge on North Littlejohns Creek. Discharge control would prevent exceedance of creek capacity and thereby not cause or exacerbate downstream flooding. Project impacts related to storm drainage facilities are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact UTIL-4: Solid Waste

Development of the project site would generate a substantial new demand for solid waste disposal services. CalRecycle posted a solid waste generation rate for warehouses from a solid waste guide for development projects in Santa Barbara County. Based on this source, the estimated annual solid waste generated by a warehouse would amount to 1.42 pounds per 100 square feet per day (CalRecycle 2019c). Using this factor, the project would generate an estimated 51,360 pounds per day, or approximately 9,373 tons per year. While the content of a ton of solid waste varies, it has been approximated that a cubic yard of solid waste weighs 300 pounds, so the project would generate approximately 62,487 cubic yards of solid waste per year.

As noted, all three County landfills have an approximate capacity of 182.5 million cubic yards, so adequate capacity exists for the project's solid waste. The project would comply with applicable state and local statutes and regulations related to solid waste as discussed above. Project impacts on solid waste are considered less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact UTIL-5: Electrical and Telecommunications Facilities

As noted above, existing electrical, natural gas, and telephone lines are available adjacent to or near the project site, and the Stockton Municipal Code requires the extension of services to any area annexed during the term of the franchise. The project site would have access to these services without requiring significant expansion of these systems, since existing lines are available.

It is expected that PG&E and telecommunications companies will be able to extend their services to the project site as required, especially since existing utility facilities are in the area. Project impacts on energy and communications systems would be less than significant.

Level of Significance: Less than significant

Mitigation Measures: None required

Impact UTIL-6: Project Energy Consumption

The project proposes development of approximately 3.6 million square feet of warehouse space. According to the 2012 Commercial Buildings Energy Consumption Survey by the U.S. Energy Information Administration, the most recent such survey conducted, warehouse and storage facilities consumed on average 6.6 kWh of electricity per square foot annually and 19.4 cubic feet of natural gas per square foot annually (EIA 2012). Based upon these factors, it is estimated that proposed development on the project site would consume approximately 23,871,342 kWh of electricity and 70,167,278 cubic feet of natural gas annually.

Development on the project site would be required to comply with the adopted California Energy Code, which specifies building energy efficiency standards. Compliance with the California Energy Code would likely lead to less electricity and natural gas consumption by project development. Along with compliance with the Renewables Portfolio Standard targets, the project would consume a smaller amount of fossil fuels.

As indicated in the CalEEMod run (see Appendix C), VMT generated by traffic associated with project development would be 42,192,202 miles annually under unmitigated conditions. With the project features and regulations that would mitigate GHG emissions, as described in Chapter 10.0, Greenhouse Gas Emissions, total annual VMT would be 36,742,376 miles. Based on estimates by SJCOG, this would lead to a reduction of approximately 427,266 gallons of gasoline and diesel fuel consumed annually by project traffic from business-as-usual conditions.

Project construction would consume substantial amounts of energy in grading, development of buildings and site improvements, and installation of utilities and street improvements. Implementation of Mitigation Measure GHG-1, described in Chapter 10.0, Greenhouse Gas Emissions, would result in reductions in energy expenditures

associated with construction. Because of the relatively flat topography of the site, the project would not require any extraordinary grading requirements. Project construction is not expected to involve substantially inefficient, wasteful, or unnecessary consumption of energy.

In summary, the project would consume less energy in building operations and vehicle trips associated with project development, and the project would implement measures that would reduce energy consumption. The project would not consume energy in a manner that is wasteful, inefficient, or unnecessary.

Level of Significance: Less than significant

Mitigation Measures: None required

18.0 CUMULATIVE IMPACTS

18.1 INTRODUCTION TO CUMULATIVE IMPACTS

A cumulative impact, as defined by CEQA Guidelines Section 15355, is an environmental effect that may result from the combination of two or more environmental effects associated with a proposed project, or from the combination of one or more project environmental effects or a combination with related environmental effects caused by other closely related projects. Cumulative impacts may also result when a project's environmental effects compound or increase other non-project environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

CEQA Guidelines Section 15130 states an EIR must discuss the cumulative environmental impacts of a project "when the project's incremental effect is cumulatively considerable." As described in CEQA Guidelines Section 15065(a)(3), "cumulatively considerable" effects occur when the incremental effects of an individual project are significant when viewed in connection with the effects of other closely related projects, including past projects, current projects, and probable future projects.

The analysis of cumulative impacts is to be based on either 1) a list of past, present, and probable future projects producing related or cumulative impacts, or 2) on a summary of projections contained in an adopted general plan or related planning document, or in a prior certified environmental document which described or evaluated regional or area-wide conditions contributing to the cumulative impact. For this EIR, the projection approach is used, using the Stockton General Plan 2040.

For each environmental issue area, the cumulative impact analysis:

- Describes the geographic context for the analysis,
- Evaluates whether there exists the potential for one or more significant cumulative impacts in that environmental issue area,
- Analyzes whether the project would make a cumulatively considerable contribution to a significant cumulative impact, or make significant a cumulative impact that was otherwise less than significant, and
- Determines whether and how a significant cumulative impact, or a considerable contribution to such an impact, can feasibly be avoided or reduced to a less than significant or less than considerable level.

If the project does not involve a considerable contribution to a significant cumulative effect, then the project's effect is not considered significant, and discussion in the EIR is

limited to the basis for that conclusion. Where significant cumulative impacts are identified, the EIR must examine reasonable, feasible options for mitigating or avoiding the project's contribution to a level that is less than considerable. As provided in *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1996), a project's considerable contribution to a significant cumulative impact can be reduced to a level that is less than considerable with mitigation measures. A project's contribution is not cumulatively considerable if the project is required by existing ordinances or programs to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

18.2 CUMULATIVE IMPACT SETTING

The potential cumulative impacts of long-range urban development in the City of Stockton through the year 2040 are analyzed in the GPEIR (City of Stockton 2018b). The GPEIR considered the environmental effects of buildout of all lands designated in the Stockton General Plan for urban development, including development of the project site and other undeveloped lands in southeastern Stockton. The proposed project would contribute to the long-range cumulative environmental impacts identified in the GPEIR, including potential cumulative impacts of planned urban development on the various resources and environmental conditions addressed at a project level in this EIR.

More specifically, GPEIR Section 6.2 (Unavoidable Significant Effects) identified certain cumulatively significant and unavoidable impacts to be a necessary part of implementing the General Plan. This required the Stockton City Council to adopt a Statement of Overriding Considerations; the statement was adopted in conjunction with adoption of the Stockton General Plan 2040.

The proposed project would involve industrial development consistent with the allowable uses specified in the existing Industrial land use designation of the site. The amount of development associated with the project is consistent with the projected buildout development assumed and analyzed in the GPEIR. As a result, the project would contribute proportionately to the potential cumulative impacts associated with projected urban development in the City of Stockton in a manner consistent with the GPEIR analysis. It would not involve any known change in, or any considerable new or more severe contribution to, the significant cumulative impacts identified in the GPEIR. A more detailed discussion is provided below.

18.3 CUMULATIVE IMPACTS OF PROJECT

18.3.1 Aesthetics and Visual Resources

Cumulative impacts on aesthetics are assumed to be localized; that is, aesthetic changes at a site will not generally impact aesthetics at another site if the sites are not visually

connected in some fashion. A visual connection could be established by juxtaposition or by location along a travel corridor, among other possibilities.

The potential aesthetic effects of urban development were addressed extensively in the Stockton General Plan 2040 and the GPEIR. Planned urban development in the Stockton area would result in extensive changes in viewsheds and loss of open space as lands surrounding the existing urban area are converted from rural agricultural to urban use. The proposed project would result in industrial development in a portion of southeastern Stockton. As discussed in Chapter 4.0, Aesthetics, the project would substitute views of new industrial development for existing views of agricultural and vacant land.

There are no scenic vistas or resources in the immediate project area, other than the riparian area along North Littlejohns Creek, which would be only minimally affected by project development. The aesthetic environment of the project site consists of views of light industrial and warehouse uses to the south and commercial uses to the north and west. Proposed development would be consistent with the existing aesthetic environment as well as with the planned development described in the Stockton General Plan 2040.

The immediate project vicinity currently is subject to limited night lighting, mainly security lighting from residences. Industrial structures and associated parking and circulation to the south and east of the site are more brightly lit and prominent in nighttime views from the site. The proposed project, along with other development projects in the area, would be required to meet City design review standards through requirements imposed during the project review process. These standards require that all light sources be shielded and directed downwards to minimize trespass light and glare on nearby residences. Additionally, all outdoor lighting sources of 1,000 lumens or greater are required to be fully shielded. With the observance of these standards, the project would not involve a considerable contribution to existing prevailing lighting in the project area.

Overall, the project would result in a less-than-considerable contribution to any cumulative aesthetic effect.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.2 Agricultural Resources

Cumulative impacts on agricultural land resources may be assessed on a regional or local level; analysis at a local level yields a more conservative result. Development proposed for the project site would result in the conversion of approximately 106 acres of Farmland of Statewide Importance, which is considered Farmland as defined by the Environmental Checklist in CEQA Guidelines Appendix G.

The impacts of conversion of agricultural land in conjunction with urban development as proposed in the Stockton General Plan 2040 was identified in the GPEIR as a significant

and unavoidable adverse effect. Significant and unavoidable impacts related to agricultural land conversion were identified in the GPEIR as:

- Impact AG-1: Although the proposed General Plan includes policies and actions that would reduce and partially offset the conversion of farmland, it designates approximately 16,160 acres of farmlands of concern under CEQA for non-agricultural uses.

- Impact AG-2: The proposed General Plan designates 2,464 acres of lands with active Williamson Act contracts for non-agricultural uses.

A Statement of Overriding Considerations for this issue was adopted by the Stockton City Council and remains operative. CEQA Guidelines Section 15152(d) states that where an EIR has been prepared and certified for a plan, a lead agency for a later project consistent with the plan should limit an EIR on the later project to environmental effects which 1) were not examined as significant effects on the environment in the prior EIR, or 2) are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means. No new or more severe impacts are associated with the project.

Development of the project site will be subject to the City's Agricultural Land Mitigation Program, which would compensate for the loss of Farmland of Statewide Importance but not fully mitigate the impact. Therefore, based upon the criteria set by CEQA Guidelines Section 15152(d), as noted in Chapter 5.0, the project would result in a less-than-considerable contribution to cumulative agricultural resource impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None feasible

18.3.3 Air Quality

Cumulative impacts on air resources may be assessed at both a regional and local level. The project would involve contributions to potential air quality impacts both at the regional level - the San Joaquin Valley Air Basin - and the local level. Air Basin conditions are described in detail in Chapter 6.0, Air Quality.

The cumulative air quality impacts of planned urbanization in the City of Stockton were addressed in the GPEIR and were found to be significant. These impacts included:

- Impact AQ-1: Implementation of the proposed General Plan would result in the generation of substantial long-term criteria air pollutant emissions that would exceed the San Joaquin Valley Air Pollution Control District (SJVAPCD) regional significance thresholds and would therefore not be considered consistent with the existing Air Quality Management Plans.

- Impact AQ-2: Construction activities associated with implementation of the proposed General Plan and [Utility Master Plan Supplements] could exceed the SJVAPCD regional significance thresholds.

- Impact AQ-3: Operation of development projects allowed under the proposed General Plan would generate emissions that would exceed the SJVAPCD regional significance thresholds for VOC, NOX, CO, PM10, and PM2.5.

- Impact AQ-4: Development allowed under the proposed General Plan and UMPS could result in short- and long-term emissions that could cause or contribute to a violation of the ambient air quality standards.

- Impact GHG-1: Implementation of the proposed General Plan would result in a substantial increase in greenhouse emissions.

The GPEIR identified a range of mitigation measures, including source controls and transportation management systems, and these measures were incorporated into the Stockton General Plan 2040. These are a part of the City's environmental review, permitting and fee structures, and therefore applicable to the project and can be expected to be included in the project conditions. Nevertheless, even with implementation of the adopted mitigation measures, the cumulative impact of planned urbanization on ozone precursor emissions would be significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact in conjunction with the approval of the Stockton General Plan 2040. In accordance with CEQA Guidelines Section 15152(d), this EIR focuses on project-specific effects.

CalEEMod estimates of air pollutant emissions from construction and operation of the proposed project indicate that neither SJVAPCD construction nor operational significance thresholds would be exceeded, with assumed application of SJVAPCD rules. The SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts notes that project emissions may be cumulatively considerable even if they are below SJVAPCD significance thresholds. However, as discussed in Chapter 6.0, Air Quality, the significance thresholds are applied to evaluate regional impacts of project-specific emissions of air pollutants. Regional impacts of a project can be characterized in terms of total annual emissions of criteria pollutants and their impact on SJVAPCD's ability to reach attainment of criteria pollutant standards. On that basis, the proposed project would not result in a considerable contribution to a significant cumulative air quality impact in the Air Basin.

The proposed project would involve emissions of TACs, mainly diesel PM from truck traffic. The California Attorney General's Office has expressed concern that such emissions would adversely affect nearby residents identified as being within a disadvantaged community and has suggested several mitigation measures that would reduce diesel PM and other pollutant emissions. Appendix B contains the Attorney General Office's suggested measures that are considered applicable to the project. It is expected that the proposed project would also incorporate these measures as applicable, thereby further reducing the cumulative effects of the proposed project.

Overall, the project would result in a less-than-considerable contribution to any cumulative air quality effect.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.4 Biological Resources

Cumulative impacts on biological resources can be addressed in several potential contexts, including bioregions, watersheds, or habitat areas for individual sensitive species. The project vicinity has been subject to significant biological resource impacts because of agricultural activities and urban development. As a result, and as characterized in Chapter 7.0, Biological Resources, the project vicinity does not support substantial populations of common or sensitive wildlife species. However, trees in the project vicinity may be used for nesting by protected and sensitive bird species, and the project site has seasonal wetlands that could support vernal pool fairy shrimp.

The proposed project would be required to participate in the SJMSCP. The SJMSCP would require preservation of existing sensitive lands, creation of new comparable habitat on the project site, or payment of fees that would be used to secure preserve lands outside the project site to compensate for the loss of sensitive habitat. In addition, the SJMSCP would require compliance with ITMMs that avoid direct impacts of development on special-status species. SJMSCP compliance is assumed by the regulatory agencies to reduce project biological impacts to a less-than-significant level. Therefore, with participation in the SJMSCP and implementation of the mitigation measures in Chapter 7.0, the project would result in a less-than-considerable contribution to any cumulative biological resource impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.5 Cultural Resources and Tribal Cultural Resources

The geography of cultural resource impacts can be defined by region, by political subdivision, or by the geography of the cultural resources present in an area when adequate inventory data are available to define it. The GPEIR evaluated the cumulative cultural resource impacts of development under the Stockton General Plan 2040 and concluded that impacts would be less than significant. No known important archaeological or historically significant resources are located on the project site. Mitigation measures described in Chapter 8.0, Cultural Resources, would ensure that impacts on any discovery of cultural resources would be reduced to a level that is less than significant. The project would result in a less-than-considerable contribution to any cumulative cultural resource impacts.

The geography of tribal cultural resource impacts is the same as that for cultural resources in general. However, AB 52 indicates that another area of consideration is the

geographic area that is traditionally and culturally affiliated with a tribe. At this time, such an area is known only when a tribe requests consultation on a project in accordance with AB 52. As noted in Chapter 8.0, the City had sent out formal notification letters for compliance with AB 52 for this project. While a response was received, no recommendations were made regarding tribal cultural resources. As discussed in Chapter 8.0, no known important archaeological or historically significant resources are located within the project vicinity, and proposed mitigation measures would reduce potential impacts on tribal cultural resource impacts to a level that would be less than significant. As a result, the project would result in a less-than-considerable contribution to any cumulative tribal cultural resource impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.6 Geology, Soils, and Mineral Resources

Cumulative impacts associated with geology and soils are assumed to be localized. The GPEIR did not identify any significant geology, soil, or mineral resource impacts associated with development under the Stockton General Plan 2040. As discussed in Chapter 9.0, Geology, the proposed project would not result in potentially significant geology and soils impacts, including potential project exposure to geologic hazards, seismic shaking, soil-related hazards, and soil erosion. Soil impacts associated with the project can be mitigated to a level that would be less than significant. As discussed in Chapter 9.0, there are no mineral resources on the project site. Therefore, the project would result in a less-than-considerable contribution to any cumulative geology, soil, or mineral resource impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.7 Greenhouse Gas Emissions

GHG emissions are related to global climate change. Global climate change is a distinct CEQA issue in that, while a project may generate GHG emissions, the impacts of such emissions are global. As such, the impacts of a project's GHG emissions are considered cumulative in nature.

The potential GHG impacts of planned urbanization in the City of Stockton were addressed in the GPEIR and were found to be significant. This impact included:

- Impact GHG-1: Implementation of the proposed General Plan would result in a substantial increase in GHG emissions.

The GPEIR identified mitigation measures, including adoption of the CAP, and these measures were incorporated into the Stockton General Plan 2040 and are a part of the City's environmental review, permitting and fee structures. Nevertheless, even with the

adopted mitigation measures, the cumulative impact of planned urbanization on GHG emissions would be significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact in conjunction with the approval of the Stockton General Plan 2040.

The analysis in Chapter 10.0, Greenhouse Gas Emissions, addresses the potential GHG impacts of project operations. It was concluded that operational GHG emissions, with incorporation of project features, would be consistent with the GHG reduction objectives of the City's CAP, along with emission reduction goals of SB 32 and its implementing Scoping Plan. Construction GHG emissions would be significant and unavoidable, but the project would not create a new or more severe impact than was discussed in the GPEIR. On that basis, the project would result in a less-than-considerable contribution to any cumulative GHG impact.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.8 Hazards and Hazardous Materials

Cumulative impacts associated with health and safety are assumed to be localized. Any project exposure to hazards would occur on or in the immediate vicinity of the site, and any potential on- or off-site impact of hazardous materials use associated with the project would also be limited to the immediate vicinity.

The GPEIR did not identify any significant hazard or hazardous material impacts associated with development under the Stockton General Plan 2040. There are no recorded sites of known contamination on the project site. Development and future use of the project site would be subject to existing permitting requirements related to hazardous materials handling and emissions control, which would reduce the potential for hazardous material releases, and consequently any off-site health effects, to a level that would be less than significant. The project would result in a less-than-considerable contribution to any cumulative hazard or hazardous material impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.9 Hydrology and Water Quality

The project site is north of North Littlejohns Creek, which discharges into French Camp Slough. Both streams are part of the French Camp Slough system, which is the geographic context for analysis of cumulative surface water impacts.

The hydrology and water quality impacts of planned urbanization under the Stockton General Plan 2040 were analyzed in the GPEIR. The EIR identified one potentially significant impact – existing and planned storm drainage infrastructure could be undersized or otherwise inadequate, leading to potential flooding and polluted runoff.

Mitigation described in the GPEIR would require preparation of a citywide storm drainage master plan that includes hydrologic and hydraulic modeling for existing and Year 2040 land uses. Preparation and implementation of this master plan would reduce drainage impacts to a level that would be less than significant.

The proposed project would involve potential water quality impacts, mainly sediment discharges from soil disturbance. However, as discussed in Chapter 12.0, Hydrology and Water Quality, BMPs and other provisions of the Construction General Permit, the Storm Water Management Program, and the Storm Water Quality Control Criteria Plan would reduce potential sedimentation and other contamination of surface waters.

The project site is located within the Eastern San Joaquin Valley Subbasin, which is the geographic context for cumulative analysis of groundwater impacts. The proposed project would involve no potential groundwater effects that are not already accounted for in existing demand projections and analyses. The project vicinity would obtain its potable water from the City's water system, which derives 75% of its supply from surface water sources.

Overall, the project would result in a less-than-considerable contribution to any cumulative hydrology or water quality impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.10 Land Use, Population, and Housing

Cumulative land use impacts are related to the scale of the project and the presence or absence of a defined community or land use entity that would be exposed to change as a result of the project; the geographic context for cumulative land use analysis can range from a project site and adjacent parcels to an entire community or region. The project site is currently under County jurisdiction but is within an area that has a mix of city, county, and State jurisdictions.

The GPEIR did not identify any significant land use impacts associated with development under the Stockton General Plan 2040. The proposed development on the project site would be consistent with the land use designations under the Stockton General Plan 2040. The CEQA analysis for this project identified potentially significant impacts on the environment that could be reduced with mitigation to a level that would be less than significant.

The population and housing impacts of planned urbanization in the City of Stockton were addressed in the GPEIR and were found to be significant. Specifically, development under the Stockton General Plan 2040 would induce substantial job growth that would exceed SJCOG employment projections.

- Impact POP-1: The proposed General Plan and UMPS would induce substantial employment growth within the EIR Study Area.

No feasible mitigation measures could be identified to reduce this impact to a level that would be less than significant, so this impact was considered significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact in conjunction with the approval of the Stockton General Plan 2040. While the General Plan identified a significant increase in growth and employment, the plan emphasized infill housing and infrastructure to accommodate these increases. In accordance with CEQA Guidelines Section 15152(d), this EIR focuses on project-specific effects.

As noted, project development would be consistent with the existing land use designation in the Stockton General Plan 2040. While the project would contribute to employment growth, the project is not expected to contribute to any population growth not discussed in the GPEIR, and consequently would not affect anticipated housing development. Overall, the project would result in a less-than-contribution to any cumulative land use, population, or housing impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.11 Noise

Cumulative noise impacts are assumed to be localized. The impacts of noise are reduced with distance; unless there is a very significant existing or proposed noise source, the potential for cumulative impacts will ordinarily be limited to a few hundred yards.

The potential noise impacts of planned urbanization in the City of Stockton were addressed in the GPEIR and were found to be significant. Specifically, noise from traffic along certain road segments would be substantially greater than under existing conditions.

- Impact NOISE-3: Increased traffic from projected development allowed by the proposed General Plan would result in a significant increase in traffic noise levels compared to existing conditions along the following roadway segments:
    - SR-99 between Farmington Road and Mariposa Road
    - SR-4 west of I-5
    - Eight Mile Road between Mokelumne Drive and Trinity Parkway
    - Eight Mile Road between West Lane and SP Railroad
    - Eight Mile Road between SR-99 and west of Bear Creek
    - March Lane between West Land and Bianchi
    - French Camp Road between McDougald and E.W.S Wood
    - California Street between Park and Weber

- California Street between Weber and Crosstown Freeway
- Airport Way between Main and Market
- Airport Way between Ninth and Tenth
- Airport Way between Sperry and CE Dixon St
- Mariposa Road between Stagecoach and SR-99
- B Street between Ralph Avenue and Arch Airport

No feasible mitigation measures could be identified to reduce these impacts to a level that would be less than significant, so this impact was considered significant and unavoidable. A Statement of Overriding Considerations was adopted for this impact in conjunction with the approval of the Stockton General Plan 2040. In accordance with CEQA Guidelines Section 15152(d), this EIR focuses on project-specific effects.

None of the impacted road segments identified in the GPEIR are on or near the project site. The traffic impact study prepared for the project (see Appendix G) does not identify any of the GPEIR segments as being affected by the project.

Traffic noise levels associated with the project were determined using the Traffic Noise Prediction Model, based upon inputs from the traffic impact study under Cumulative conditions without and with the project. Truck mix percentages were based upon overall traffic counts and vehicle classification conducted for the area roadways. Table 18-1 shows the results of the traffic noise analysis. Based upon the information in Table 18-1, the project would not result in a significant increase in traffic noise levels under the Cumulative Plus Project Scenario, as traffic noise would not exceed the 3-dB impact threshold set in the City of Stockton Noise Element.

As discussed in Chapter 14.0, Noise, rural residences are located adjacent to the project site. Noise from project site development would not have a significant impact on these residences with implementation of identified mitigation. Overall, the project would result in a less-than-considerable contribution to any cumulative noise impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

TABLE 18-1
TRAFFIC NOISE LEVELS – CUMULATIVE CONDITIONS

Roadway	Segment	Traffic Noise Level 100 ft. from Centerline (dB L_{dn})		
		Cumulative No Project	**Cumulative Plus Project**	**Change**
SR 99	North of Mariposa Road	83	83	0
	South of Mariposa Road	82	82	0
Mariposa Road	SR 99 to Farmington Road	69	69	0
	Carpenter Road to SR 99	68	71	+3
	Project Site to Carpenter Road	67	70	+3
	East of Project Site	67	67	0
	East of Austin Road	65	65	0
Arch-Airport Road	Qantas Road to SR 99	72	72	+1

Source: J.C. Brennan and Associates 2021.

18.3.12 Public Services and Recreation

Cumulative impacts related to public services are appropriately addressed at the City level, as the City of Stockton would provide most of the public services for the project site. The GPEIR did not identify any significant public service or recreation impacts associated with development under the Stockton General Plan 2040.

The project would not involve demands on public schools or parks and recreation, and therefore would have no cumulative impact on these services, or a considerable contribution to any such effect. As discussed in Chapter 15.0, Public Services, project impacts on fire protection services would be substantially reduced by the installation of ESFR sprinkler systems in proposed building development. The Stockton Fire Department has indicated that it intends to address fire response times to southeast Stockton at a future date, including the potential construction of a fire station. The project would pay Public Facility Fees that could be used for the future construction of a fire station. Development of new fire stations would be subject to CEQA review as required.

Annexation of the project site will require the detachment of the project site from the Montezuma Fire District. So that this district is not economically challenged, the applicant will be required by LAFCo to enter into a revenue agreement or an equivalent measure with the district prior to annexation. Despite detachment of the project from the

Montezuma Fire District, fire protection in the project vicinity will continue to be provided by the agency most capable of responding in accordance with adopted mutual aid agreements.

Police facilities would need to be renovated or moved to another location, as discussed in Chapter 15.0. As with fire facilities, the project would pay Public Facility Fees that could be used for future improvements to police facilities which also would be subject to CEQA review and must mitigate for any identified significant impacts.

Overall, the project would result in a less-than-considerable contribution to any cumulative public service or recreation impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

18.3.13 Transportation

Setting

Cumulative transportation impacts, primarily vehicular traffic, are addressed within the area potentially impacted by a proposed project, typically within a certain radius from the project site. This is the case with the proposed project, the potential traffic impacts of which are addressed in Chapter 16.0, Transportation.

The potential transportation impacts of planned urbanization in the City of Stockton were addressed in the GPEIR and were found to be significant. The GPEIR identified mitigation measures, including specific improvements. These measures were incorporated into the Stockton General Plan 2040 and are a part of the City's environmental review, permitting, and fee structures. Nevertheless, even with the adopted mitigation measures, the cumulative transportation impacts were determined to be significant and unavoidable.

- Impact TRAF-1: Implementation of the proposed General Plan, in combination with regional growth, would result in increased vehicle traffic, which would affect the operation of local roadways and freeway segments. As shown in Table 4-14.2 and discussed above, the proposed General Plan would result in significant level of service impacts to roadway and freeway segments.

- Impact TRAF-2: Implementation of the proposed General Plan, in combination with regional growth, would result in increased vehicle traffic, which would affect the operation of regional roadways and freeway segments. As discussed above, the proposed General Plan would result in significant level of service impacts to roadway and freeway segments.

A Statement of Overriding Considerations was adopted for this impact in conjunction with the approval of the Stockton General Plan 2040. In accordance with CEQA Guidelines Section 15152(d), this EIR focuses on project-specific effects.

Project Cumulative Impacts

The project's potential for cumulatively considerable contributions to traffic impacts was considered in the traffic impact study by KD Anderson and Associates (2021), available in Appendix G of this EIR. As described in Chapter 16.0, cumulative conditions with the Stockton General Plan are a long-term background condition, which includes future year forecasts of traffic volumes based on development of surrounding land uses. The cumulative scenarios assume future development that is consistent with the Stockton General Plan 2040.

The analysis also assumes roadway improvements consistent with the long-term future context. These include improvements from the Stockton General Plan and from the *Draft Environmental Impact Report – Mariposa Lakes Specific Plan*. Mariposa Lakes is a very large proposed urban development near the project site that would, if ultimately constructed, require extensive street and intersection improvements in the general project area. The improvements considered in the traffic impact study also included:

- Widening of Mariposa Road northwest of Carpenter Road to six lanes.
- Widening of Mariposa Road southeast of Carpenter Road to four lanes.
- Widening of SR 99 from north of the Crosstown Freeway to south of Arch Road to eight lanes.

Project impacts under Cumulative conditions were evaluated in the traffic study for roadway segments only; no intersections or ramp junctions were studied. Table 18-2 shows LOS at the study roadway segments under Cumulative No Project and Cumulative Plus Project conditions.

Under Cumulative Plus Project conditions, three roadway segments were determined to operate at LOS inconsistent with City standards:

- *SR 99 – Golden Gate Avenue to Mariposa Road.* This roadway segment would operate at LOS F, which is considered unacceptable under City policy. However, LOS would also be unacceptable under Cumulative No Project conditions, and the project-related increase in volume would not be greater than five percent. Therefore, based on Stockton General Plan policy, this impact is considered less than significant, and no improvements are recommended.
- *Mariposa Road – Carpenter Road to Project Site.* This roadway segment would operate at LOS E, which is considered unacceptable under City policy. Compared to Cumulative No Project conditions, the project-related increase in volume would be greater than five percent. This would conflict with City policy; therefore, this impact is considered significant. The traffic impact study recommends an improvement on this segment that is described below. With this improvement, this segment with the project would operate at LOS C, which would be consistent with City policy.

TABLE 18-2
ROADWAY SEGMENT LOS – CUMULATIVE CONDITIONS

Roadway Segment	Cumulative No Project LOS	Cumulative Plus Project LOS
SR 99 – North of Crosstown Freeway	D	D
Crosstown Freeway – West of SR 99	D	D
SR 99 – Crosstown Freeway to Golden Gate Ave.	D	D
SR 99 – Golden Gate Ave. to Mariposa Rd.	**E**	**F**
Mariposa Rd. – SR 99 to 8th St./Farmington Rd.	C	C
Mariposa Rd. – Carpenter Rd. to SR 99	C	D
Mariposa Rd. – Project site to Carpenter Rd.	C	**E**
Mariposa Rd. – Southeast of project site	C	C
Mariposa Rd. – East of Austin Rd.	A	A
SR 99 – Mariposa Rd. to Arch-Airport Rd.	C	C
Arch-Airport Rd. – Qantas Lane to SR 99	**F**	**F**
SR 99 – South of Arch-Airport Rd.	C	C

Bold indicates unacceptable LOS.
Source: KD Anderson and Associates 2021.

- *Arch-Airport Road –Qantas Lane to SR 99*. This roadway segment would operate at LOS F, which is considered unacceptable under City policy. However, LOS would also be unacceptable under Cumulative No Project conditions, and the project-related increase in volume would not be greater than five percent. Therefore, based on Stockton General Plan policy, this impact is considered less than significant, and no improvements are recommended.

In summary, three roadway segments would experience LOS that could potentially conflict with City policy. One of the roadway segments would have LOS that is consistent with City policy with an improvement described below. The other two segments would operate at an unacceptable LOS, but criteria set by the City would not require the project to contribute to improvements.

The traffic impact study analyzed the adequacy of project site access under Cumulative Plus Project conditions. The LOS at the two proposed driveways was analyzed. The northwest driveway access point was determined to have LOS of A during both AM and PM peak hours. The southeast driveway access point was determined to have LOS of B during the AM peak hour and C during the PM peak hour. LOS at both access points was determined to be adequate per City policy, and no improvements were considered necessary.

Vehicle Miles Traveled

The GPEIR did not make a CEQA finding related to VMT. The traffic impact study discussed impacts related to VMT under proposed project Cumulative Plus Project conditions. As discussed in Chapter 16.0, Transportation, implementation of the project would result in no net change from travel associated with the current General Plan-designated land uses. Because the project would result in no net change from travel associated with the current General Plan–designated land use, the project would result in no net change in VMT from a cumulative perspective. Therefore, the project would result in a less-than-considerable contribution to cumulative VMT impacts.

Overall, the project would result in a less-than-considerable contribution to transportation impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

Recommended Roadway Segment Improvement Measure:

TRANS-1: The project shall contribute fair-share costs to an improvement of the segment of Mariposa Road from Carpenter Road to project site access that would widen the roadway segment from four lanes to six lanes.

18.3.14 Utilities and Energy

Cumulative utility impacts are appropriately considered at the level of the utility service area. For water, sewer, storm drainage, and solid waste services, this would be the City of Stockton, as the City either provides these services directly or contracts these services out to franchisees. For energy and communications services, the service area is regional or statewide, but the project would involve no potential effects that could reasonably extend outside the immediate project vicinity.

The GPEIR indicates that the City would have adequate water, wastewater, and storm drainage capacity available to serve proposed development under the Stockton General Plan 2040, with which the proposed project is consistent. Also, solid waste needs can be accommodated, and the project would provide its own storm drainage system.

The GPEIR did not identify any significant energy issues associated with development under the Stockton General Plan 2040. PG&E obtains its electricity from power plants and hydroelectric facilities it owns, along with purchases from other power sources. It is expected that PG&E can generate additional electricity for the proposed project without expanding its facilities. PG&E imports most of its natural gas from other states, although it also uses in-state gas wells. PG&E can provide additional natural gas to the project without expanding its infrastructure. Since future development would be required to comply with energy efficiency standards in building codes, energy demands of the project on PG&E's energy supplies would be reduced.

Overall, the project would result in a less-than-considerable contribution to any cumulative utility or energy impacts.

Contribution to Significant Cumulative Impacts: Less than considerable

Mitigation Measures: None required

19.0 COMPARISON OF ALTERNATIVES

19.1 INTRODUCTION

CEQA Guidelines Section 15126.6(a) requires an EIR to "consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation." More specifically, the EIR shall "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." The alternatives analysis must identify the potential alternatives and include adequate information about each one to allow meaningful evaluation, analysis, and comparison with the proposed project. Alternatives to be considered must feasibly attain most of the basic project objectives and avoid or substantially lessen one or more of the significant effects of the proposed project, even if an alternative would impede to some degree the attainment of the project objectives or would be more costly. The environmentally superior alternative must be identified among the alternatives considered.

There are no set rules governing the nature and scope of the alternatives to be discussed, other than the "rule of reason." While the "rule of reason" is not defined, it is understood to mean that not all conceivable alternatives need to be considered. If an alternative is not feasible or does not provide an opportunity to avoid or substantially reduce environmental effects, the alternative need not be analyzed in detail; if this is the case, the reasons for limiting the analysis should be identified.

The following sections describe the process used to select project alternatives for evaluation in this chapter, the alternatives that were considered but not subjected to detailed analysis, and the analysis of selected alternatives to the project. The alternatives analysis conforms to the guidelines of CEQA and the CEQA Guidelines and represents the best professional opinion of the EIR preparer, City of Stockton staff, and their technical reviewers. However, the final authority for the approval of the proposed project, the selection or rejection of alternatives, and the feasibility or infeasibility of alternatives rests with the decision-makers of the City of Stockton.

19.2 SELECTION OF ALTERNATIVES

Alternatives to the project were selected for evaluation in this EIR based on the criteria set forth in CEQA Guidelines Section 15126.6. These criteria include:

1) Ability of the alternative to meet most of the basic objectives of the project;

2) Feasibility of the alternative; and

3) Ability of the alternative to avoid or substantially reduce one or more of the significant environmental effects of the project.

Ability of the Alternative to Meet Project Objectives

Potential alternatives to the project were evaluated and selected with respect to the objectives of the project. As identified and discussed in Section 3.2 of this EIR, the main project objective is the entitlement of the project site for predominantly high-cube warehouse building spaces and supporting facilities. Related objectives include creation of employment opportunities and generation of additional revenue for the City.

Feasibility of the Alternative

Alternatives to the project were evaluated with respect to the "rule of reason" and general feasibility criteria suggested by the CEQA Guidelines, including such criteria as the suitability of the site or alternative site, the economic viability of the alternative, the availability of infrastructure, the consistency of the alternative with general plan designations, zoning or other plans or regulatory limitations, the effect of applicable jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to an alternative site, including consideration of whether or not the site is already owned by the applicant. The application of these criteria to potential alternatives to the proposed project is described in this section and in Section 19.3.

Avoidance or Substantial Reduction of Significant Effects

The evaluation of alternatives must also consider the potential of the alternative to avoid or substantially lessen any of the significant environmental effects of the project, as identified in Chapters 4.0 through 17.0 of this EIR. The potential effects of the project are summarized in Chapter 2.0, Summary.

The alternatives analysis accounts for the potentially significant environmental effects of the alternatives as compared to the proposed project. Some of the potential effects of the project and the alternatives are common to virtually all development in the Stockton vicinity and would not vary from alternative to alternative. Similarly, certain environmental effects are addressed by routine requirements that would apply uniformly to any alternative. Since the focus of the alternatives analysis is comparison to the proposed project, issues that do not vary substantially between the alternatives are not extensively analyzed. These include the following:

> *Aesthetics*. The project would involve a loss of open space and a change in visual character that is inherent in proposed development as well as other large-scale industrial projects. Otherwise, the project would involve effects that are less than significant. Potential light and glare impacts on surrounding lands are typically addressed by the proposed lighting design and conformance with existing Stockton Municipal Code requirements.

Biological Resources. While the project would involve conversion of existing open space and associated habitat values, it would not involve large-scale conversion of sensitive habitats or impacts on associated sensitive species use. Conversion impacts are common to "greenfield" development in the Stockton area and are addressed through implementation of the SJMSCP or equivalent measures. The project would have no substantial impacts on wetlands and Waters of the U.S., so this issue is also not considered in detail.

Cultural Resources and Tribal Cultural Resources. The project and other planned development has the potential to impact currently unknown archaeological resources within the project site. These potential impacts can be avoided by mitigation measures typically required of development projects. Also, tribes with a traditional and cultural affiliation with the project area have been contacted about consultation, and mitigation measures have been identified for potential impacts on tribal cultural resources. As such, this issue is not considered in detail in this analysis.

Geology, Soils, and Mineral Resources. The project site has soils with characteristics that impose potential development constraints. These constraints, common in the Stockton area, would be addressed through routine soils engineering that would be required for the project. Soil erosion is a potential issue that would be addressed through City of Stockton storm water requirements and by the required SWRCB Construction General Permit process. Potential impacts on paleontological resources can be avoided by inadvertent discovery mitigation measures included in this EIR and typically required of other development projects. As no mineral resources have been identified on the project site, this issue is not considered in this analysis.

Land Use, Population, and Housing. The project would not involve significant land use effects or Stockton General Plan inconsistency, as the project is consistent with City General Plan designations. Pre-zoning that would occur as part of the annexation process would ensure consistency with City zoning. Because the project is consistent with the Stockton General Plan, it would not involve significant population, housing, or employment effects. These issues are not considered in detail in this analysis.

Public Services and Recreation. The project would generate potential impacts for public services that are common to new land development in the City of Stockton. Long fire response times associated with the project would be addressed with proposed project design measures and inter-agency agreements. Application of routine mitigation measures, including the payment of required Public Facilities Fees, school impact fees, and park fees, would reduce these potential effects to a level that would be less than significant. This issue is not considered in detail in this analysis.

Utilities and Energy. The project would involve new demands for sewer, water, storm drainage, and other utilities. The project site is located within defined service areas for these utilities; facilities needed to serve new development have

been master planned, and capacity is available to serve the project. Issues identified in the EIR are routine matters that would be addressed by City review of development design and improvements. Utility issues are not considered in detail in this analysis.

19.3 ALTERNATIVES NOT CONSIDERED IN DETAIL

The following alternatives were not addressed in detail, as they did not meet the criteria for detailed analysis defined above. That is, the following alternatives 1) would not meet most of the basic objectives of the project, 2) were clearly infeasible, or 3) did not have the ability to avoid or substantially lessen the significant environmental effects of the proposed project. Alternatives that might conceivably meet the analysis criteria were subject to detailed analysis, as documented in Section 19.4.

19.3.1 Alternative Sites

CEQA Guidelines Section 15126.6(f)(2) indicates that alternative locations for a proposed project should be considered if any of the significant effects of the project would be avoided or substantially lessened at an alternative location. Only locations that have the potential to avoid or substantially reduce any of the significant effects of the project need be considered for inclusion in the EIR. As with all potential alternatives, project location alternatives must be reasonable, feasible, and able to meet most of the basic objectives of the project. The analysis may also consider the fact that a proposed project site is currently owned or controlled by the project developer.

The availability of an alternative site that would support proposed project development was considered. The most feasible alternative sites are in the areas designated for industrial development in southern Stockton, mainly around Stockton Metropolitan Airport and the Norcal Logistics Center site. Alternative locations near the airport would eliminate some of the environmental impacts on or near the project site; however, it would most likely displace those impacts to the alternative location. It is possible that, depending on the location, some impacts might be reduced by the alternative; for example, public transit is available in the area near the airport, providing an alternative to motor vehicle use. However, it is also possible that new or more severe environmental impacts could be introduced, including traffic on the local roadways and compatibility of development with airport operations. No clear opportunity to reduce environmental effects exists under this alternative.

In addition to the lack of potential to reduce environmental impacts, there is uncertainty regarding the lack of availability of alternative locations for the proposed development. Locations may not be for sale, or the owners may not be interested in selling the property. Other locations may have issues that make the property less desirable; for example, access for truck traffic may be inadequate or inconvenient. The project applicant has obtained control of the project site and has prepared development plans specifically for this site. For all the reasons described, the use of alternative sites was not analyzed further.

19.3.2 Alternative Site Design

This alternative would involve site designs for the proposed project that would avoid or substantially lessen one or more of the potentially significant effects identified in this EIR. Regarding the proposed development, there are no apparent design changes that could be implemented that would reduce the potential impacts of the proposed development under the project. The anticipated type of development would be high-cube warehouse, which limits potential design changes as such use requires large floor areas and heights. Given these limitations, this alternative was not analyzed further.

19.4 ALTERNATIVES CONSIDERED IN DETAIL

The alternatives to the proposed project that have been considered in detail are addressed in the following sections. The overall analysis is summarized in Table 19-1.

TABLE 19-1
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT IMPACTS

Issue Area	***Proposed Project***	**Alt 1: No Project**	**Alt 2: Alternative Industrial Development**	**Alt 3: Reduced Project Site Development**
Agricultural Land Conversion	*Potentially significant*	Avoided	No change	No change
Air Pollutant/GHG Emissions	*Potentially significant*	Avoided	Possibly more severe	Reduced
Hazardous Materials	*Less than significant*	Possibly more severe	Possibly more severe	Reduced
Water Quality	*Potentially significant*	Avoided	No change	Reduced
Noise Generation	*Potentially significant*	Avoided	No change	Minimal reduction
Traffic Generation	*Less than significant*	Avoided	No change	Reduced

19.4.1 No Project Alternative

CEQA Guidelines Section 15126.6(e) states that the alternatives analysis must include evaluation of a "no project" alternative. "No project" is defined as no action with respect to the proposed project and continuation of existing circumstances without approval of the project. CEQA Guidelines Section 15126.6(e)(3)(B) further explains:

> If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the “no project” alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing

> state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

For the purposes of this EIR, the No Project Alternative is defined as no annexation to the City of Stockton, no industrial pre-zoning and no industrial development as proposed by the project. The project site would continue to be used for agricultural activities consistent with the existing San Joaquin County zoning.

Since industrial development would not occur under this alternative, there would be no impacts associated with such development on the project site. Existing public services and utilities from the County and other agencies would continue to be provided; no public services and utilities from the City would be extended to the project site. No changes would be made to roads on or adjacent to the project site. Most environmental impacts associated with the proposed project would be avoided, particularly air pollutant and GHG emissions, noise, and traffic.

However, this alternative would meet none of the objectives of the proposed project. It also would be inconsistent with both the City of Stockton and San Joaquin County General Plans, which anticipate industrial development of the project site. No annexation and development of the site also would mean that the City would realize no additional increase in revenue from property taxes, utility user taxes, license fees, and other taxes and fees. With no development, only limited employment opportunities associated with agricultural work would be created.

It is uncertain if agricultural operations on the project site, even those involving higher-value crops, would be viable in the long term, given its location in an area designated for industrial development under the Stockton General Plan and already developed with some residential and commercial uses. In addition, farm equipment and vehicles would likely use Mariposa Road adjacent to the project site. This could create conflicts with more urban traffic and disrupt the flow of vehicle traffic in the area, particularly that of heavy-duty trucks. There also may be potential issues with the disposal of agricultural waste, particularly if burning is involved.

The No Project Alternative would not require hazardous materials that may be used as part of the proposed high-cube warehouse development. However, continued agricultural use may require agricultural chemicals such as pesticides, herbicides, and fertilizers, that have potential to contaminate the soils and adjacent North Littlejohns Creek if not properly applied. Agricultural activities also could generate dust emissions to which nearby land uses may be exposed, including residences that are considered "sensitive receptors."

Thus, while this alternative would avoid most of the environmental impacts of the proposed project, it could have more adverse impacts on specific environmental issues, plus it would not meet project objectives. It should be noted that potential environmental impacts of the proposed project would be reduced to levels that are less than significant with the implementation of mitigation measures, while still realizing the project objectives.

19.4.2 Alternative Industrial Development

This alternative proposes development of the project site other than the high-cube warehouses proposed by the project. For this alternative, it is assumed that the City would annex the project site and pre-zone the property as Limited Industrial (IL), the same as for the proposed project. The IL zone would be consistent with the existing Stockton General Plan designation for the site (Industrial).

The IL zone is applied to areas appropriate for light manufacturing uses that may generate more nuisance impacts than acceptable in commercial zoning districts and whose operations are totally conducted indoors. Examples of such uses that are permitted by right include electronics, equipment, and appliance manufacturing; fabric product manufacturing; food and beverage product manufacturing; furniture and fixtures manufacturing; metal products fabrication and machine/welding shops; printing and publishing; research and development; and wholesaling and distribution. In addition, activities allowed in the IL zone with additional approvals include electricity generating plants, recycling facilities and transfer stations, and cannabis distribution and manufacturing. Other non-industrial uses are allowed in the IL zone, but it is assumed for this analysis that the project site would be developed with light industrial uses.

Alternative industrial development would require extension of public services and utilities from the City to the project site. Road improvements, including curb, gutter, and sidewalk improvements, would need to be made. Because of this, development under this alternative would have similar impacts to the proposed project, particularly related to traffic and noise. Ground disturbance impacts related to soil erosion, surface water quality, and drainage would be similar.

However, this alternative would not meet the objectives of the proposed project related to warehouse development. Depending on the type of industrial activity located on the project site, this alternative may have new or more severe impacts than the proposed project. For instance, manufacturing activities may use or store a greater quantity of hazardous materials, or generate quantities of hazardous waste, releases of which could have a more adverse impact in the vicinity than would occur under the proposed project. Uses involving exposed process machinery and extensive outdoor storage or raw materials or products may involve more adverse visual impacts, as well as soil and water contamination concerns. Air pollutant and GHG emissions may be greater, depending on the industrial activity. Manufacturing uses may or may not be consistent with the development existing or proposed in the area, which consists mainly of logistical uses.

In summary, this alternative would have similar environmental impacts to the proposed project on some issues, but it would potentially have new or more severe impacts on others. The potential environmental impacts of the alternative would, like the proposed project, be reduced to levels that are less than significant with the implementation of mitigation measures while still realizing the project objectives.

19.4.3 Reduced Project Site Development

Under this alternative, the project site would be annexed to the City of Stockton and pre-zoned as under the proposed project. Also, proposed development of the project site would be like the proposed project. However, the proposed warehouse development on the project site would be reduced in floor area. For the purposes of this analysis, it is assumed that only Buildings 3 and 4 (see Figure 3-1), totaling approximately 2,042,880 square feet in floor area, would be constructed.

This alternative would be consistent with the objectives of the proposed project. As with the proposed project, it would contribute to increased City revenue potential, though at a lower level. Employment opportunities also would be created, again at a lower level than under the proposed project. As with the proposed project, utilities provided by the City would need to be extended to the project site, but this extension would not have significant environmental impacts since utilities are available in the vicinity.

The environmental impacts of the proposed project would be lessened by this alternative. Air pollutant and GHG emissions from both mobile and area emissions would be reduced, although a CalEEMod run indicates that ROG emissions would remain above their SJVAPCD significance threshold. The alternative would also reduce the amount of traffic that would be generated, along with attendant air quality and noise impacts. With the reduced development, a lower quantity of hazardous materials would be used. Effects on biological resources, cultural resources, soils, hydrology, and construction noise would be the same as the proposed project, and mitigation would likely be required to reduce some of these impacts.

As noted, this alternative would lead to reduced employment opportunities and revenues for the City from those available under the proposed project. Since less floor area would be developed, potentially more land would be left available for existing uses such as agriculture, although the existing walnut orchard would likely be removed. Agricultural activities, as discussed under the No Project Alternative, could involve the use of agricultural chemicals that could contaminate the project site and nearby North Littlejohns Creek if not properly used. Also, agricultural activities could generate dust emissions to which nearby sensitive receptors could be exposed, and potential conflicts could occur between farm equipment and vehicle traffic.

In summary, this alternative would reduce most of the environmental impacts of the proposed project, and it would generally meet project objectives. However, it could have more adverse impacts on specific environmental issues, mainly related to potential agricultural use, plus it would not meet project objectives to the extent the proposed project would.

19.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As the No Project Alternative would eliminate or avoid all potential environmental effects associated with the proposed project, it would be considered the environmentally superior alternative. However, this alternative would meet none of the project objectives, while it could generate adverse environmental impacts of its own.

CEQA Guidelines Section 15126.6(e)(2) requires that, if a No Project Alternative is identified as the environmentally superior alternative, then an EIR shall identify an environmentally superior alternative from the other alternatives. Most of the other alternatives analyzed in this EIR would involve environmental effects similar to the proposed project. The Reduced Project Site Development Alternative would involve some reduced impacts in certain issue areas, while also meeting the objectives of the proposed project. Therefore, the Reduced Project Site Development Alternative would be considered the environmentally superior alternative after the No Project Alternative.

20.0 OTHER CEQA ISSUES

20.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

CEQA Guidelines Section 15126.2(b) states that an EIR shall discuss significant environmental effects that cannot be avoided if a proposed project is implemented. This includes significant impacts that can be mitigated but not reduce to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, the implications of these impacts, and the reasons why the project is being proposed notwithstanding their effects, should be described.

Table 2-1 of this EIR identifies all the potentially significant environmental effects of the project and the mitigation measures to address these effects. In most cases, the potentially significant impacts of the project can be reduced to levels that are less than significant with identified mitigation measures. However, there were five impacts identified that were considered significant and unavoidable, even when mitigation measures were implemented:

- The project would convert approximately 106 acres of Farmland of Statewide Importance. Although the project would participate in the City's Agricultural Lands Mitigation Program and the SJMSCP, conversion of this farmland cannot be avoided.

- The project would generate NO_x emissions, a component of ozone, at a level above the significance threshold established for this pollutant by the SJVAPCD in. Although the project would implement Additional Air Quality Improvement Measures specified in Appendix B, along with SJVAPCD rules, it cannot be stated with certainty that this impact would be reduced to a level that would be less than significant.

- The project would generate NO_x emissions, a component of ozone, in the vicinity of a Disadvantaged Unincorporated Community. Although the project would implement Additional Air Quality Improvement Measures specified in Appendix B, it cannot be stated with certainty that this impact would be reduced to a level that would be less than significant.

- Project construction emissions that would generate GHGs. Although mitigation to reduce these emissions has been identified, these measures cannot be precisely quantified, and no quantified thresholds applicable to GHG construction emissions are available. Therefore, it cannot be stated with certainty that GHG emissions would be reduced to a level that is considered less than significant.

- Project development would lead to an increase of VMT in the vicinity, inconsistent with the objectives of CEQA Guidelines Section 15064.3(b). Although mitigation measures were identified that could reduce VMT, it cannot be stated that the reduction would be consistent with the recommended standard in the Stockton General Plan 2040.

20.2 IRREVERSIBLE ENVIRONMENTAL COMMITMENTS

CEQA Guidelines Section 15126.2(c) states that an EIR shall discuss significant irreversible environmental changes which would be involved if a proposed project is implemented. CEQA Guidelines Section 15126.2(c) states, in part:

> "Uses of nonrenewable resources during the initial and continued phases of the 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 improvement which provides 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 commitments of resources should be evaluated to assure that such current consumption is justified."

The project would involve the irreversible commitment of materials to the construction of buildings, parking spaces, and supporting infrastructure. Construction materials would involve sand and gravel, concrete, asphalt, plastics, and metals, as well as renewable resources such as wood. These materials would not be used in highly significant or unusual quantities when compared to similar projects and would be obtained from existing commercial sources. Some of these materials could be recycled if some or all the project facilities were demolished in the future. Under Section 8.28.060 of the Stockton Municipal Code, permit applicants are required to meet the waste diversion requirement of at least 50 percent of waste materials generated as discards by a construction, demolition, or renovation project, regardless of whether the permit applicant performs the work or hires contractors, subcontractors, or others to perform the work.

Project site development would involve an irreversible loss of agricultural land to urban development, which is documented in detail in Chapter 5.0, Agricultural Resources. As documented in Chapter 5.0, potential agricultural land losses associated with urban development have been recognized in prior City General Plans, most recently in the Stockton General Plan 2040 adopted by the City in December 2018 and its certified GPEIR.

Project site development would also involve an essentially irreversible loss of open space and the potential aesthetic and biological resource values associated with it. As discussed in Chapter 7.0, Biological Resources, the project may fill in a ditch and seasonal wetlands, the latter containing potential habitat for vernal pool fairy shrimp. However, mitigation measures, including participation in the SJMSCP, would minimize potential impacts.

An essentially irreversible reduction in groundwater recharge area and increase in runoff during rainfall events would occur as a consequence of project site development. However, groundwater recharge losses are not considered significant; potential increases in runoff would be minimized by storm water treatment and detention requirements, thereby mitigating impacts of runoff increases to a level that would be less than significant, as documented in Chapter 12.0, Hydrology and Water Quality.

There are no other changes associated with the project, or with resources impacted by the project, that are irreversible, other than the use of energy during project construction and operations. Energy use is discussed in Chapter 17.0, Utilities and Energy, where it was determined that the project would not consume energy in a wasteful, inefficient, or unnecessary manner.

20.3 GROWTH-INDUCING IMPACTS

CEQA Guidelines Section 15126.2(d) requires an EIR to discuss the potential growth-inducing impacts of a project or program. "Growth-inducing impacts" are ways in which a proposed project could foster economic or population growth or the construction of additional housing in the surrounding environment, either directly or indirectly. CEQA Guidelines Section 15126.2(d) further notes that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Growth can be induced in a variety of ways. New development can create demands for other types of development. For example, new industrial development which provides substantial numbers of jobs may attract new residents to an area, creating a demand for more housing. The same project in an area with an abundant labor supply may have no growth-inducing effect at all. In a more general sense, new urban development in rural areas may induce growth by providing both a catalyst for a change in land use and economic incentives for conversion of nearby agricultural lands.

Growth also may be induced through the removal of development obstacles. For example, the provision of new utilities or other infrastructure in an undeveloped area may induce growth in that area. Construction of new or larger domestic water systems in areas with no water infrastructure may facilitate development of such areas. Expansion of electrical systems can have similar effects. In some cases, new infrastructure may not have a distinguishable growth-inducing effect, such as new facilities in areas that are already developed.

Chapter 13.0, Land Use, analyzed the potential effects of the project on population and housing, and the conclusion reached was that project impacts would be less than significant. The project is unlikely to induce population growth because employees would be drawn mainly from the existing population in the Stockton area and San Joaquin County.

As described in Chapter 17.0, Utilities and Energy, infrastructure designed to accommodate the project either already exists in proximity to the project site or would be extended there as part of project approval. No major utility lines would need to be

extended to the project site, and utility improvements associated with the project would not extend urban utility service to substantial areas of undeveloped land. Much of the area near the project site is developed or approved for industrial and logistical development, and proposed development would be consistent with the land use designations under the Stockton General Plan. The extent of this existing and approved development is illustrated on Figure 1-6. In view of the relevant factors discussed above, the project would not have a significant growth-inducing impact.

20.4 ENVIRONMENTAL JUSTICE

Environmental justice is not an issue that CEQA explicitly requires to be addressed; however, the State of California has recently emphasized the incorporation of environmental justice concerns in land use and environmental planning. State law defines "environmental justice" as "the fair treatment of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." Low-income residents, communities of color, tribal nations, and immigrant communities have historically experienced disproportionate environmental burdens and related health problems. This inequity has resulted from many factors, including inappropriate zoning and incomplete land use planning, which has led to development patterns that concentrate pollution emissions and environmental hazards in communities that have not had the political power to protect themselves.

During the processing and environmental review of the nearby Sanchez-Hoggan project, the City received comments related to the project's air quality and GHG impacts. One of these comments, from the California Department of Justice, asserted that the EIR failed to account for project impacts on nearby sensitive populations. These populations included those in "disadvantaged communities" (see below) identified for this project that experience greater pollution burdens than other communities. The Department of Justice recommended several measures, described as best practices and potential mitigation for siting and designing warehouse facilities, to minimize both construction and operational air quality and GHG emission impacts of the Sanchez-Hoggan project. These measures were incorporated into the Sanchez-Hoggan project. The City and the Mariposa Industrial Park project applicants have agreed that the project will be required to implement these same measures, which are shown in Appendix B.

Relevant State Laws and Local Plans

SB 535 – Disadvantaged Communities

In 2012, the Legislature passed SB 535, directing that 25 percent of the proceeds from the Greenhouse Gas Reduction Fund go to projects that provide a benefit to disadvantaged communities. To assist in identifying a disadvantaged community for the purposes of SB 535, the California Office of Environmental Health Hazard Assessment has developed the California Communities Environmental Health Screening Tool (CalEnviroScreen). CalEnviroScreen measures pollution and population characteristics using 20 indicators

such as air quality, drinking water quality, waste sites, toxic emissions, asthma rates, and poverty. It applies a formula based on these indicators to each U.S. Census tract in California to generate a score that rates the level of cumulative environmental impacts on each area. A census tract with a higher score is one that experiences higher pollution burdens and vulnerability than one with a lower score. A census tract that scores in the top 25% under the CalEnviroScreen formula is considered a disadvantaged community.

The project site is located within Census Tract 6077003700 (Figure 20-1 and Table 20-1). Census Tract 6077003700 has an overall CalEnviroScreen score that places it in the top 5 percentile; therefore, it is considered a disadvantaged community. This census tract, with a population that is 63% Hispanic, has high scores in drinking water, $PM_{2.5}$, pesticides, hazardous waste, and solid waste. It also has high scores in unemployment, education, poverty, and linguistic isolation (OEHHA 2020). As such, project impacts on the physical environment that could affect the health and well-being of the residents of this disadvantaged community, particularly one with a high pollution burden score such as this one, could be considered potentially significant.

As noted in Chapter 13.0, Land Use, the project site is also within an identified DUC – the Mariposa Road Community (see Figure 13-3). The DUC is defined by different legislation (SB 244) and addresses potential annexations rather than environmental concerns. As such, the DUC designation is unrelated to the SB 535 designation, although both typically are applied to lower-income communities.

SB 1000 – Environmental Justice and General Plans

SB 1000, signed into law in 2016, requires cities and counties to adopt an Environmental Justice element or to integrate environmental justice goals, objectives, and policies into other elements of their General Plans. The Environmental Justice Element or integrated environmental justice policies must reduce the unique or compounded health risks in disadvantaged communities by addressing at minimum the following topics: Pollution Exposure and Air Quality, Public Facilities, Food Access, Safe and Sanitary Homes, Physical Activity, Civil or Community Engagement, and Improvements and Programs That Address the Needs of Disadvantaged Communities.

Some of these topics are not directly connected to potential impacts on the physical environment, which is what CEQA evaluates. However, other topics directly affect environmental issues. Environmental justice topics relevant to CEQA analysis and the project's environmental impacts relevant to these issues are discussed later in this section.

City of Stockton General Plan

As noted above, SB 1000 requires the incorporation of an Environmental Justice Element or integrated environmental justice policies within a General Plan. The Stockton General Plan 2040 complies with this requirement by incorporating policies and actions related to environmental justice into several elements of the General Plan, rather than by preparing a separate element. Appendix A of the Stockton General Plan 2040 provides a list of policies and actions relevant to environmental justice, which include the following:

Land Use Element

- Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
- Policy LU-6.3: Ensure that all neighborhoods have access to well-maintained public facilities and utilities that meet community service needs.

Community Health Element

- Policy CH-2.1: Prioritize maintenance of streets and improvement of sidewalks, parks, and other infrastructure in areas of the city that historically have been comparatively underserved by public facilities, including implementation of complete streets where needed, especially in conjunction with infrastructure maintenance and improvement projects.
- Policy CH-2.2: Stimulate investment through partnerships with private property owners, neighborhood groups, health and housing advocates, non-governmental organizations, and other community supporters.
- Policy CH-2.3: Focus on reducing the unique and compounded environmental impacts and risks in disadvantaged communities.
- Policy CH-3.2: Encourage neighborhood-serving commercial uses in areas where frequently needed goods and services are not widely available, especially for those areas with no availability within a 2-mile radius.
- Policy CH-4.2: Support homeless members of the Stockton community with programs to improve quality of life.

Analysis and Conclusions

Stockton General Plan Policy CH-2.3 focuses on reducing the unique and compounded environmental impacts and risks in disadvantaged communities. Project impacts related to environmental burdens on the disadvantaged community are described below.

- Air pollutant and diesel particulate matter emissions generated by the project could adversely affect nearby residents. However, as described in Chapter 6.0, Air Quality, an HRA conducted for the project concluded that potential carcinogenic risks for nearby sensitive receptors, mainly residences, would not exceed the SJVAPCD significance threshold for such risk. Also, project features, implementation of Additional Air Quality Improvement Measures (see Appendix B), and compliance with SJVAPCD rules and regulations would reduce air pollutant emissions to levels below SJVAPCD significance thresholds, thereby reducing health risks from such emissions. However, the California Department of Justice has expressed concern about emissions from warehouse projects that are close to disadvantaged communities. These concerns and proposed actions to address these concerns are described later in this section.

- Another project impact that could adversely affect well-being in the community is increased noise from project operations. As discussed in Chapter 14.0, Noise, project impacts would be less than significant with implementation of mitigation measures.

- Pesticide exposure was identified as a significant environmental burden on the community. The project would eliminate one potential source of pesticide use, as existing agricultural land on the project site would be converted to urban use. This also would likely reduce pesticide impacts on groundwater in the area.

- Hazardous material issues were analyzed in Chapter 11.0, Hazards and Hazardous Materials. The analysis concluded that potential hazardous material impacts would be less than significant with compliance with applicable federal, state, and local regulations.

- The project proposes to collect stormwater runoff into a detention basin, from which runoff would eventually be discharged into North Littlejohns Creek (see Chapter 12.0, Hydrology and Water Quality). This would reduce potential contamination of aquifers in the area and minimize impacts on drinking water.

- Solid waste would be collected by the franchise haulers for the area of southeast Stockton (see Chapter 17.0, Utilities and Energy). Because of this, the project would not contribute to solid waste issues in the disadvantaged community. Moreover, with project development, there would be fewer open spaces for potential illegal dumping.

SB 1000 Analysis

As noted above, SB 1000 recommends the integration of a minimum of seven environmental justice topics in land use planning. Some of these topics are not directly connected to potential impacts on the physical environment, which is what CEQA evaluates. However, other topics directly affect environmental issues. Table 20-1 lists the SB 1000 environmental justice topics potentially relevant to CEQA analysis and the project's environmental impacts on these issues. The project would be consistent with Policy CH-2.3 and other policies and actions related to environmental justice; therefore, impacts would be less than significant.

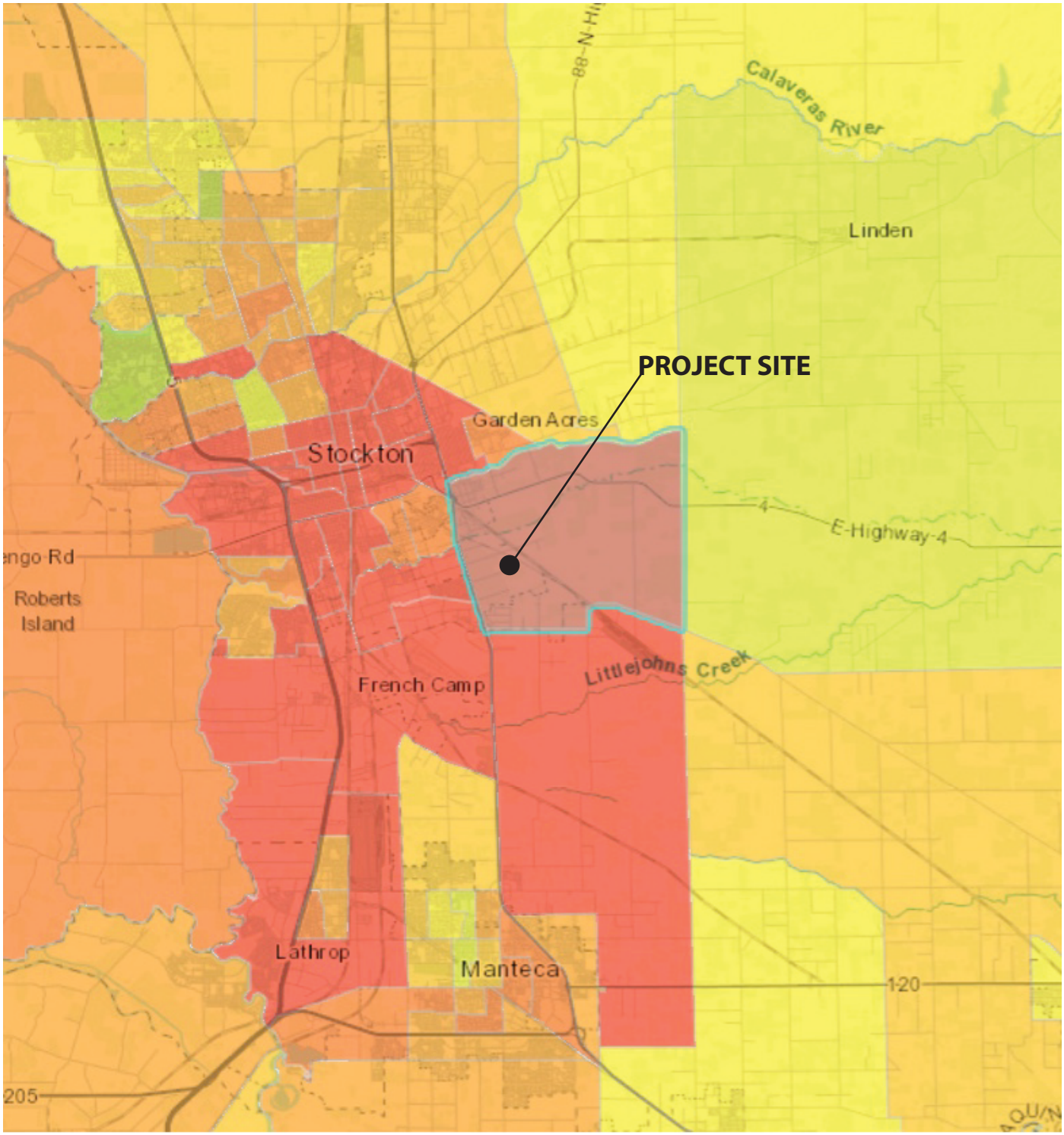
Additional Air Quality Improvement Measures

This EIR includes detailed analyses of the project's air quality and GHG emission impacts in Chapters 6.0 and 10.0, respectively. These analyses found that the project would have no significant impacts with the required application of SJVAPCD rules and mitigation measures. Nevertheless, because the project site is within an identified disadvantaged community, and reflecting on environmental justice concerns expressed by the California Department of Justice, the City and project applicant have agreed to implement the Additional Air Quality Improvement Measures shown in Appendix B. These measures include several of the measures recommended by the Department of

Justice in its comments on the nearby Sanchez-Hoggan AnnexationThese measures are identified in Appendix B. For those measures that were not incorporated within the project, Table 20-1 provides a brief explanation.

TABLE 20-1
SB 1000 TOPICS AND PROJECT IMPACTS

SB 1000 Topic	**Project Impacts**
Pollution Exposure and Air Quality	The project would generate air pollutant emissions that are below SJVAPCD significance thresholds designed to assist in achieving federal and state air quality standards. The project would connect to the City's water system and would have its own detention basins for runoff, so water pollution is not an issue. The project would not generate potentially toxic chemical emissions nor discharge any substantial toxic substances to which nearby residents would be exposed (Chapter 5.0, Air Quality; Chapter 10.0, Hazards; Chapter 11.0, Hydrology; Chapter 16.0, Utilities).
Public Facilities	The project would be connected to the City's water and wastewater systems. It would not be located next to any undesirable land uses such as landfills or waste collection facilities. Project would improve the adjacent segment of Mariposa Road with sidewalks (Chapter 14.0, Public Services; Chapter 15.0, Transportation; Chapter 16.0, Utilities).
Food Access	No project environmental impacts relevant to this issue.
Safe and Sanitary Homes	Housing units in the vicinity would not be exposed to substantial pollutant emissions, contaminated or toxic discharges, or loud noise (Chapter 6.0, Air Quality; Chapter 11.0, Hazards; Chapter 14.0, Noise).
Physical Activity	There are no project environmental impacts relevant to this issue.
Civil or Community Engagement	There are no project environmental impacts relevant to this issue.
Improvements and Programs That Address the Needs of Disadvantaged Communities	There are no project environmental impacts relevant to this issue.



SOURCE: Cal Enviro Screen 2021

Figure 20-1
CAL ENVIRO SCREEN RESULTS

Table 20-1
CALENVIROSCREEN INDICATOR SCORES
CENSUS TRACT 6077003700
Population 3,099

Note: The results for each indicator range from 0-100 and represent the percentile ranking of census tract 6077003700 relative to other census tracts.

Overall Percentiles	
CalEnviroScreen 4.0 Percentile	96
Pollution Burden Percentile	95
Population Characteristics Percentile	85
Exposures	
Ozone	51
Particulate Matter 2.5	53
Diesel Particulate Matter	41
Toxic Releases	56
Traffic	29
Pesticides	91
Drinking Water	100
Lead from Housing	73
Environmental Effects	
Cleanup Sites	55
Groundwater Threats	58
Hazardous Waste	85
Impaired Waters	45
Solid Waste	80
Sensitive Populations	
Asthma	64
Low Birth Weight	50
Cardiovascular Disease	92
Socioeconomic Factors	
Education	94
Linguistic Isolation	87
Poverty	76
Unemployment	88
Housing Burden	57

21.0 SOURCES

21.1 REFERENCES CITED

Association of Environmental Professionals – American Planning Association (AEP-APA). 2015. Application for Leave to File Amicus Curiae Brief in Support of Friant Ranch, L.P. Filed with California Supreme Court May 12, 2015.

Becerra, Xavier. Attorney General. California Department of Justice. Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act. Undated.

Brown and Caldwell. 2016. Draft 2015 Urban Water Management Plan. Prepared for City of Stockton. May 2016.

Bryant, William A. and Earl W. Hart. 2007. Fault-Rupture Hazard Zones in California: Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps. Department of Conservation, California Geological Survey Special Publication 42. Interim Revision 2007.

California Air Pollution Control Officers Association (CAPCOA). 2009. Model Policies for Greenhouse Gases in General Plans: A Resource for Local Government to Incorporate General Plan Policies to Reduce Greenhouse Gas Emissions. June 2009.

California Air Resources Board (ARB). 2001. Ozone Transport: 2001 Review. April 2001.

_____. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April 2005.

_____. 2008a. 2008 California Toxic Inventory.

_____. 2008b. Climate Change Scoping Plan: A Framework for Change. December 2008.

_____. 2013. The California Almanac of Emissions and Air Quality. 2013 Edition.

_____. 2014. First Update to the Climate Change Scoping Plan: Building on the Framework. May 2014.

_____. 2016. Ambient Air Quality Standards. June 4, 2016.

_____. 2017. California's 2017 Climate Change Scoping Plan. November 2017.

_____. 2020a. CEPAM: 2016 SIP - Standard Emission Tool, Emission Projections by Summary Category. Available online at https://www.arb.ca.gov/app/emsinv/fcemssumcat/cepam_emssumcat_query_v5.php. Accessed December 22, 2020.

_____. 2020b. California Greenhouse Gas Emissions for 2000 to 2018.

California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program (FMMP). 2016. The California Land Conservation Act of 1965 2016 Status Report. December 2016.

_____. 2018a. San Joaquin County 1990-2018 Land Use Summary.

_____. 2018b. San Joaquin County Important Farmland 2018 (map).

California Department of Conservation, Division of Mines and Geology (DMG). 1977. Mineral Land Classification Study of the Stanislaus River Area, San Joaquin and Stanislaus Counties, California. DMG Open File Report 77-16.

_____. 1988. Mineral Land Classification of Portland Cement Concrete Aggregate in the Stockton-Lodi Production-Consumption Region. Special Report 160.

California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR). 2001. Oil, Gas, and Geothermal Fields in California 2001. Map S-1.

California Department of Education. 2020. DataQuest – 2019-20 Enrollment by Ethnicity and Grade, Stockton Unified Report. Available online at https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthGrd.aspx?cds=3968676&agglevel=district&year=2019-20. Accessed August 12, 2020.

California Department of Finance. 2020. Report E-5, Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2020, with 2010 Benchmark. Released May 1, 2020.

California Department of Forestry and Fire Protection (Cal Fire). 2007a. Draft Fire Hazard Severity Zones in LRA, San Joaquin County (map). October 2, 2007.

_____. 2007b. Draft Fire Hazard Severity Zones in SRA, San Joaquin County (map). Adopted on November 7, 2007.

California Department of Resources Recovery and Recycling (CalRecycle). 2016. Facility/Site Summary Details, San Joaquin County. Available online at http://www.calrecycle.ca.gov/SWFacilities/Directory/Detail/. Accessed August 6, 2017.

_____. 2019a. Jurisdiction Disposal by Facility – Disposal during 2017 for Stockton. Available online at https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility. Date generated February 20, 2019.

_____. 2019b. SWIS Facility Detail. Available online at https://www2.calrecycle.ca.gov/swfacilities/Directory/39-AA-0022/. Accessed August 7, 2019.

_____. 2019c. Solid Waste Generation Rates. Available online at https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates#Industrial. Accessed August 7, 2019.

California Department of Toxic Substances Control (DTSC). 2008. Interim Guidance for Sampling Agricultural Properties (Third Revision). August 7, 2008.

_____. 2020a. EnviroStor database, www.envirostor.dtsc.ca.gov. Accessed July 24, 2020.

_____. 2020b. Reassessment Prepared for the US EPA under Cooperative Agreement with California Department of Toxic Substances Control: Amador Chemical Corporation. June 1, 2020.

California Department of Transportation (Caltrans). 2013. Transportation and Construction Vibration Guidance Manual. September 2013.

_____. 2017. Designated and Eligible California Scenic Highways. Available online at www.dot.ca.gov/design/lap/livability/scenic-highways/index.html. March 2017.

California Employment Development Department (EDD). 2020a. Historical Civilian Labor Force, Stockton-Lodi MSA (San Joaquin County). March 2019 Benchmark. July 17, 2020.

_____. 2020b. Report 400 C - Monthly Labor Force Data for Counties, Annual Average 2019 – Revised. March 13, 2020.

California Energy Commission (CEC). 2012. 2013 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. May 2012.

_____. 2018a. 2017 Integrated Energy Policy Report. CEC-100-2017-001-C. February 2018.

_____. 2018b. Electricity Consumption by County – San Joaquin County. Available online at ecdms.energy.ca.gov/elecbycounty.aspx. Accessed July 26, 2018.

_____. 2018c. Gas Consumption by County – San Joaquin County. Available online at ecdms.energy.ca.gov/gasbycounty.aspx. Accessed July 26, 2018.

California Environmental Protection Agency (CalEPA). 2021a. Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit. Available online at http://www.calepa.ca.gov/SiteCleanup/CorteseList/CurrentList.pdf. Accessed January 14, 2021.

_____. 2021b. List of "Active" CDO and CAO from Water Board. Available online at http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm. Accessed January 14, 2021.

California Geological Survey (CGS). 2017. CGS Information Warehouse: Regulatory Maps. Available online at http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps. Accessed July 29, 2017.

California Office of Environmental Health Hazard Assessment (OEHHA). 2020. CalEnviroScreen 3.0. Available online at oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. Accessed August 4, 2020.

California Office of Historic Preservation. 1990. Archaeological Resource Management Reports (ARMR): Recommended Contents and Format. February 1990.

California Office of Noise Control. 1976. Guidelines for the Preparation and Content of Noise Elements of the General Plan. February 1976.

City of Stockton. 2004. Stockton Citywide Design Guidelines. Approved by City Council Resolution 04-0213, March 30, 2004.

_____. 2014. City of Stockton Climate Action Plan. Prepared by ICF International. Adopted December 2014.

_____. 2016. Stockton 2040 General Plan Update Existing Conditions Technical Memorandum: Cultural Resources. June 28, 2016.

_____. 2018a. Envision Stockton 2040 General Plan. Adopted December 2018.

_____. 2018b. Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR. Prepared by PlaceWorks. June 2018.

_____. 2020a. Public Review Draft Environmental Impact Report for the Sanchez-Hoggan Annexation, Stockton, CA. Prepared by BaseCamp Environmental, Inc. March 6, 2020.

_____. 2020b. City of Stockton Sphere of Influence Plan/Municipal Service Review. Submitted by City of Stockton and PlaceWorks. April 23, 2020.

Coffman Associates, Inc. 2016. Airport Land Use Compatibility Plan Update for Stockton Metropolitan Airport. May 2016.

Cornerstone Earth Group. 2020a. Phase I Environmental Site Assessment, Mariposa Road Properties, APNs 179-22-010, 179-22-011, 179-22-012, 179-22-013, 179-22-016, and 179-22-017, Stockton, California. September 2, 2020.

_____. 2020b. Phase II Soil Quality Evaluation, Mariposa Road Properties, APNs 179-22-010, 179-22-011, 179-22-012, 179-22-013, 179-22-016, and 179-22-017, Stockton, California. December 18, 2020.

DMJM+Harris and Burlington Northern Santa Fe (BNSF). 2001. Stockton Intermodal Facility at Stockton, California. Presented at AREMA 2001.

Eastern San Joaquin Groundwater Authority (ESJGA). 2019. Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan. November 2019.

EDAW/AECOM. 2007. Draft Environmental Impact Report, Mariposa Lakes Specific Plan. Volume 1: DEIR Text. Prepared for City of Stockton. March 2007.

Egan, M. David. 1988. Architectural Acoustics. McGraw Hill, New York.

Environmental Permitting Specialists. 2021. Draft Analysis of Public Health Risks at a Proposed Industrial Development, Stockton, California. April 23, 2021.

Environmental Science Associates (ESA). 2014. Norcal Logistics Center Draft Environmental Impact Report. Prepared for City of Stockton Community Development Department. September 2014.

Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map #06077C0490F, San Joaquin County, California. Effective date October 16, 2009.

Federal Highway Administration (FHWA). 2006. Roadway Construction Noise Model User's Guide. FHWA-HEP-05-054. January 2006.

Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. FTA-VA-90-1003-06. May 2006.

Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018.

Harris, Cyril M. 1991. Handbook of Acoustical Measurements and Noise Control. McGraw-Hill, Inc., New York.

J.C. Brennan and Associates. 2021. Mariposa Industrial Environmental Noise Assessment, City of Stockton, California. April 6, 2021.

KD Anderson and Associates. 2021. Traffic Impact Study for the Mariposa Industrial Park Project**,** Stockton, California. April 12, 2021.

Kier and Wright. 2020. Due Diligence Report, Mariposa Industrial Park, Stockton, CA. October 16, 2020.

Kilcarr, Sean. 2001. BNSF Opens New Intermodal Facility in California. On Fleet Owner website, https://www.fleetowner.com/news/fleet_bnsf_opens_new. Posted May 14, 2001.

Lund, Jay, Ellen Hanak, William Fleenor, Richard Howitt, Jeffrey Mount, and Peter Moyle. 2007. Envisioning Futures for the Sacramento-San Joaquin Delta. Public Policy Institute of California.

Moore Biological Consultants. 2020. Dark Horse, San Joaquin County, California: Preliminary Wetlands and Special-Status Species Review. September 28, 2020.

_____. 2021. Mariposa Industrial Park, San Joaquin County, California: Biological Assessment. April 22, 2021.

National Oceanic and Atmospheric Administration (NOAA). 2019. Monthly Average Mauna Loa CO_2. Data collected by Earth System Research Laboratory, Global Monitoring Division. Available online at https://www.esrl.noaa.gov/gmd/ccgg/trends/. Accessed July 25, 2019.

Northeastern San Joaquin County Groundwater Banking Authority (NSJGBA). 2004. Eastern San Joaquin Groundwater Basin Groundwater Management Plan. September 2004.

Regional Water Quality Control Board (RWQCB). 1986. San Joaquin Hydrologic Basin Planning Area (map). Revised August 1986.

_____. 2014. California 303(d) list of Water Quality Limited Segments. Available online at http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list/index.shtml.

_____. 2015. The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region: The Sacramento River Basin and the San Joaquin River Basin. Fourth Edition, Revised June 2015 (with Approved Amendments).

Sacramento Area Council of Governments/San Joaquin Council of Governments (SACOG/SJCOG). 2013. Interregional Truck Operations On I-5 and SR 99 and STAA Routes Improvement Study. Prepared by The Tioga Group, Inc. Draft Revised – April 2013.

San Joaquin Council of Governments. (SJCOG). 2000. San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP). November 14, 2000.

_____. 2018a. 2018 Regional Transportation Plan/Sustainable Communities Strategy. Adopted June 2018.

_____. 2018b. 2018 Regional Transportation Plan/Sustainable Communities Strategy Draft Programmatic Environmental Impact Report. March 2018.

_____. 2018c. San Joaquin County Regional Congestion Management Program, 2018 Update. Adopted April 2018.

_____. 2019. Unmet Transit Needs Assessment, Fiscal Year 19/20. Adopted May 28, 2019.

San Joaquin County. 2016a. San Joaquin County General Plan Policy Document. Prepared by Mintier Harnish. December 2016.

_____. 2016b. San Joaquin County General Plan Background Report. Prepared by Mintier Harnish. December 2016.

San Joaquin County Agricultural Commissioner's Office. 2020. 2019 San Joaquin County Crop Report.

San Joaquin County Flood Control and Water Conservation District. 2018. Groundwater Report, Spring 2018.

San Joaquin County Office of Emergency Services (OES). 2019a. San Joaquin County Emergency Operations Plan. Adopted April 23, 2019.

_____. 2019b. Flood and Dam Failure Hazard Annex. March 2019.

_____. Undated. What to Do in a Flood: South East Stockton Evacuation Zone (brochure).

San Joaquin Local Agency Formation Commission (San Joaquin LAFCo). 2011. Municipal Service Review, Rural Fire Protection Districts, San Joaquin County (draft). May 20, 2011.

_____. 2012. Change of Organization Policies and Procedures (Including Annexations and Reorganizations). Adopted September 21, 2007; last amended December 14, 2012.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015a. Guide for Assessing and Mitigating Air Quality Impacts. Adopted March 19, 2015.

_____. 2015b. Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. Filed with California Supreme Court April 13, 2015.

_____. 2018. 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards. November 15, 2018.

_____. 2020. Ambient Air Quality Standards and Valley Attainment Status. Available online at http://www.valleyair.org/aqinfo/attainment.htm. Accessed August 7, 2020.

Solano Archaeological Services. 2021. Cultural Resources Inventory and Evaluation Report, Mariposa Industrial Park Project, San Joaquin County, California. April 2021.

State Water Resources Control Board (SWRCB). 2020. GeoTracker website, www.geotracker.swrcb.ca.gov. Accessed July 24, 2020.

United Nations Intergovernmental Panel on Climate Change (IPCC). 2001. Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change.

_____. 2004. "16 Years of Scientific Assessment in Support of the Climate Convention." December 2004.

U.S. Department of Agriculture. 2019. 2017 Census of Agriculture. California, State and County Data, Volume 1 – Geographic Area Series, Part 5. Issued April 2019.

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2018. Custom Soil Resource Report for San Joaquin County, California. August 31, 2018. [Hoggan property]

_____. 2019. Custom Soil Resource Report for San Joaquin County, California. January 30, 2019. [Sanchez property]

U.S. Department of Agriculture, Soil Conservation Service (SCS). 1992. Soil Survey of San Joaquin County, California.

U.S. Energy Information Administration (EIA). 2012. 2012 Commercial Buildings Energy Consumption Survey. Available online at https://www.eia.gov/consumption/commercial/.

_____. 2020. California State Energy Profile. Last updated January 16, 2020.

U.S. Environmental Protection Agency (EPA). 2009. Endangerment and Cause of Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. Federal Register Vol. 74, No. 239, pp. 66496-66546. December 15, 2009.

_____. 2018a. Ground-Level Ozone Pollution: Health Effects of Ozone Pollution. Available on EPA website at https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution. Last updated on October 10, 2018.

_____. 2018b. Particulate Matter (PM) Pollution: Health and Environmental Effects of Particulate Matter (PM). Available on EPA website at https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm. Last updated on June 20, 2018.

Wagner, D. L., E. J. Bortugno, and R. D. McJunkin. 1991. Geologic Map of the San Francisco-San Jose Quadrangle, California, 1:250,000. California Division of Mines and Geology, Regional Geologic Map Series.

West Yost Associates. 2017a. Technical Memorandum: Stockton General Plan Update – Sewer Master Plan Supplement. December 13, 2017.

_____. 2017b. Technical Memorandum: Stockton General Plan Update – Stormwater Master Plan Supplement. December 6, 2017.

_____. 2017c. Technical Memorandum: Stockton General Plan Update – Potable Water Master Plans Supplement. December 12, 2017.

_____. 2021. Mariposa Industrial Park Project Water Supply Assessment. Prepared for City of Stockton. January 2021.

Westerling, Leroy, Josue Medellin-Azuara, Joshua Viers. 2018. San Joaquin Valley Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-003.

21.2 PERSONS CONSULTED

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21.3 EIR PREPARERS

This document was prepared by BaseCamp Environmental, Inc. of Lodi, with assistance from, and under the direction of, the City of Stockton, notably Planning Manager Matt Diaz. BaseCamp Environmental staff participating in document preparation included the following:

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Terry Farmer, AICP, Senior Environmental Planner

Krista Simpson, Research and Graphics

Rayanna Beck, Research and Document Production

APPENDIX A
NOTICE OF PREPARATION AND COMMENTS

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Mariposa Industrial Park Project

Lead Agency: City of Stockton Community Development Department | Contact Person: Nicole Moore

Mailing Address: 345 N El Dorado Street | Phone: 209-937-8195

City: Stockton | Zip: 95202 | County: San Joaquin

Project Location: County: San Joaquin | City/Nearest Community: Stockton

Cross Streets: Mariposa Road and Carpenter Road | Zip Code: 95215

Longitude/Latitude (degrees, minutes and seconds): 37 ° 55 ′ 31 ″ N / 121 ° 12 ′ 30 ″ W Total Acres: 206

Assessor's Parcel No.: Several | Section: 59, 69 | Twp.: 1N | Range: 7E | Base: Mt Diablo

Within 2 Miles: State Hwy #: 99 | Waterways: N Littlejohns Creek

Airports: Stockton Metropolitan | Railways: BNSF | Schools: Nightingale (SUSD)

Document Type:

CEQA: ☒ NOP ☐ Draft EIR | NEPA: ☐ NOI | Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR | ☐ EA | ☐ Final Document
☐ Neg Dec (Prior SCH No.) _____ | ☐ Draft EIS | ☐ Other: _____
☐ Mit Neg Dec Other: _____ | ☐ FONSI

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☒ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☒ Site Plan ☒ Land Division (Subdivision, etc.) ☐ Other: Design Review

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☒ Industrial: Sq.ft. 3.6 m Acres 206 Employees Unknown
☐ Educational: _____
☐ Recreational: _____
☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☐ Other: _____

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☐ Fiscal ☒ Recreation/Parks ☒ Vegetation
☒ Agricultural Land ☒ Flood Plain/Flooding ☒ Schools/Universities ☒ Water Quality
☒ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☒ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☒ Sewer Capacity ☒ Wetland/Riparian
☒ Biological Resources ☐ Minerals ☒ Soil Erosion/Compaction/Grading ☒ Growth Inducement
☐ Coastal Zone ☒ Noise ☒ Solid Waste ☒ Land Use
☒ Drainage/Absorption ☒ Population/Housing Balance ☒ Toxic/Hazardous ☐ Cumulative Effects
☐ Economic/Jobs ☒ Public Services/Facilities ☒ Traffic/Circulation ☐ Other: _____

Present Land Use/Zoning/General Plan Designation:

Existing use is vacant and agricultural; existing zoning is Agricultural; existing GP is Industrial

Project Description: *(please use a separate page if necessary)*

The project proposes annexation and industrial development of nine adjacent parcels adjacent to the City of Stockton and totaling 206 acres . Conceptual development plans involve seven "high-cube" warehouses with a total floor area of 3.6 million square feet together with circulation, parking, utility infrastructure, and access from Mariposa Road.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

X	Air Resources Board		Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency		Parks & Recreation, Department of
	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District # 10		Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB # 5
	Caltrans Planning		Resources Agency
X	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
X	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of		State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of		SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
X	Fish & Game Region # 2		Tahoe Regional Planning Agency
	Food & Agriculture, Department of		Toxic Substances Control, Department of
	Forestry and Fire Protection, Department of		Water Resources, Department of
	General Services, Department of		
	Health Services, Department of		Other:
	Housing & Community Development		Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date December 14, 2020 Ending Date January 13, 2021

Lead Agency (Complete if applicable):

Consulting Firm: _____ Applicant: _____
Address: _____ Address: _____
City/State/Zip: _____ City/State/Zip: _____
Contact: _____ Phone: _____
Phone: _____

Signature of Lead Agency Representative: _____ **Date:** _____

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

CITY OF STOCKTON
NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

DATE: December 14, 2020

TO: Responsible and Trustee Agencies, Organizations, and Interested Parties

FROM: City of Stockton, Community Development Department (Lead Agency)

SUBJECT: **PREPARATION OF ENVIRONMENTAL IMPACT REPORT, MARIPOSA INDUSTRIAL PARK**

PROJECT TITLE: Mariposa Industrial Park Project

CITY PROJECT FILE #: P20-0805

The City of Stockton intends to prepare an Environmental Impact Report (EIR) for the Mariposa Industrial Park Project (hereafter, the "Project") pursuant to Section 15021 of the California Environmental Quality Act (CEQA) Guidelines. Section 15082 of the CEQA Guidelines requires the City to prepare this Notice of Preparation (NOP) to provide to the Office of Planning and Research, responsible and trustee agencies, and other interested parties with sufficient information describing the Project and its potential environmental effects to enable the responsible agencies to make a meaningful response. The project description, location and the probable environmental effects are contained in the attached materials.

As specified by the CEQA Guidelines, the NOP will be circulated for a 30-day review period. The comment period runs from Monday, December 14, 2020, to Wednesday, January 13, 2021. The City welcomes your input during the review period. In the event the City has not received either a response or a well-justified request for additional time by a responsible agency by the end of the review period, the City may presume that the responsible agency has no response (CEQA Guidelines Section 15082[b][2]).

A virtual scoping meeting for this project will be held from 6:00 p.m. to 7:30 p.m. on Tuesday, January 5, 2021. You may attend the meeting by going to www.webex.com. The meeting number is 177 032 4196 and the password is pJPP3ppmM49. You may join by phone by dialing 1-415-655-0001, and using the meeting number for the access code.

If you have any questions regarding this matter or would like to submit comments on behalf of your agency/organization or as an individual, please submit your comments to the City's Project Manager at:

City of Stockton
Community Development Department
Attention: Nicole Moore
345 N. El Dorado Street
Stockton, CA 95202
209-937-8598 or Nicole.Moore@stocktonca.gov.

ATTACHMENT A

NOTICE OF PREPARATION FOR AN ENVIRONMENTAL IMPACT REPORT FOR THE MARIPOSA INDUSTRIAL PARK PROJECT

A.1 PROJECT LOCATION

The project site consists of 205.8 acres of undeveloped land located in the unincorporated area of San Joaquin County southeast of the City of Stockton, south of Mariposa Road and east of the termini of Clark Drive and Marfargoa Road. The site is approximately 1.3 miles southeast of SR 99 along Mariposa Road (Figures 1 through 5). The project site consists of nine parcels shown on the attached figures and listed in Table 1 below. Greenlaw Partners, LLC, the current owner of parcels 179-220-018 and 019, is the project applicant.

TABLE 1
PROPOSED ANNEXATION PARCELS

Parcels	Acres	Owner
179-220-010 179-220-011	12.46 7.46	KAHNCO, Inc. Ron Kahn 969 G Edgewater Boulevard, Suite 636 Foster City, California 94404
179-220-012 179-220-013	24.55 14.97	Investment Grade Loans, Inc. (servicing agent) Andy Lewis 475 S. San Antonio Road Los Altos, California 94022
179-220-016 179-220-017 179-220-024	19.52 14.97 0.50	E and F Financial Services, Inc. (representing 40+ owners) Bill Feldbrill 655 Mariners Island Boulevard, Suite 302 San Mateo, California 94404
179-220-018 179-220-019	65.73 43.31	Mariposa Road Owners, LLC c/o Greenlaw Partners, LLC 18301 Von Karman Avenue, Suite 250 Irvine, California 92660
Total Acres	205.77	

The San Joaquin County General Plan designates the site A/UR: Agriculture Urban Reserve. The existing County zoning of the site is AG-40: Agriculture, 40-acre-minimum parcel size. The project site is shown on the Stockton East 7.5-minute quadrangle map within Sections 59 and 69 of the Campo de los Franceses land grant subdivision in Township 1 North, Range 7 East, Mt. Diablo Baseline and Meridian. The approximate

latitude of the project site is 37° 55′ 13″ North, and the approximate longitude is 121° 12′ 39″ West.

A.2 EXISTING CONDITIONS

The project site is presently within the land use planning jurisdiction of San Joaquin County. North Littlejohns Creek forms the approximate southern boundary of the project site, and Mariposa Road forms the approximate northeastern boundary. The northern half of the project site is devoted to orchards, while the southern half is largely vacant except for two widely separated rural residences; historically, the southern portion of the site has been used for agricultural purposes. The land area west of the site along Marfargoa Road and Clark Drive is predominantly rural residential in nature; three other rural residences, not a part of the project site, are located along the eastern boundary of the site south of Mariposa Road. Land to the east is vacant and in agricultural use. Land to the south of the site is approved for industrial development.

The site is immediately southeast of the City of Stockton in an area that the City has designated for industrial development and that has been developing progressively for industrial purposes over time. The Norcal Logistics Center, immediately south of the project site, consists of an approved industrial subdivision of approximately 325-acres. The Norcal project is located between Arch Road and Mariposa Road within the City limits. More recently, the City approved the Sanchez-Hoggan Annexation Project, which consists of an approved industrial development of two properties totaling approximately 170 acres. The Hoggan property is across North Littlejohns Creek from and southwest of the project site.

A.3 PROJECT DESCRIPTION

The proposed project would modify the Stockton City boundary to include the proposed project parcels. In conjunction with annexation, the site would be prezoned to allow development of industrial uses. Under the proposed IL zoning designation (Title 16 of the Stockton Municipal Code) industrial development of up to 60 percent of the site area, with building heights reaching 60 feet, would be permitted.

The Conceptual Site Plan for the project proposes the construction of seven buildings totaling approximately 3.6 million square feet in floor area, along with parking areas and vehicular access and storm drainage detention areas. The project would include improvements along the Mariposa Road frontage, development of an internal access road and an emergency vehicle accessway along the perimeter of the site. One or more storm drainage detention ponds that would collect runoff from the developed area are proposed in the southern portion of the project site. A pump station would discharge collected storm flows to the adjacent North Littlejohns Creek. Industrial buildings would be connected to existing water and wastewater lines adjacent to the site.

Proposed industrial uses will require further discretionary approvals, including the following approvals from the City of Stockton:

- Annexation: The proposed annexation includes all nine parcels listed in Table 2-1 totaling approximately 205.8 acres. All the parcels are within the Stockton Sphere of Influence and have been designated as Industrial by the City's 2040 General Plan. Annexation of the site will also require the approval of the San Joaquin LAFCo.

- Prezone: The proposed prezone would apply City IL-Industrial, Limited zoning to all of the subject parcels, consistent with the proposed industrial use. The proposed IL zoning is an implementing zone of the existing general plan Industrial designation. Pre-zoning would become effective upon annexation of the site. The existing San Joaquin County zoning would expire upon removal of the site from County jurisdiction.

- Tentative Subdivision Map: The applicant has submitted a Tentative Subdivision Map (Figure 7) for City approval, which defines a total of nine lots that would accommodate proposed industrial buildings, street dedications and storm drainage detention basins.

- Site Plan Review/Design Review: The project proposes to develop the nine parcels with light industrial land uses. Project planning and engineering are in progress as illustrated in Figure 6, a Conceptual Site Plan. Potential industrial development would total approximately 3.7 million square feet. The specifics of the proposed development will be defined more precisely in a proposed Site Plan to be submitted for City site plan and design review approvals.

A.4 ISSUES TO BE ANALYZED IN THE EIR

The City of Stockton has determined that an Environmental Impact Report (EIR) will be prepared for the project. The EIR, which is in preparation, will consider the potential environmental effects of, mitigation measures and alternatives to the proposed industrial development. Concerns to be addressed in the EIR are summarized as follows:

Aesthetics and Visual Resources

The EIR will consider the size and architectural character of proposed structures and site improvements, their relationship to surrounding development and consistency with City of Stockton design standards, together with potential lighting impacts on surrounding land uses and night sky.

Agricultural Resources

Proposed industrial development will involve conversion of agricultural land to urban industrial use. The EIR will consider direct agricultural land conversion as a result of the

project as well as indirect effects on conversion of offsite agricultural lands. The analysis will occur in the context of the City's analysis of larger agricultural conversion issues in the certified 2018 Stockton General Plan EIR.

Air Quality

The EIR will quantify construction and operational air pollutant emissions associated with the project, their relationship to state and federal standards, exceedance of applicable emissions thresholds, carbon monoxide concentrations at nearby congested intersections, toxic air contaminants and odors. The EIR will report on a Health Risk Assessment of the project addressing potential air toxic emissions and potential heath effects on occupants of surrounding lands. The air quality analysis will also consider the context of the certified 2018 Stockton General Plan EIR.

Biological Resources

The EIR will include a Biological Assessment (BA) of the project identifying the existing biological resources of the project site and describing the potential impacts of proposed industrial development those resources. The BA will describe effects on habitat for special-status and migratory species, wetlands, riparian areas, stream channels, and other sensitive habitats as well as potential mitigations for these effects. The analysis will consider existing and proposed conservation easement protections along the creeks, as well as the mitigating effect of the project participating in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

Cultural Resources

The EIR will include the results of a cultural resources record search, survey of the project site, and cultural resources assessment of the project, including consideration of the potential impacts of proposed industrial development on known and as yet-undiscovered historical and/or archaeological resources. The EIR will also consider Tribal Cultural Resources, as discussed below.

Energy

The EIR will consider and discuss predicted energy consumption associated with the project, along with conservation measures associated with the siting and operation of the project generally and those that would be incorporated into proposed buildings. The EIR will identify the project potential, if any, for wasteful or inefficient use of energy.

Geology, Soils, and Mineral Resources

The EIR will describe the general geology of the project area, geotechnical and seismic hazards, soil quality and erosion potential, suitability of soil for development, potential project impact on accessibility of mineral resources, and potential effects on unique geological or paleontological resources.

Greenhouse Gas (GHG) Emissions

The EIR will quantify and identify the significance of construction and operational GHG emissions associated with the project and the project's consistency with applicable GHG management plans, including the Stockton Climate Action Plan.

Hazards and Hazardous Materials

The EIR will document the presence or absence of documented environmental contamination on and near the project site, including potential surface soil contamination from agricultural use. Use, storage, and transportation of hazardous materials associated with proposed industrial uses and potential for environmental contamination will be evaluated.

Hydrology and Water Quality

The EIR will describe the surface and groundwater hydrologic resources of the project site and vicinity, as well as exposure to 100-year and 200-year flooding hazards. Potential for project encroachment on North Littlejohns Creek and other direct effects to surface and groundwater resources will be described as will storm water volume and quality and conformance with adopted City of Stockton storm water quality protection and treatment standards.

Land Use, Population, and Housing

The EIR will analyze project consistency with the Stockton General Plan, zoning, and other applicable land use plans and ordinances, along with the potential direct and indirect impacts on population growth and housing needs. The EIR will discuss the project's relationship to the City's adopted Municipal Services Review (MSR), any required modifications to the MSR and any potential environmental effects that could result therefrom. The EIR will discuss potential effects on the adjacent unincorporated community and potential environmental justice concerns.

Noise

The EIR will describe the existing noise environment and the potential effects of project construction and operation on sensitive land uses adjacent to and near the project and access routes. The analysis will consider noise impacts associated with industrial development, impacts of increased traffic on roadway noise, and the effects of roadway noise increases on land uses along primary project traffic routes.

Public Services and Recreation

The EIR will describe existing public service providers and providers that would be responsible for public services upon annexation of the project site to the City of Stockton. The EIR will consider the need for new or expanded facilities required for agencies responsible for fire protection, police protection, schools, and parks and recreation, and

the potential impacts of addition of any new or expanded public facilities on the environment. Ongoing discussions between the Stockton Fire Department and the San Joaquin LAFCo regarding fire service response times will be discussed.

Transportation

The EIR will describe the location, nature, and operation of existing transportation systems serving the project site and vicinity. The EIR will quantify and consider the generation of traffic from new industrial uses, including the impacts on traffic flow on streets and intersections in the project vicinity and the vehicle miles traveled impacts of the project. The EIR will also evaluate consistency with applicable transportation plans and impacts on or related to alternative travel modes.

Tribal Cultural Resources

The EIR will document City compliance with the AB 52 tribal cultural resource requirements, including the AB 52 notification process, tribal requests for consultation, impacts on resources of potential importance to local tribes, and the results of the consultation process.

Utilities

The EIR will describe existing and planned utility systems serving the project site and surrounding development. The EIR will identify any necessary extension of water, wastewater, storm drainage, solid waste, and other utilities and the potential environmental impacts of those extensions.

Wildfire

The EIR will document existing or potential future exposure to wildfire hazards associated with the project.

Cumulative Impacts

The EIR will consider the potential cumulative impacts of the project in all of the above-listed resource areas, based primarily on the analysis of citywide environmental effects in the recently adopted Envision Stockton General Plan 2040 EIR.

Alternatives to the Proposed Project

The EIR will evaluate the comparative environmental effects of a reasonable range of alternatives to the proposed project, including the required No Project Alternative. The range of alternatives is to be determined.

Growth-Inducing Impacts

The EIR will consider the potential effects of the proposed industrial development on planned or potential urban development in the southeast Stockton area using the

"general plan projections method," relying on the City's recently adopted Envision Stockton 2040 General Plan and EIR.

Environmental Justice

The State has taken a more active role on environmental justice issues in land use and environmental planning. The EIR will discuss environmental justice as it applies to this project. It will identify any communities that may experience disproportionate adverse environmental impacts resulting from the project, including Disadvantaged

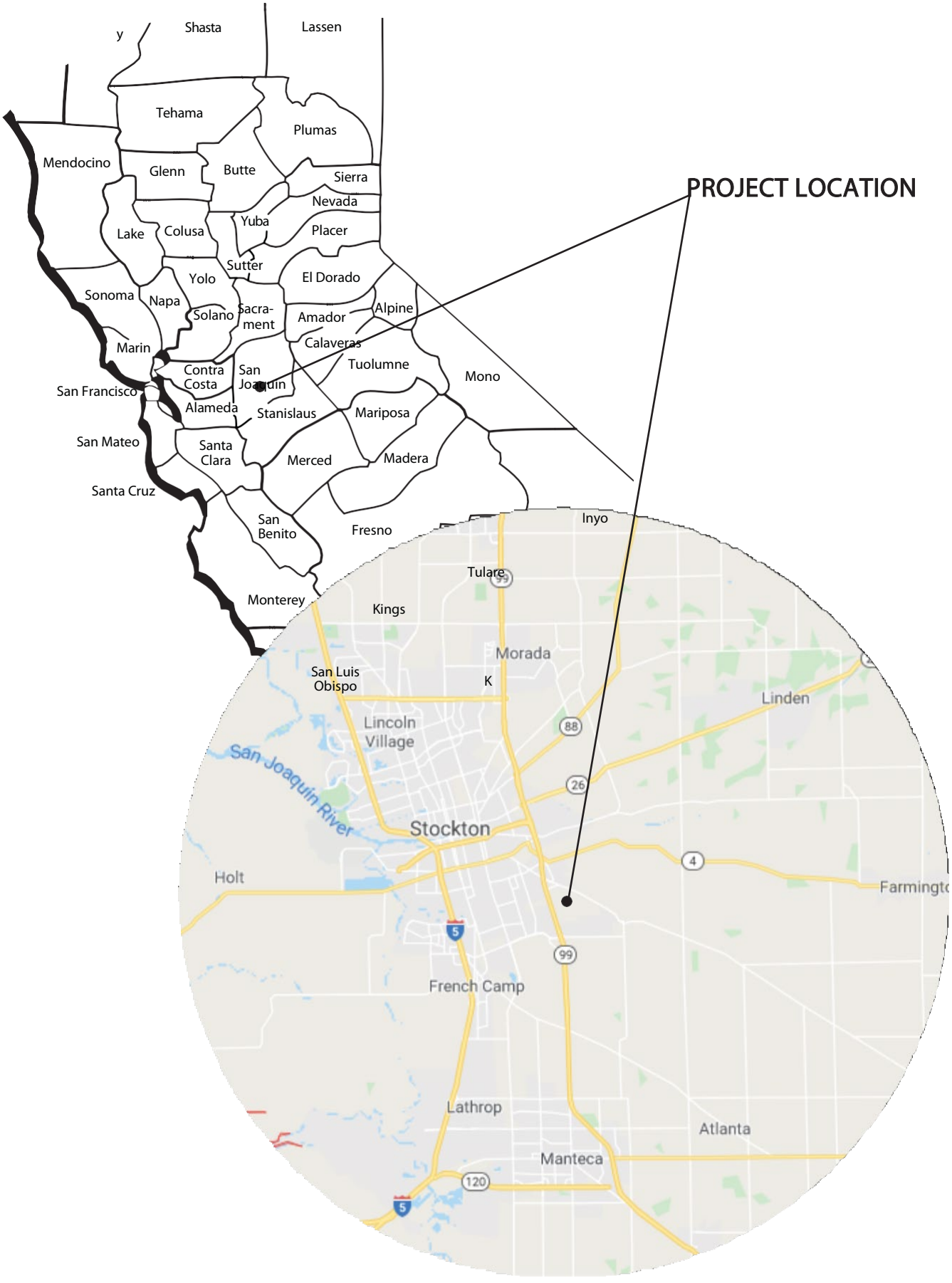
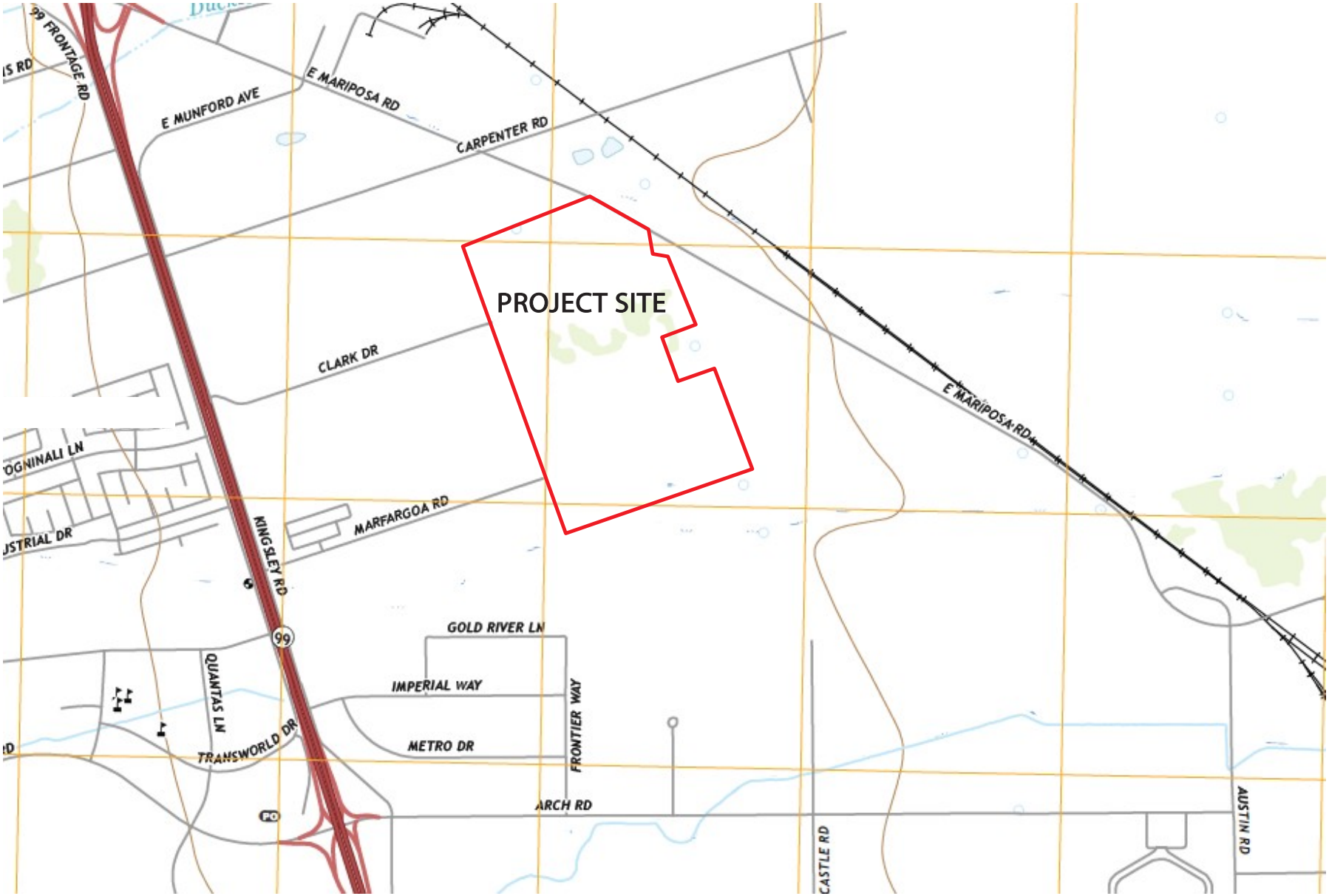


Figure 1-1
REGIONAL LOCATION MAP

SOURCE: Google Maps

Figure 2
STREET MAP



BaseCamp Environmental

SOURCE: USGS Quadrangle Map, Stockton East, 2018. The project site is located in Township 1 N, Range 7 East and Sections 59 and 60 of the USGS Map.

Figure 3
USGS MAP

SOURCE: Google Maps

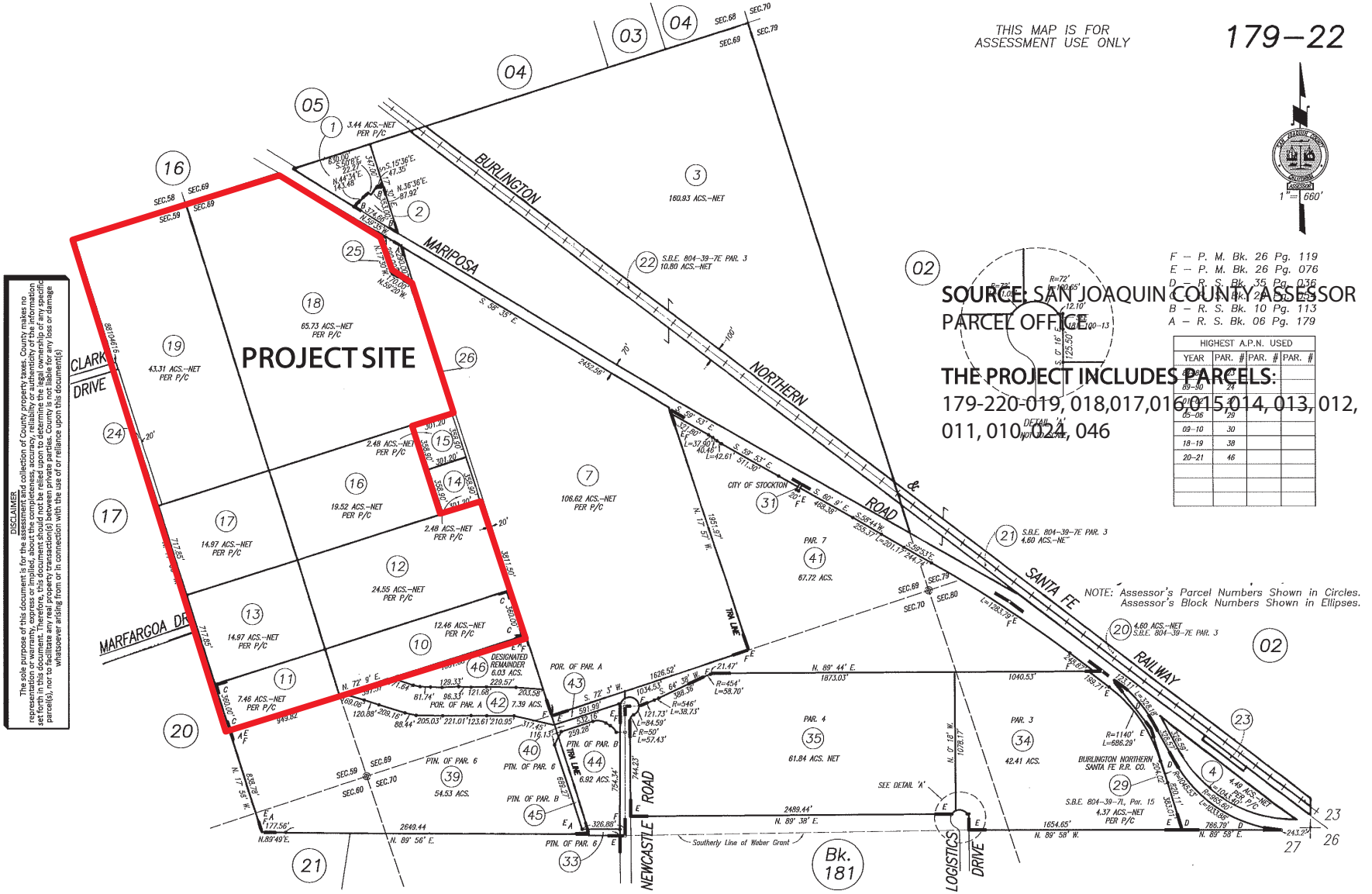


Figure 5
ASSESSOR PARCEL MAP

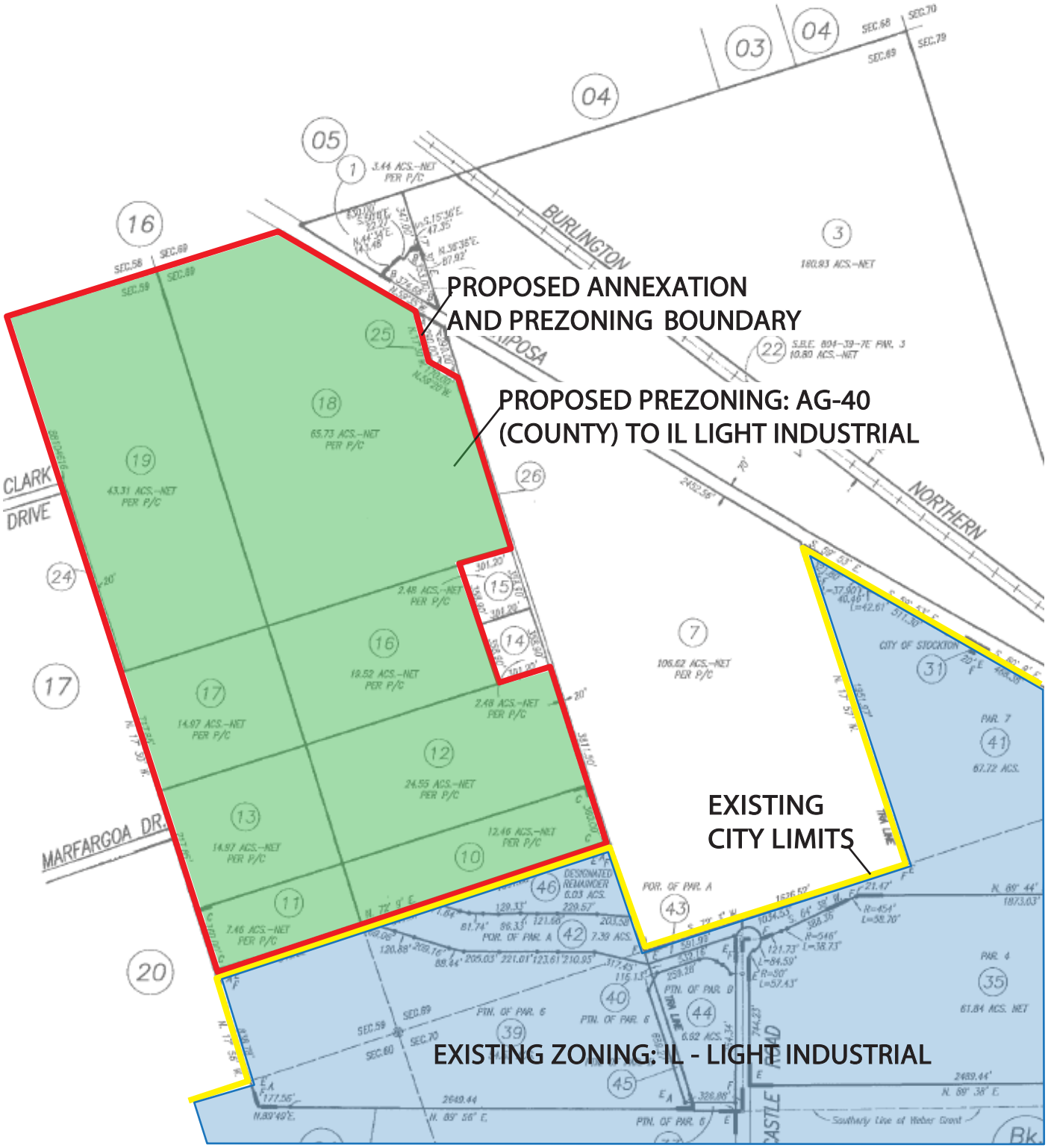
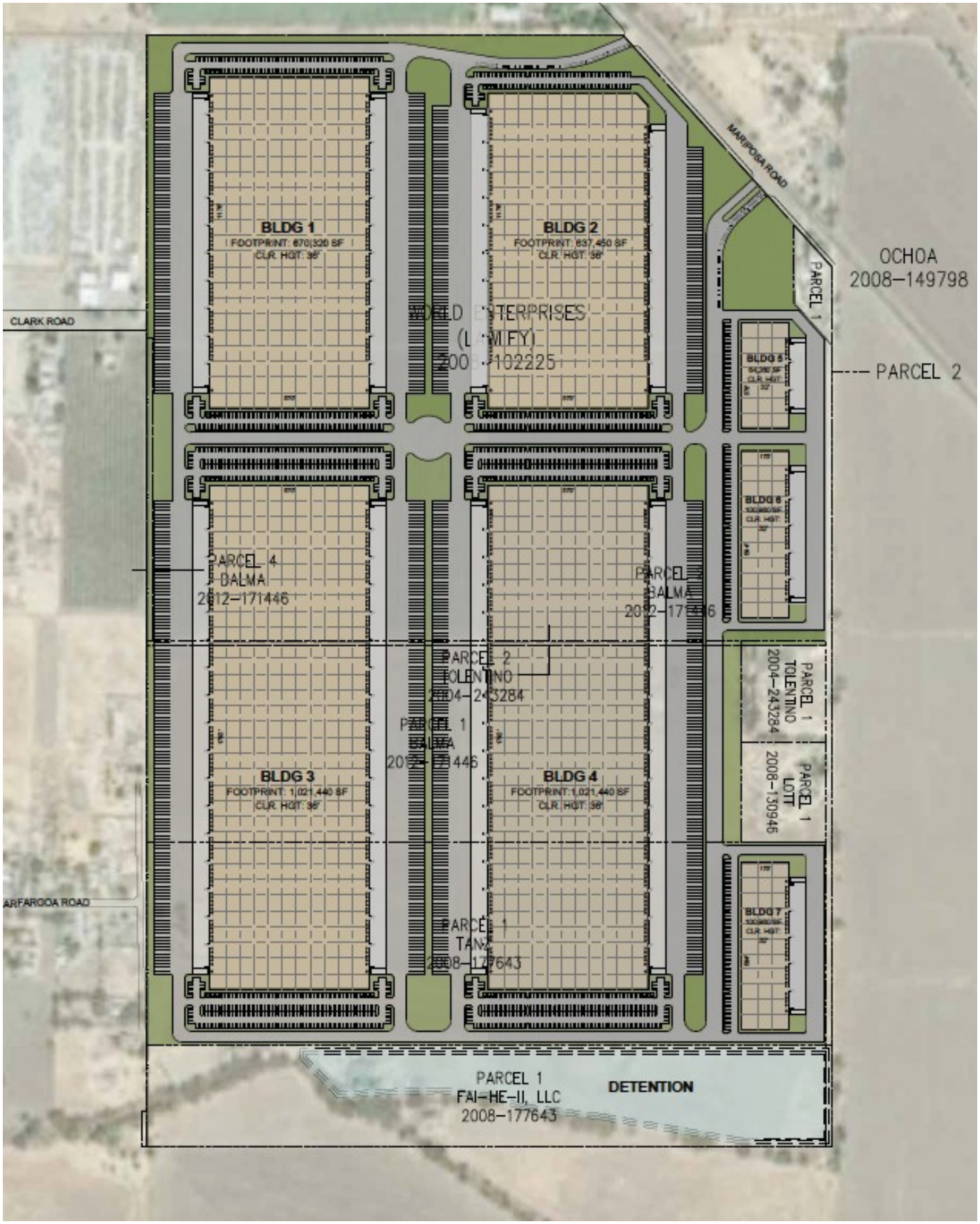
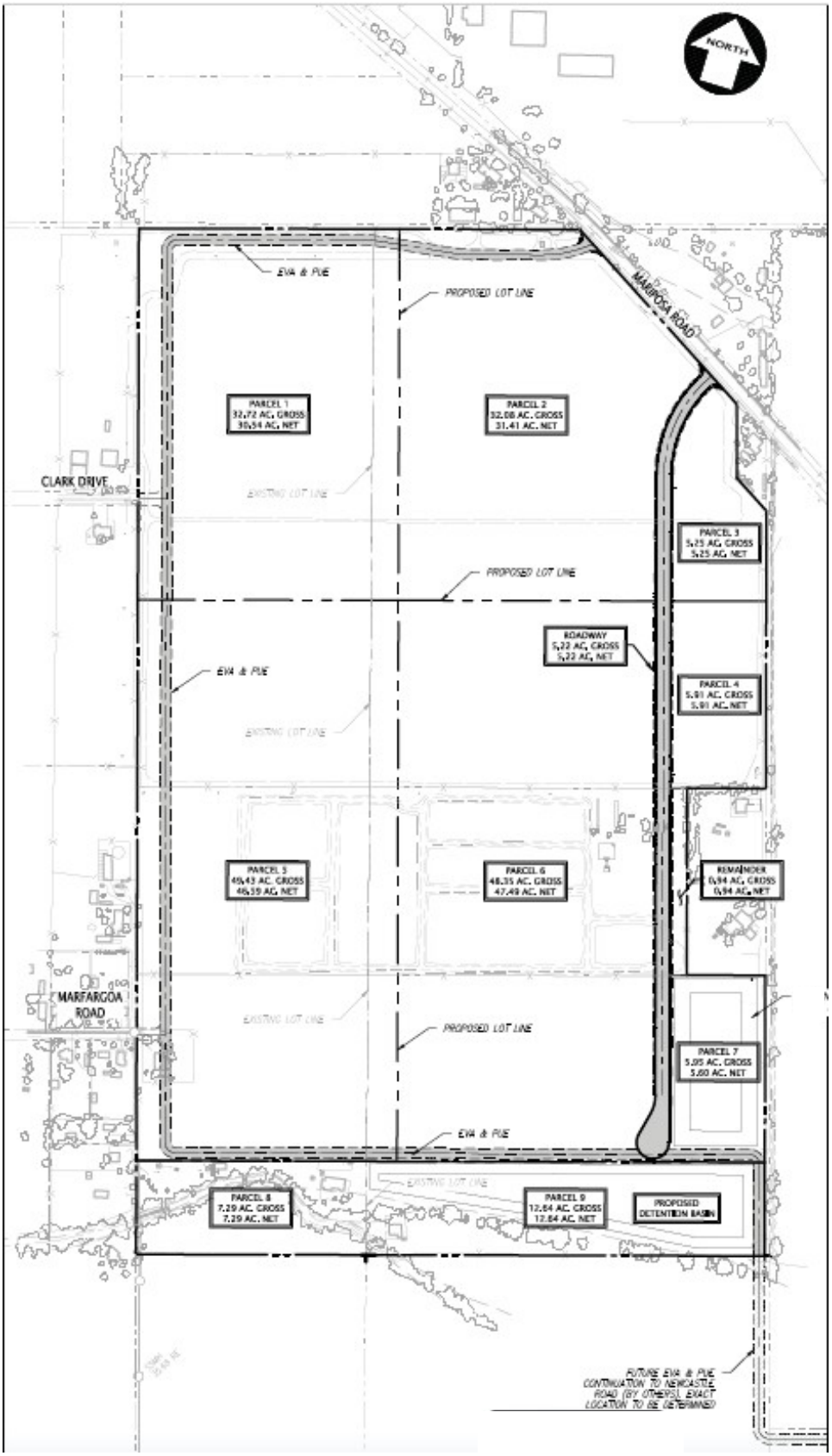


Figure 6
PROPOSED ANNEXATION AND PREZONING



SOURCE: Ware Malcomb

Figure 7
CONCEPTUAL SITE PLAN



SOURCE: Kier & Wright

Figure 8
PROPOSED TENATIVE SUBDIVISION MAP

JANUARY 12, 2021

VIA EMAIL: NICOLE.MOORE@STOCKTONCA.GOV
City of Stockton
Community Development Department
Attention: Nicole Moore
345 N. El Dorado Street
Stockton, CA 95202

Dear Ms. Moore:

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT FOR THE MARIPOSA INDUSTRIAL PARK PROJECT, SCH# 2020120283

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation of an Environmental Impact Report for the Mariposa Industrial Park Project (Project). The Division monitors farmland conversion on a statewide basis, provides technical assistance regarding the Williamson Act, and administers various agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's potential impacts on agricultural land and resources.

Project Description

The project proposes annexation and industrial development of nine adjacent parcels adjacent to the City of Stockton and totaling 206 acres. Conceptual development plans involve seven "high-cube" warehouses with a total floor area of 3.6 million square feet together with circulation, parking, utility infrastructure, and access from Mariposa Road. A portion of the project site is currently designated as Farmland of Statewide Importance by the Department of Conservation's Farmland Mapping and Monitoring Program.[1]

[1] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, https://maps.conservation.ca.gov/DLRP/CIFF/

Department Comments

Although conversion of agricultural land is often an unavoidable impact under CEQA analysis, feasible alternatives and/or feasible mitigation measures must be considered. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation under CEQA. Rather, the criterion is feasible mitigation that lessens a project's impacts. As stated in CEQA statue, mitigation may also include, "Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."[2]

The conversion of agricultural land represents a permanent reduction in the State's agricultural land resources. As such, the Department advises the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the loss of agricultural land. Conservation easements are an available mitigation tool and considered a standard practice in many areas of the State. The Department highlights conservation easements because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

A source that has proven helpful for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

http://www.calandtrusts.org/resources/conserving-californias-harvest/

Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

[2] Public Resources Code Section 15370, Association of Environmental Professionals, 2020 CEQA, California Environmental Quality Act, Statute & Guidelines, page 284, https://www.califaep.org/docs/2020_ceqa_book.pdf

Conclusion

The Department recommends further discussion of the following issues:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measures for all impacted agricultural lands within the proposed project area.

Thank you for giving us the opportunity to comment on Notice of Preparation of an Environmental Impact Report for the Mariposa Industrial Park Project. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Associate Environmental Planner via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber

Monique Wilber

Conservation Program Support Supervisor

8 January 2021

Nicole Moore
City of Stockton
345 North El Dorado Street
Stockton, CA 95377

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, MARIPOSA INDUSTRIAL PARK PROJECT, SCH#2020120283, SAN JOAQUIN COUNTY

Pursuant to the State Clearinghouse's 16 December 2020 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the Mariposa Industrial Park Project, located in San Joaquin County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three

(3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at:
https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

If you have questions regarding these comments, please contact me at (916) 464-4856 or Nicholas.White@waterboards.ca.gov.

Nicholas White
Water Resource Control Engineer

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

Received
DEC 21 2020
City of Stockton
Community Development

December 17, 2020

Nicole Moore
City of Stockton Community Development Department
345 N. El Dorado Street
Stockton, CA 95202

Re: 2020120283, Mariposa Industrial Park Project, San Joaquin County

Dear Ms. Moore:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

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AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

a. A brief description of the project.

b. The lead agency contact information.

c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).

d. A "California Native American tribe" is defined 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 Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

a. Alternatives to the project.

b. Recommended mitigation measures.

c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

a. Type of environmental review necessary.

b. Significance of the tribal cultural resources.

c. Significance of the project's impacts on tribal cultural resources.

d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources 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 Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

a. Whether the proposed project has a significant impact on an identified tribal cultural resource.

b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

January 7, 2021

Nicole Moore
City of Stockton
Community Development Department
345 N. El Dorado Street
Stockton, CA 95202

Project: Preparation of Environmental Impact Report, Mariposa Industrial Park #P20-0805

District CEQA Reference No: 20201056

Dear Ms. Moore:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above from the City of Stockton (City). The project consists of the construction of seven buildings totaling around 3.6 million square feet in floor area. (Project). The Project is located at the south of Mariposa Road and East of the termini of Clark Drive and Marfargoa Road, in Stockton, CA (APN Nine Different Parcels).

Project Scope

The Project consists of the construction of approximately 3.6 million square feet in floor area along with parking areas and vehicle assess with storm drainage detention areas. The project will also include the improvements along the Mariposa Road frontage, development of an internal access road and an emergency vehicle access way along the perimeter of the site.

The District's initial review of the Project concludes that emissions resulting from construction and/or operation of the Project may exceed the following thresholds of significance: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size (PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5). The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions.

Samir Sheikh
Executive Director/Air Pollution Control Officer

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Other potential significant air quality impacts related to Toxic Air Contaminants (see information below under Health Risk Assessment), Ambient Air Quality Standards, Hazards and Odors, may require assessments and mitigation. More information can be found in the District's Guidance for Assessing and Mitigating Air Quality Impacts at: https://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf

The District offers the following comments:

1) Project Related Criteria Pollutant Emissions

The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions. The additional environmental review of the Project's potential impact on air quality should consider the following items:

1a) Project Related Construction Emissions

Construction emissions are short-term emissions and should be evaluated separately from operational emissions. Equipment exhaust, as well as fugitive dust emissions should be quantified. For reference, the District's annual criteria thresholds of significance for construction are listed above.

The District recommends that the City consider the use of the cleanest reasonably available off-road construction practices (i.e. eliminating unnecessary idling) and fleets, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations as a mitigation measure to reduce Project related impacts from construction related exhaust emissions.

1b) Project Related Operational Emissions

Emissions from stationary sources and mobile sources should be analyzed separately. For reference, the District's annual criteria thresholds of significance for operational emissions are listed above.

1c) Recommended Model

Project related criteria pollutant emissions from construction and operational sources should be identified and quantified. Emissions analysis should be performed using CalEEMod (**Cal**ifornia **E**mission **E**stimator **Mod**el), which uses the most recent approved version of relevant Air Resources Board (ARB)

emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

1d) Project Related Operational Emissions– Truck Routing

Truck routing involves the path/roads heavy-duty trucks take to and from their destination. The air emissions from heavy-duty trucks can impact residential communities and sensitive receptors.

The District recommends the City consider evaluating heavy-duty truck routing patterns to help limit emission exposure to residential communities and sensitive receptors. More specifically, this measure would assess current truck routes, in consideration of the number and type of each vehicle, destination/origin of each vehicular trip, time of day/week analysis, vehicle miles traveled and emissions. The truck routing evaluation would also identify alternative truck routes and their impacts on VMT, GHG emissions, and air quality.

1e) Project Related Operational Emissions– Cleanest Available Truck

The San Joaquin Valley will not be able to attain stringent health-based federal air quality standards without significant reductions in emissions from heavy-heavy duty (HHD) Trucks, the single largest source of NOx emissions in the San Joaquin Valley. The District recently adopted the 2018 PM2.5 Plan, which includes significant new reductions from HHD Trucks, including emissions reductions by 2023 through the implementation of the California Air Resources Board (CARB) Statewide Truck and Bus Regulation, which requires truck fleets operating in California to meet the 2010 0.2 g/bhp-hr NOx standard by 2023. Additionally, to meet the federal air quality standards by the 2020 to 2024 attainment deadlines, the District's Plan relies on a significant and immediate transition of heavy duty truck fleets to zero or near-zero emissions technologies, including the near-zero truck standard of 0.02 g/bhp-hr NOx established by the California Air Resources Board.

For development projects which typically generate a high volume of heavy duty truck traffic (e.g. "high-cube" warehouse or distribution center), there are heavy duty trucks traveling to-and-from from the project location at longer trip length distances for potential distribution. Since the Project may exceed the District significance thresholds, the District recommends that the following mitigation measures be considered by the City for inclusion in the Environmental Impact Report (EIR) for project related operational emissions.

- Advise fleets associated with Project operational activities to utilize the cleanest available HHD truck technologies, including zero and near-zero (0.02 g/bhp-hr NOx) technologies as feasible.

- Advise all on-site service equipment (cargo handling, yard hostlers, forklifts, pallet jacks, etc.) to utilize zero-emissions technologies as feasible.

- Advise fleets associated with future development projects to be subject to the best practices (i.e. eliminating unnecessary idling).

In addition, the District recommends that the City include mitigation measures to reduce project related operational impacts through incorporation of design elements, for example, increased energy efficiency, reducing vehicle miles traveled, etc. More information on mitigation measures can be found on the District's website at: http://www.valleyair.org/transportation/ceqa_idx.htm.

1f) Project Related Operational Emissions– Reduce Idling of Heavy Duty Trucks

The goal of this strategy is to limit the potential for localized PM2.5 and toxic air quality impacts associated with failure to comply with the state's Heavy Duty anti-idling regulation (e.g limiting vehicle idling to specific time limits). The diesel exhaust from excessive idling has the potential to impose significant adverse health and environmental impacts. Therefore, efforts to ensure compliance of the anti-idling regulation, especially near sensitive receptors, is important to limit the amount of idling within the community, which will result in community air quality benefits.

1g) Project Related Operational Emissions– Electric On-Site Off-Road and On-Road Equipment

Since the Project consists of an Industrial facility, it may have the potential to result in increased use of off-road equipment (i.e. forklifts) and/or on-road equipment (i.e. mobile yard trucks with the ability to move materials). The District recommends the City advise the project proponent to utilize electric or zero emission off-road and on-road equipment used on-site for this Project.

2) Voluntary Emission Reduction Agreement

If the Project is expected to have a significant impact, the District recommends the EIR also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this Project.

A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate Project specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-specific regional impacts on air quality can be fully mitigated. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-specific regional emissions have been mitigated to less than significant. To assist the Lead Agency and project proponent in ensuring that the environmental document is compliant with CEQA, the District recommends the Draft EIR includes an assessment of the feasibility of implementing a VERA.

3) Health Risk Screening/Assessment

A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TAC's) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. TAC's are air pollutants identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) that pose a present or potential hazard to human health. A common source of TACs can be attributed to diesel exhaust emitted from both mobile and stationary sources. List of TAC's identified by OEHHA/CARB can be found at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants

The District recommends the development project(s) be evaluated for potential health impacts to surrounding receptors (on-site and off-site) resulting from operational and multi-year construction TAC emissions.

i) The District recommends conducting a screening analysis that includes all sources of emissions. A screening analysis is used to identify projects which may have a significant health impact. A prioritization, using CAPCOA's updated methodology, is the recommended screening method. A prioritization score of 10 or greater is considered to be significant and a refined Health Risk Assessment (HRA) should be performed.

   For your convenience, the District's prioritization calculator can be found at: http:www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION%20RMR%202016.XLS.

ii) The District recommends a refined HRA for development projects that result in a prioritization score of 10 or greater. Prior to performing an HRA, it is recommended that development project applicants contact the District to review the proposed modeling protocol. A development project would be considered to have a significant health risk if the HRA demonstrates that the project related health impacts would exceed the Districts significance threshold of 20 in a million for carcinogenic risk and 1.0 for the Acute and Chronic Hazard Indices, and would trigger all feasible mitigation measures. The District recommends that development projects which result in a significant health risk not be approved.

   For HRA submittals, please provide the following information electronically to the District for review:

   - HRA AERMOD model files
   - HARP2 files
   - Summary of emissions source locations, emissions rates, and emission factor calculations and methodology.

   More information on toxic emission factors, prioritizations and HRAs can be obtained by:

   - E-Mailing inquiries to: hramodeler@valleyair.org; or
   - The District can be contacted at (559) 230-6000 for assistance; or
   - Visiting the Districts website (Modeling Guidance) at: http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

4) Ambient Air Quality Analysis

An ambient air quality analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of the ambient air quality standards. The District recommends that an AAQA be performed for the Project if emissions exceed 100 pounds per day of any pollutant.

If an AAQA is performed, the analysis should include emissions from both Project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

Specific information for assessing significance, including screening tools and modeling guidance is available online at the District's website www.valleyair.org/ceqa.

5) Cumulative Air Impacts

In addition to the discussions on the topics identified above, the District recommends the EIR also include a discussion of whether the Project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment. More information on the District's attainment status can be found online by visiting the District's website at: http://valleyair.org/aqinfo/attainment.htm.

6) District Rule 9510 (Indirect Source Review)

The purpose of District Rule 9510 is to reduce the growth in both NOx and PM10 emissions associated with development and transportation projects from mobile and area sources associated with construction and operation of development projects. The rule encourages clean air design elements to be incorporated into development projects. In case the proposed development project clean air design elements are insufficient to meet the targeted emission reductions, the rule requires developers to pay a fee used to fund projects to achieve off-site emissions reductions.

The proposed Project is subject to District Rule 9510 because it will receive a project-level discretionary approval from a public agency and will equal or exceed 25,000 square feet of light industrial space. When subject to the rule, an Air Impact Assessment (AIA) application is required prior to applying for project-level approval from a public agency. In this case, if not already done, please inform the project proponent to immediately submit an AIA application to the District to comply with District Rule 9510.

An AIA application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval.

Information about how to comply with District Rule 9510 can be found online at: http://www.valleyair.org/ISR/ISRHome.htm.

The AIA application form can be found online at: http://www.valleyair.org/ISR/ISRFormsAndApplications.htm.

7) Nuisance Odors

While offensive odors rarely cause any physical harm, they can be unpleasant, leading to considerable distress among the public and often resulting in citizen complaints.

The City should consider all available pertinent information to determine if the Project could have a significant impact related to nuisance odors. Nuisance odors may be assessed qualitatively taking into consideration of project design elements and proximity to off-site receptors that potentially would be exposed to objectionable odors. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact. According to the District Guidance for Assessing and Mitigating air Quality Impacts (GAMAQI), a significant odor problems are defined as more than one confirmed complaint per year averaged over a three-year period, or three unconfirmed complaints per year averaged over a three-year period. An unconfirmed complaint means that either the odor/air contaminant release could not be detected, or the source/facility cannot be determined.

The District is available to assist the City with information regarding specific facilities and categories of facilities, and associated odor complaint records.

8) Solar Deployment in the Community

It is the policy of the State of California that renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December 31, 2045. While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, the production of solar energy is contributing to improving air quality and public health. The District suggests that the City of Stockton consider the feasibility of incorporating solar power systems, as an emission reduction strategy for this Project.

9) Charge Up! Electric Vehicle Charger

To support further installation of electric vehicle charging equipment and development of such infrastructure, the District offers incentives to public agencies, businesses, and property owners of multi-unit dwellings to install electric charging infrastructure (Level 2 and 3 chargers). The purpose of this incentive program is to promote clean air alternative-fuel technologies and the use of low or zero-emission vehicles. The District suggests that the City and Project proponent consider the feasibility of installing electric vehicle chargers for this Project.

Please visit www.valleyair.org/grants/chargeup.htm for more information.

10) District Rules and Regulations

The District issues permits for many types of air pollution sources and regulates some activities not requiring permits. A project subject to District rules and regulation would reduce its impacts on air quality through compliance with regulatory requirements. In general, a regulation is a collection of rules, each of which deals with a specific topic. Here are a couple of example, Regulation II (Permits) deals with permitting emission sources and includes rules such as District permit requirements (Rule 2010), New and Modified Stationary Source Review (Rule 2201), and implementation of Emission Reduction Credit Banking (Rule 2301).

The list of rules below is neither exhaustive nor exclusive. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. To identify other District rules or regulations that apply to this Project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (209) 557-6446.

10a) District Rules 2010 and 2201 - Air Quality Permitting for Stationary Sources

Stationary Source emissions include any building, structure, facility, or installation which emits or may emit any affected pollutant directly or as a fugitive emission. District Rule 2010 requires operators of emission sources to obtain an Authority to Construct (ATC) and Permit to Operate (PTO) from the District. District Rule 2201 requires that new and modified stationary sources of emissions mitigate their emissions using best available control technology (BACT).

This Project will be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and will require District permits. Prior to construction, the Project proponent should submit to the District

an application for an Authority to Construct (ATC). For further information or assistance, the project proponent may contact the District's Small Business Assistance (SBA) Office at (209) 557-6446.

10b) District Rule 9410 (Employer Based Trip Reduction)

Future development projects may be subject to District Rule 9410 (Employer Based Trip Reduction) if the Project would result in employment of 100 or more "eligible" employees. District Rule 9410 requires employers with 100 or more "eligible" employees at a worksite to establish an Employer Trip Reduction Implementation Plan (eTRIP) that encourages employees to reduce single-occupancy vehicle trips, thus reducing pollutant emissions associated with work commutes. Under an eTRIP plan, employers have the flexibility to select the options that work best for their worksites and their employees.

Information about how District Rule 9410 can be found online at: www.valleyair.org/tripreduction.htm.

For additional information, you can contact the District by phone at 559-230-6000 or by e-mail at etrip@valleyair.org

10c) Other District Rules and Regulations

Future development projects may also be subject to the following District rules: Regulation VIII, (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).

If you have any questions or require further information, please contact Harout Sagherian by e-mail at Harout.Sagherian@valleyair.org or by phone at (559) 230-5860.

Sincerely,

For Arnaud Marjollet
Director of Permit Services

AM: hs

S J C O G, Inc.

555 East Weber Avenue ● Stockton, CA 95202 ● (209) 235-0600 ● FAX (209) 235-0438

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

SJMSCP RESPONSE TO LOCAL JURISDICTION (RTLJ)
ADVISORY AGENCY NOTICE TO SJCOG, Inc.

To: Nicole Moore, City of Stockton, Community Development Department

From: Laurel Boyd, SJCOG, Inc.

Date: January 12, 2021

-Local Jurisdiction Project Title: Mariposa Industrial Park Project (P20-0805)

Assessor Parcel Number(s): 179-220-10 to -19

Local Jurisdiction Project Number: P20-0805

Total Acres to be converted from Open Space Use: Unknown

Habitat Types to be Disturbed: Agricultural Habitat Land

Species Impact Findings: Findings to be determined by SJMSCP biologist.

Dear Ms. Moore:

SJCOG, Inc. has reviewed the project referral for the Mariposa Industrial Park Project (P20-0805). This project consists of a Notice of Preparation of a Draft EIR for the Mariposa Industrial Park Project to include the construction of seven buildings totaling approximately 3.6 million square feet in floor area, along with parking areas and vehicular access and storm drainage detention areas. The project would include improvements along the Mariposa Road frontage, development of an internal access road and an emergency vehicle accessway along the perimeter of the site. One or more storm drainage detention ponds that would collect runoff from the developed area are proposed in the southern portion of the project site. A pump station would discharge collected storm flows to the adjacent North Littlejohns Creek. Industrial buildings would be connected to existing water and wastewater lines adjacent to the site. The project site is located south of Mariposa Road and east of the termini of Clark Drive and Marfargoa Road, Stockton (APN: 179-220-10 to -19).

The City of Stockton is a signatory to San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Participation in the SJMSCP satisfies requirements of both the state and federal endangered species acts, and ensures that the impacts are mitigated below a level of significance in compliance with the California Environmental Quality Act (CEQA). The LOCAL JURISDICTION retains responsibility for ensuring that the appropriate Incidental Take Minimization Measure are properly implemented and monitored and that appropriate fees are paid in compliance with the SJMSCP. Although participation in the SJMSCP is voluntary, Local Jurisdiction/Lead Agencies should be aware that if project applicants choose against participating in the SJMSCP, they will be required to provide alternative mitigation in an amount and kind equal to that provided in the SJMSCP.

This Project is subject to the SJMSCP. This can be up to a 30 day process and it is recommended that the project applicant contact SJMSCP staff as early as possible. It is also recommended that the project applicant obtain an information package. http://www.sjcog.org

Please contact SJMSCP staff regarding completing the following steps to satisfy SJMSCP requirements:

- Schedule a SJMSCP Biologist to perform a pre-construction survey ***prior to any ground disturbance***
- SJMSCP Incidental take Minimization Measures and mitigation requirement:

1. Incidental Take Minimization Measures (ITMMs) will be issued to the project and must be signed by the project applicant prior to any ground disturbance but no later than six (6) months from receipt of the ITMMs. If ITMMs are not signed within six months, the applicant must reapply for SJMSCP Coverage. Upon receipt of signed ITMMs from project applicant, SJCOG, Inc. staff will sign the ITMMs. This is the effective date of the ITMMs.
2. Under no circumstance shall ground disturbance occur without compliance and satisfaction of the ITMMs.
3. Upon issuance of fully executed ITMMs and prior to any ground disturbance, the project applicant must:
    a. Post a bond for payment of the applicable SJMSCP fee covering the entirety of the project acreage being covered (the bond should be valid for no longer than a 6 month period); or
    b. Pay the appropriate SJMSCP fee for the entirety of the project acreage being covered; or

c. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
d. Purchase approved mitigation bank credits.

4. Within 6 months from the effective date of the ITMMs or issuance of a building permit, whichever occurs first, the project applicant must:
   a. Pay the appropriate SJMSCP for the entirety of the project acreage being covered; or
   b. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
   c. Purchase approved mitigation bank credits.

Failure to satisfy the obligations of the mitigation fee shall subject the bond to be called.

- Receive your Certificate of Payment and release the required permit

It should be noted that if this project has any potential impacts to waters of the United States [pursuant to Section 404 Clean Water Act], it would require the project to seek voluntary coverage through the unmapped process under the SJMSCP which could take up to 90 days. It may be prudent to obtain a preliminary wetlands map from a qualified consultant. If waters of the United States are confirmed on the project site, the Corps and the Regional Water Quality Control Board (RWQCB) would have regulatory authority over those mapped areas [pursuant to Section 404 and 401 of the Clean Water Act respectively] and permits would be required from each of these resource agencies prior to grading the project site.

If you have any questions, please call (209) 235-0600.

S J C O G, Inc.

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

555 East Weber Avenue ● Stockton, CA 95202 ● (209) 235-0600 ● FAX (209) 235-0438

SJMSCP HOLD

TO: Local Jurisdiction: Community Development Department, Planning Department, Building Department, Engineering Department, Survey Department, Transportation Department, Other: _____

FROM: Laurel Boyd, SJCOG, Inc.

DO NOT AUTHORIZE SITE DISTURBANCE
DO NOT ISSUE A BUILDING PERMIT
DO NOT ISSUE _____ FOR THIS PROJECT

The landowner/developer for this site has requested coverage pursuant to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). In accordance with that agreement, the Applicant has agreed to:

1) SJMSCP Incidental Take Minimization Measures and mitigation requirement:

1. Incidental Take Minimization Measures (ITMMs) will be issued to the project and must be signed by the project applicant prior to any ground disturbance but no later than six (6) months from receipt of the ITMMs. If ITMMs are not signed within six months, the applicant must reapply for SJMSCP Coverage. Upon receipt of signed ITMMs from project applicant, SJCOG, Inc. staff will sign the ITMMs. This is the effective date of the ITMMs.
2. Under no circumstance shall ground disturbance occur without compliance and satisfaction of the ITMMs.
3. Upon issuance of fully executed ITMMs and prior to any ground disturbance, the project applicant must:
   a. Post a bond for payment of the applicable SJMSCP fee covering the entirety of the project acreage being covered (the bond should be valid for no longer than a 6 month period); or
   b. Pay the appropriate SJMSCP fee for the entirety of the project acreage being covered; or
   c. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
   d. Purchase approved mitigation bank credits.
4. Within 6 months from the effective date of the ITMMs or issuance of a building permit, whichever occurs first, the project applicant must:
   a. Pay the appropriate SJMSCP for the entirety of the project acreage being covered; or
   b. Dedicate land in-lieu of fees, either as conservation easements or fee title; or
   c. Purchase approved mitigation bank credits.

   Failure to satisfy the obligations of the mitigation fee shall subject the bond to be called.

Project Title: Notice of Preparation of a Draft EIR for the Mariposa Industrial Park Project

Assessor Parcel #s 179-220-10 to -19

T _____, R_____, Section(s): _____

Local Jurisdiction Contact: Nicole Moore

The LOCAL JURISDICTION retains responsibility for ensuring that the appropriate Incidental Take Minimization Measures are properly implemented and monitored and that appropriate fees are paid in compliance with the SJMSCP.

From: Gale Tolentino <grtolent@uci.edu>
Sent: Tuesday, January 12, 2021 9:12 AM
To: Nicole Moore <Nicole.Moore@stocktonca.gov>

Subject: Mariposa Industrial Park - Concerns

Dear Nicole Moore,

I hope this email finds you well. I am emailing you in regards to the Industrial Park construction on Mariposa Road. I have a few concerns about the well-being of my property. My first concern is if the construction will affect my private water well by increasing water-related contaminants causing my household to have unhealthy drinking water? My second concern is the privacy of my home. Due to the close proximity of the building, Can you ensure my private property will be enclosed via walls, fences, etc?

Thank you for your time.

Best Regards,
The Tolentino Residence

APPENDIX B
ADDITIONAL AIR QUALITY IMPROVEMENT MEASURES

APPENDIX B
MARIPOSA INDUSTRIAL PARK PROJECT DRAFT EIR

ADDITIONAL AIR QUALITY IMPROVEMENT MEASURES

In June of 2020, the City of Stockton approved the annexation and industrial development of the 170-acre Sanchez-Hoggan Annexation project located on Arch-Airport Road in southeast Stockton. Prior to project approval the City prepared a Draft EIR, circulated the EIR for public and agency comment and then prepared and certified a Final EIR. The Final EIR included responses to several comments that, a few of which were focused on potential air quality impacts of the project and related health effects on local populations, including residents of nearby unincorporated communities.

Air quality-related comments on the Sanchez-Hoggan EIR were received from the California Air Resources Board and the San Joaquin Valley Air Pollution Control District during the public review period. Additional comments addressing similar concerns were received from the California Department of Justice after the close of the public review and after completion of the Final EIR. The City nonetheless prepared detailed responses to these, and other, comments that were presented to the Stockton Planning Commission and City Council for their consideration together with the Final EIR.

The Sanchez-Hoggan Draft EIR included detailed analysis of the potential air quality impacts of the project including a Health Risk Assessment assessing potential health risks to surrounding lands. On the basis of the EIR's analysis, the City concluded that the air quality impacts of the project would be less than significant, largely as a result of required conformance with established air quality permit requirements and associated mitigation measures. Nonetheless, the City went above and beyond the requirements of CEQA in an effort to more fully address the air quality concerns raised by the commenting agencies. As a part of this effort, the City prepared a list of additional air quality improvement measures, shown below, conformance with which was required of the project by an adopted condition of project approval.

The approved Sanchez-Hoggan project and the proposed Mariposa Industrial Park project are very similar in type, size, location, scale of development and potential environmental impacts. For these reasons, the Sanchez-Hoggan EIR is an important source document for the Mariposa Industrial Park Project Draft EIR and is cited repeatedly in the Mariposa EIR. Early in the preparation process for the Mariposa EIR, in order to pro-actively address the air quality concerns of the agencies, the City and the project applicant agreed to include the Sanchez-Hoggan Additional Air Quality Improvement Measures in the Mariposa EIR and to require their implementation in conjunction with approval of the Mariposa Industrial Park project. It is for this reason that those measures are, hereby included in Appendix B and referenced in the analysis of air quality impacts in the EIR.

---

1. If agreeable by future tenants with more than 100 Employees per shift, tenant improvement plans shall be submitted for review and approval by Community Development Department to verify the incorporation of changing/shower facilities for building occupants to encourage and facilitate bicycle commuting, pursuant to Section A5.106.4.3 of the California Green Building Code Standards, voluntary measures. If applicable, these changing/shower facilities shall be installed and functional, prior to final tenant occupancy. The Applicant will include a reference to the recommendation in the project CC&Rs for future tenants to review, prior to tenant improvement approval by the City of Stockton.

2. All heavy-duty trucks used for dirt and material hauling during construction shall meet current CARB regulations and Include such specifications in construction documents and implement them throughout construction.

3. Construction contracts shall require compliance with all applicable air quality regulations. Include these specifications in construction documents.

4. All site operations shall comply with applicable air quality regulations. Include these restrictions through tenant leases or in recorded covenants.

5. During construction, electric-powered, battery-powered, natural gas, or hybrid off-road construction equipment will be utilized where available to assist in on-going onsite operations. If substantial evidence is provided by the permittee or its contractor that such equipment is not commercially available, including a description of commercially reasonable efforts to secure such equipment, off-road diesel-powered construction equipment greater than 50 horsepower will meet USEPA Tier 4 off-road emission standards. Further, all permanent onsite generators shall be alternative- powered and/or electric or battery-powered, natural gas-powered or hybrid. The permittee shall ensure that this condition is incorporated into its general construction contract and that the general contractor will incorporate this condition in all relevant sub-contracts. Provide specifications in construction plans and, in the contract, or contract specifications.

6. All off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction shall be electric-powered, provided that it is commercially available, which may be plug-in or battery.

7. The Applicant/Owner shall include written information regarding CARB's proposed ACT Rule and the Clean Truck Programs at the Ports of Long Beach and Los Angeles as exhibits to the project CC&Rs or all tenant leases.

8. To further promote alternative fuels and help support clean truck fleets, tenants shall be provided with written information related to the SCAQMD's Carl Moyer Program, or other such programs that promote truck retrofits or "clean" vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. Tenants will also be provided with written information about the availability of (1)

alternatively fueled cargo handling equipment; (2) grant programs for diesel-fueled vehicle engine retrofit and/or replacement; (3) designated truck parking locations in the project vicinity; (4) access to alternative fueling stations proximate to the site that supply alternative fuels, including but not limited to, compressed natural gas, hydrogen, and electricity; and (5) the US Environmental Protection Agency's SmartWay program. The Applicant/Owner shall ensure that its Tenant leases include a signed acknowledgment by the lessee that it has received and reviewed the written information provided pursuant to this condition. Provide the specified data to tenants. The Applicant shall include these measures in the CC&Rs as recommendations or guidelines.

9. All construction equipment, trucks, and vehicles during construction and project operations shall be limited to idling onsite for no longer than five minutes. This shall be reinforced by signage on the property and included in the CC&Rs.

10. The Applicant, developer and/or successors-in-interest (ADS) for the project shall retain a qualified professional to prepare a detailed plan for implementation of the Air Quality Improvement Measures described in Appendix V of the certified Final EIR for the Sanchez-Hoggan Annexation Project. The Plan shall consider the range of anticipated tenants and feasible means for implementation of the measures based on substantial evidence. Substantial evidence may include records of commercially reasonable efforts to obtain the required equipment or evidence that the use of such equipment is not commercially available or financially feasible and shall describe the ADS' alternative efforts to achieve the objective of the measure.

Upon request by the City, the ODS shall submit the Plan to the Stockton Community Development Department (hereafter "City") every three years from the effective date of the City approval. The Plan shall consider the existing tenants, substantial evidence for adherence to air quality improvement measures included in the Final EIR Appendix V, and identification and reasoning for any measure not fully adhered to due to hardship or financial infeasibility. The City is responsible for acceptance and enforcement of the monitoring Plan; however, a copy of the Plan will be made available by the City if requested by the responsible and trustee agencies involved in the original environmental analysis approved with the Project EIR.

11. Tenants within the project site shall be subject to the following requirements:

a. Tenants with 100 or more employees shall prepare a Trip Reduction Plan providing information on transit and ridesharing in compliance with SJVAPCD Rule 9410.

b. Tenants with 100 or more employees shall provide onsite meal options such as break rooms, food trucks.

c. All tenant-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site meet or exceed 2010 model-

year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025.

d. Tenants shall utilize electric-powered or zero-emission forklifts, tuggers, and other off-road mobile equipment to the degree feasible. The developer will provide infrastructure for the tenant to install charging stations for yard equipment.

e. Tenants shall use zero-emission light - and medium-duty vehicles to the degree feasible.

f. The developer will provide signage at entrances indicating that truck operators shall turn off engines when not in use and observe State idling requirements.

g. Provide electric truck charging stations at dock doors proportional to demand.

h. Provide electric TRU electrical connections at dock doors proportional to demand.

i. Provide electric light vehicle charging stations per code requirements and proportional to demand.

j. The proposed building will be solar-adaptable per code requirements.

k. Standby generators fuel systems shall be non-diesel where feasible.

l. The CC&R's shall recommend tenants to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.

m. Comply with applicable Stockton Building Codes, greenhouse gas reduction requirements, and energy conservation standards.

n. Provide exit signage, directing trucks to truck routes.

o. The CC&R's shall recommend staff training in pollution control requirements and related record-keeping.

p. The CC&R's shall include information related to the availability of incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade truck fleets.

q. The CC&R's shall make specific reference to air quality improvement measures promoting the use of zero-emission all-electric plug-in TRUs, hydrogen fuel cell transport refrigeration, and cryogenic transport refrigeration technologies, such as the above measures "g," "h" and "i.".

r. The CC&R's shall advise tenants of various applicable State emission control requirements.

Should effectuation of these measures create a hardship due to lack of adequate equipment or if financially infeasible due to market constraints, the permittee or its contractor shall provide substantial evidence that such equipment is not commercially available or the improvement are not financially feasible and include an alternative effort to achieve the desired result of the measure.

12. The Applicant shall provide tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade truck fleets.

13. The Applicant shall install a screen wall to the north of the Hoggan property to serve as a visual and sound buffer. The annual wind rose for Stockton shows that the most frequent wind direction is westerly and northwesterly, accounting for 42% of all hourly observations, which directs air pollutants away from sensitive receptors to the north and west of the Hoggan property. Where feasible as to not impact circulation and onsite safety, truck loading bays and truck/trailer parking shall be designed to be located farthest from any receptors.

14. The Applicant will provide conduits to primary dock locations for future EV truck charging and/or other electric back up support. Proposed buildings will be solar-adaptable as per the above measure "1-j".

15. The Applicant will install EV-ready conduits and charging station locations as required in the City of Stockton Building Code.

16. To assist in countywide efforts to divert recyclable wastes from landfill disposal that can produce greenhouse gases when the wastes decompose, throughout the operating life of the project, the property owner shall provide both recycling bins and trash bins in all trash enclosures, as available by the local waste hauling company, to assist with the separation of recyclables and trash.

17. The project shall be designed, constructed in accordance with LEED green building certification standards. Include such specifications in construction documents. Construct accordingly.

18. In addition to any other applicable requirements, the Hoggan property shall install a masonry or other solid wall on the northern side adjacent to the Little John's Creek setback. Landscaping along this line shall include screening trees.

19. Signage on both sites shall meet the following standards:

a. Entry and exit points are clearly designated.

b. Truck parking and maintenance activity is confined to the project site and is not allowed on nearby public streets.

20. The construction contractor shall:

a. Water a minimum of three times daily to control dust during any activities that generate dust,

b. Apply chemical soil stabilizers on inactive areas (i.e., disturbed areas within the site that are unused for four consecutive days) during grading operations,

c. Suspend any dust-generating operations when wind speeds exceed 25 miles per hour,

d. At least once a day during ground-disturbing activities operate PM10-efficient street sweepers or roadway- washing trucks on adjacent roadways to remove dirt dropped by construction vehicles or dried mud carried off by trucks moving or bringing materials, and Schedule construction activities in accordance with specific San Joaquin County Air Quality Management District (AQMD) directives.

21. The permittee/applicant shall provide verification that construction specifications establish a five-minute idling limit for all heavy-duty construction equipment utilized during construction of the proposed project. Signage shall be posted throughout the construction site regarding the idling time limit, and the construction contractor shall maintain a log for review by City inspectors. The log shall verify that construction equipment operators are advised of the idling time limit at the start of each construction day. Note idling limits in construction specifications. Maintenance of logs required.

22. The permittee/applicant shall provide a cool roof specifications in construction plans verifying specifications for the proposed warehouse roof would utilize cool roofing materials with an aged reflectance and thermal emittance values that are equal to or greater than those specified in the 2016 CALGreen Building Standards Table A5.106.11.2.2 for Tier 1 and the City's Green Building Standards within Chapter 15.72 of the Stockton Municipal Code.

23. Proposed building plans will include electrical system features that will encourage use of electrically powered landscaping equipment, such as lawnmowers and leaf blowers.

24. The permittee/applicant shall provide verification that tenant leases or covenants recorded with any future ownership changes shall require all off-road equipment (non-street legal), such as forklifts and street sweepers, that are used onsite during project operations to be powered by alternative fuels, electrical batteries or other non-diesel fuels (e.g., propane) that do not result in diesel particulate emissions and result in low or zero emissions. Include these restrictions through tenant leases or in recorded covenants.

25. Building contractors for the project shall be subject to the following requirements:

a. Haul trucks and large onsite diesel equipment shall be equipped with CARB Tier IV-compliant engines or better, if available.

b. Small equipment shall be electric or low-emission, where feasible.

c. Off-road diesel-powered equipment shall not be left in the “on position” for more than 10 hours per day.

d. Provide temporary electrical hookup to the construction yard and associated work areas.

e. Prepare and implement a Dust Control Plan approved by the APCD with robust watering requirements.

f. Prohibit the idling of heavy equipment for more than 5 minutes.

g. Maintain on the construction site an inventory of construction equipment, maintenance records, and datasheets, including design specifications and emission control tier classifications.

h. Participate in City mitigation monitoring efforts as required.

i. Comply with SJVAPCD Rule 4601, limiting VOCs in architectural coatings.

APPENDIX C
AIR QUALITY MODELING RESULTS

Mariposa Industrial Park

San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	3,616.87	1000sqft	83.03	3,616,870.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2026
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Grading -

Vehicle Trips - Weekday trip rate from project traffic study.

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	150	0

tblConstructionPhase	NumDays	110.00	30.00
tblConstructionPhase	NumDays	1,550.00	750.00
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	155.00	30.00
tblConstructionPhase	NumDays	110.00	45.00
tblOffRoadEquipment	HorsePower	231.00	226.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4413	4.0425	3.2462	0.0156	0.9984	0.0498	1.0482	0.2459	0.0463	0.2922	0.0000	1,443.5945	1,443.5945	0.0876	0.0000	1,445.7855
2023	0.8778	7.3026	6.4684	0.0361	2.0822	0.0574	2.1396	0.5654	0.0530	0.6184	0.0000	3,359.1312	3,359.1312	0.1497	0.0000	3,362.8740
2024	5.3181	7.2769	6.2491	0.0360	2.1192	0.0557	2.1750	0.5753	0.0516	0.6269	0.0000	3,344.3249	3,344.3249	0.1503	0.0000	3,348.0825
2025	4.2945	3.3780	2.8286	0.0167	1.0037	0.0250	1.0286	0.2724	0.0231	0.2955	0.0000	1,554.0366	1,554.0366	0.0708	0.0000	1,555.8063
Maximum	**5.3181**	**7.3026**	**6.4684**	**0.0361**	**2.1192**	**0.0574**	**2.1750**	**0.5753**	**0.0530**	**0.6269**	**0.0000**	**3,359.1312**	**3,359.1312**	**0.1503**	**0.0000**	**3,362.8740**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4413	4.0425	3.2462	0.0156	0.9133	0.0498	0.9631	0.2366	0.0463	0.2829	0.0000	1,443.5944	1,443.5944	0.0876	0.0000	1,445.7854
2023	0.8778	7.3026	6.4684	0.0361	2.0822	0.0574	2.1396	0.5654	0.0530	0.6184	0.0000	3,359.1311	3,359.1311	0.1497	0.0000	3,362.8738
2024	5.3181	7.2648	6.2491	0.0360	2.1192	0.0557	2.1750	0.5753	0.0516	0.6269	0.0000	3,344.3247	3,344.3247	0.1503	0.0000	3,348.0823
2025	4.2945	3.3653	2.8286	0.0167	1.0037	0.0250	1.0286	0.2724	0.0231	0.2955	0.0000	1,554.0365	1,554.0365	0.0708	0.0000	1,555.8062
Maximum	**5.3181**	**7.3026**	**6.4684**	**0.0361**	**2.1192**	**0.0574**	**2.1750**	**0.5753**	**0.0530**	**0.6269**	**0.0000**	**3,359.1311**	**3,359.1311**	**0.1503**	**0.0000**	**3,362.8738**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.11**	**0.00**	**0.00**	**1.37**	**0.00**	**1.33**	**0.56**	**0.00**	**0.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-4-2022	7-3-2022	0.2767	0.2767
2	7-4-2022	10-3-2022	1.7256	1.7256
3	10-4-2022	1-3-2023	2.5779	2.5779
4	1-4-2023	4-3-2023	2.0408	2.0408
5	4-4-2023	7-3-2023	2.0381	2.0381
6	7-4-2023	10-3-2023	2.0613	2.0613
7	10-4-2023	1-3-2024	2.0853	2.0853
8	1-4-2024	4-3-2024	2.0107	2.0107

9	**4-4-2024**	**7-3-2024**	1.9872	1.9872
10	**7-4-2024**	**10-3-2024**	2.0098	2.0098
11	**10-4-2024**	**1-3-2025**	7.1163	7.1033
12	**1-4-2025**	**4-3-2025**	5.4026	5.3916
13	**4-4-2025**	**7-3-2025**	1.6607	1.6607
		Highest	7.1163	7.1033

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.7919	3.0000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0646	0.0646	1.7000e-004	0.0000	0.0688
Energy	0.1192	1.0833	0.9100	6.5000e-003		0.0823	0.0823		0.0823	0.0823	0.0000	6,019.3600	6,019.3600	0.2415	0.0669	6,045.3328
Mobile	2.7760	13.5745	35.6621	0.1770	15.8396	0.1160	15.9556	4.2436	0.1083	4.3519	0.0000	16,336.3949	16,336.3949	0.5456	0.0000	16,350.0349
Waste						0.0000	0.0000		0.0000	0.0000	690.1409	0.0000	690.1409	40.7862	0.0000	1,709.7948
Water						0.0000	0.0000		0.0000	0.0000	265.3515	1,316.5975	1,581.9490	27.3137	0.6559	2,460.2332
Total	**8.6870**	**14.6581**	**36.6052**	**0.1835**	**15.8396**	**0.1985**	**16.0381**	**4.2436**	**0.1907**	**4.4344**	**955.4924**	**23,672.4170**	**24,627.9094**	**68.8871**	**0.7228**	**26,565.4645**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.7919	3.0000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0646	0.0646	1.7000e-004	0.0000	0.0688
Energy	0.1192	1.0833	0.9100	6.5000e-003		0.0823	0.0823		0.0823	0.0823	0.0000	6,019.3600	6,019.3600	0.2415	0.0669	6,045.3328
Mobile	2.6124	12.2028	31.8391	0.1560	13.7936	0.1023	13.8960	3.6955	0.0955	3.7910	0.0000	14,401.5678	14,401.5678	0.5025	0.0000	14,414.1295
Waste						0.0000	0.0000		0.0000	0.0000	172.5352	0.0000	172.5352	10.1965	0.0000	427.4487
Water						0.0000	0.0000		0.0000	0.0000	212.2812	1,053.2780	1,265.5592	21.8509	0.5247	1,968.1865
Total	**8.5234**	**13.2864**	**32.7823**	**0.1625**	**13.7936**	**0.1848**	**13.9784**	**3.6955**	**0.1780**	**3.8734**	**384.8164**	**21,474.2704**	**21,859.0868**	**32.7916**	**0.5916**	**22,855.1663**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.88**	**9.36**	**10.44**	**11.44**	**12.92**	**6.90**	**12.84**	**12.92**	**6.71**	**12.65**	**59.73**	**9.29**	**11.24**	**52.40**	**18.15**	**13.97**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-961.0000
Total	**-961.0000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/4/2022	4/15/2022	5	10	
2	Site Preparation	Site Preparation	4/4/2022	6/24/2022	5	60	
3	Grading	Grading	6/25/2022	8/5/2022	5	30	
4	Building Construction	Building Construction	8/6/2022	6/20/2025	5	750	
5	Paving	Paving	12/2/2024	1/31/2025	5	45	
6	Architectural Coating	Architectural Coating	12/10/2024	1/20/2025	5	30	

Acres of Grading (Site Preparation Phase): 203

Acres of Grading (Grading Phase): 85

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,425,305; Non-Residential Outdoor: 1,808,435; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	304.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	1,519.00	593.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0000e-003	0.0000	2.0000e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5600e-003	0.0320	0.0395	6.0000e-005		1.6700e-003	1.6700e-003		1.6000e-003	1.6000e-003	0.0000	5.2268	5.2268	9.7000e-004	0.0000	5.2510
Total	**3.5600e-003**	**0.0320**	**0.0395**	**6.0000e-005**	**2.0000e-003**	**1.6700e-003**	**3.6700e-003**	**3.0000e-004**	**1.6000e-003**	**1.9000e-003**	**0.0000**	**5.2268**	**5.2268**	**9.7000e-004**	**0.0000**	**5.2510**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.1000e-004	1.1700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3278	0.3278	1.0000e-005	0.0000	0.3280
Total	**1.7000e-004**	**1.1000e-004**	**1.1700e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3278**	**0.3278**	**1.0000e-005**	**0.0000**	**0.3280**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.0000e-004	0.0000	9.0000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5600e-003	0.0320	0.0395	6.0000e-005		1.6700e-003	1.6700e-003		1.6000e-003	1.6000e-003	0.0000	5.2268	5.2268	9.7000e-004	0.0000	5.2510
Total	**3.5600e-003**	**0.0320**	**0.0395**	**6.0000e-005**	**9.0000e-004**	**1.6700e-003**	**2.5700e-003**	**1.4000e-004**	**1.6000e-003**	**1.7400e-003**	**0.0000**	**5.2268**	**5.2268**	**9.7000e-004**	**0.0000**	**5.2510**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.1000e-004	1.1700e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3278	0.3278	1.0000e-005	0.0000	0.3280
Total	**1.7000e-004**	**1.1000e-004**	**1.1700e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3278**	**0.3278**	**1.0000e-005**	**0.0000**	**0.3280**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1076	0.0000	0.1076	0.0116	0.0000	0.0116	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0216	0.2060	0.1990	2.8000e-004		0.0114	0.0114		0.0105	0.0105	0.0000	24.5860	24.5860	7.9500e-003	0.0000	24.7848
Total	**0.0216**	**0.2060**	**0.1990**	**2.8000e-004**	**0.1076**	**0.0114**	**0.1190**	**0.0116**	**0.0105**	**0.0221**	**0.0000**	**24.5860**	**24.5860**	**7.9500e-003**	**0.0000**	**24.7848**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
Total	**5.1000e-004**	**3.4000e-004**	**3.5200e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9834**	**0.9834**	**2.0000e-005**	**0.0000**	**0.9840**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0484	0.0000	0.0484	5.2300e-003	0.0000	5.2300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0216	0.2060	0.1990	2.8000e-004		0.0114	0.0114		0.0105	0.0105	0.0000	24.5860	24.5860	7.9500e-003	0.0000	24.7848
Total	**0.0216**	**0.2060**	**0.1990**	**2.8000e-004**	**0.0484**	**0.0114**	**0.0598**	**5.2300e-003**	**0.0105**	**0.0157**	**0.0000**	**24.5860**	**24.5860**	**7.9500e-003**	**0.0000**	**24.7848**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
Total	**5.1000e-004**	**3.4000e-004**	**3.5200e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9834**	**0.9834**	**2.0000e-005**	**0.0000**	**0.9840**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0451	0.0000	0.0451	4.8700e-003	0.0000	4.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.0959	0.1185	1.8000e-004		5.0200e-003	5.0200e-003		4.8000e-003	4.8000e-003	0.0000	15.6803	15.6803	2.9000e-003	0.0000	15.7529
Total	**0.0107**	**0.0959**	**0.1185**	**1.8000e-004**	**0.0451**	**5.0200e-003**	**0.0501**	**4.8700e-003**	**4.8000e-003**	**9.6700e-003**	**0.0000**	**15.6803**	**15.6803**	**2.9000e-003**	**0.0000**	**15.7529**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
Total	**5.1000e-004**	**3.4000e-004**	**3.5200e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9834**	**0.9834**	**2.0000e-005**	**0.0000**	**0.9840**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0203	0.0000	0.0203	2.1900e-003	0.0000	2.1900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.0959	0.1185	1.8000e-004		5.0200e-003	5.0200e-003		4.8000e-003	4.8000e-003	0.0000	15.6803	15.6803	2.9000e-003	0.0000	15.7529
Total	**0.0107**	**0.0959**	**0.1185**	**1.8000e-004**	**0.0203**	**5.0200e-003**	**0.0253**	**2.1900e-003**	**4.8000e-003**	**6.9900e-003**	**0.0000**	**15.6803**	**15.6803**	**2.9000e-003**	**0.0000**	**15.7529**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.4000e-004	3.5200e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9834	0.9834	2.0000e-005	0.0000	0.9840
Total	**5.1000e-004**	**3.4000e-004**	**3.5200e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9834**	**0.9834**	**2.0000e-005**	**0.0000**	**0.9840**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0358	0.3665	0.3744	6.0000e-004		0.0194	0.0194		0.0179	0.0179	0.0000	52.2895	52.2895	0.0169	0.0000	52.7123
Total	**0.0358**	**0.3665**	**0.3744**	**6.0000e-004**		**0.0194**	**0.0194**		**0.0179**	**0.0179**	**0.0000**	**52.2895**	**52.2895**	**0.0169**	**0.0000**	**52.7123**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0958	3.1593	0.6342	8.6400e-003	0.2057	8.2100e-003	0.2139	0.0594	7.8500e-003	0.0673	0.0000	820.7021	820.7021	0.0465	0.0000	821.8638
Worker	0.2726	0.1820	1.8724	5.7800e-003	0.6352	4.0400e-003	0.6393	0.1689	3.7200e-003	0.1726	0.0000	522.8153	522.8153	0.0124	0.0000	523.1249
Total	**0.3685**	**3.3413**	**2.5067**	**0.0144**	**0.8409**	**0.0123**	**0.8532**	**0.2283**	**0.0116**	**0.2399**	**0.0000**	**1,343.5173**	**1,343.5173**	**0.0589**	**0.0000**	**1,344.9886**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0358	0.3665	0.3744	6.0000e-004		0.0194	0.0194		0.0179	0.0179	0.0000	52.2894	52.2894	0.0169	0.0000	52.7122
Total	**0.0358**	**0.3665**	**0.3744**	**6.0000e-004**		**0.0194**	**0.0194**		**0.0179**	**0.0179**	**0.0000**	**52.2894**	**52.2894**	**0.0169**	**0.0000**	**52.7122**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0958	3.1593	0.6342	8.6400e-003	0.2057	8.2100e-003	0.2139	0.0594	7.8500e-003	0.0673	0.0000	820.7021	820.7021	0.0465	0.0000	821.8638
Worker	0.2726	0.1820	1.8724	5.7800e-003	0.6352	4.0400e-003	0.6393	0.1689	3.7200e-003	0.1726	0.0000	522.8153	522.8153	0.0124	0.0000	523.1249
Total	**0.3685**	**3.3413**	**2.5067**	**0.0144**	**0.8409**	**0.0123**	**0.8532**	**0.2283**	**0.0116**	**0.2399**	**0.0000**	**1,343.5173**	**1,343.5173**	**0.0589**	**0.0000**	**1,344.9886**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0817	0.8291	0.9200	1.4700e-003		0.0414	0.0414		0.0381	0.0381	0.0000	129.5577	129.5577	0.0419	0.0000	130.6053
Total	**0.0817**	**0.8291**	**0.9200**	**1.4700e-003**		**0.0414**	**0.0414**		**0.0381**	**0.0381**	**0.0000**	**129.5577**	**129.5577**	**0.0419**	**0.0000**	**130.6053**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1684	6.0699	1.3227	0.0209	0.5093	6.2400e-003	0.5156	0.1472	5.9700e-003	0.1532	0.0000	1,983.1627	1,983.1627	0.0804	0.0000	1,985.1734
Worker	0.6277	0.4037	4.2256	0.0138	1.5729	9.7100e-003	1.5826	0.4182	8.9400e-003	0.4271	0.0000	1,246.4108	1,246.4108	0.0274	0.0000	1,247.0953
Total	**0.7961**	**6.4736**	**5.5483**	**0.0347**	**2.0822**	**0.0160**	**2.0982**	**0.5654**	**0.0149**	**0.5803**	**0.0000**	**3,229.5735**	**3,229.5735**	**0.1078**	**0.0000**	**3,232.2687**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0817	0.8291	0.9200	1.4700e-003		0.0414	0.0414		0.0381	0.0381	0.0000	129.5576	129.5576	0.0419	0.0000	130.6051
Total	**0.0817**	**0.8291**	**0.9200**	**1.4700e-003**		**0.0414**	**0.0414**		**0.0381**	**0.0381**	**0.0000**	**129.5576**	**129.5576**	**0.0419**	**0.0000**	**130.6051**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1684	6.0699	1.3227	0.0209	0.5093	6.2400e-003	0.5156	0.1472	5.9700e-003	0.1532	0.0000	1,983.1627	1,983.1627	0.0804	0.0000	1,985.1734
Worker	0.6277	0.4037	4.2256	0.0138	1.5729	9.7100e-003	1.5826	0.4182	8.9400e-003	0.4271	0.0000	1,246.4108	1,246.4108	0.0274	0.0000	1,247.0953
Total	**0.7961**	**6.4736**	**5.5483**	**0.0347**	**2.0822**	**0.0160**	**2.0982**	**0.5654**	**0.0149**	**0.5803**	**0.0000**	**3,229.5735**	**3,229.5735**	**0.1078**	**0.0000**	**3,232.2687**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0775	0.7776	0.9233	1.4900e-003		0.0368	0.0368		0.0338	0.0338	0.0000	130.5988	130.5988	0.0422	0.0000	131.6548
Total	**0.0775**	**0.7776**	**0.9233**	**1.4900e-003**		**0.0368**	**0.0368**		**0.0338**	**0.0338**	**0.0000**	**130.5988**	**130.5988**	**0.0422**	**0.0000**	**131.6548**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1640	6.0625	1.2596	0.0209	0.5132	6.2000e-003	0.5194	0.1483	5.9300e-003	0.1543	0.0000	1,983.5878	1,983.5878	0.0800	0.0000	1,985.5872
Worker	0.5906	0.3654	3.9236	0.0133	1.5850	9.5100e-003	1.5945	0.4214	8.7500e-003	0.4302	0.0000	1,202.0210	1,202.0210	0.0247	0.0000	1,202.6381
Total	**0.7545**	**6.4278**	**5.1832**	**0.0342**	**2.0983**	**0.0157**	**2.1140**	**0.5697**	**0.0147**	**0.5844**	**0.0000**	**3,185.6088**	**3,185.6088**	**0.1047**	**0.0000**	**3,188.2253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0775	0.7776	0.9233	1.4900e-003		0.0368	0.0368		0.0338	0.0338	0.0000	130.5987	130.5987	0.0422	0.0000	131.6546
Total	**0.0775**	**0.7776**	**0.9233**	**1.4900e-003**		**0.0368**	**0.0368**		**0.0338**	**0.0338**	**0.0000**	**130.5987**	**130.5987**	**0.0422**	**0.0000**	**131.6546**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1640	6.0625	1.2596	0.0209	0.5132	6.2000e-003	0.5194	0.1483	5.9300e-003	0.1543	0.0000	1,983.5878	1,983.5878	0.0800	0.0000	1,985.5872
Worker	0.5906	0.3654	3.9236	0.0133	1.5850	9.5100e-003	1.5945	0.4214	8.7500e-003	0.4302	0.0000	1,202.0210	1,202.0210	0.0247	0.0000	1,202.6381
Total	**0.7545**	**6.4278**	**5.1832**	**0.0342**	**2.0983**	**0.0157**	**2.1140**	**0.5697**	**0.0147**	**0.5844**	**0.0000**	**3,185.6088**	**3,185.6088**	**0.1047**	**0.0000**	**3,188.2253**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0337	0.3350	0.4311	7.0000e-004		0.0148	0.0148		0.0136	0.0136	0.0000	61.3444	61.3444	0.0198	0.0000	61.8405
Total	**0.0337**	**0.3350**	**0.4311**	**7.0000e-004**		**0.0148**	**0.0148**		**0.0136**	**0.0136**	**0.0000**	**61.3444**	**61.3444**	**0.0198**	**0.0000**	**61.8405**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0748	2.8198	0.5646	9.7300e-003	0.2410	2.8700e-003	0.2438	0.0696	2.7500e-003	0.0724	0.0000	924.7276	924.7276	0.0370	0.0000	925.6532
Worker	0.2603	0.1553	1.6981	5.9900e-003	0.7441	4.3700e-003	0.7485	0.1978	4.0200e-003	0.2019	0.0000	541.9792	541.9792	0.0105	0.0000	542.2409
Total	**0.3351**	**2.9751**	**2.2627**	**0.0157**	**0.9851**	**7.2400e-003**	**0.9923**	**0.2675**	**6.7700e-003**	**0.2742**	**0.0000**	**1,466.7068**	**1,466.7068**	**0.0475**	**0.0000**	**1,467.8941**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0337	0.3350	0.4311	7.0000e-004		0.0148	0.0148		0.0136	0.0136	0.0000	61.3444	61.3444	0.0198	0.0000	61.8404
Total	**0.0337**	**0.3350**	**0.4311**	**7.0000e-004**		**0.0148**	**0.0148**		**0.0136**	**0.0136**	**0.0000**	**61.3444**	**61.3444**	**0.0198**	**0.0000**	**61.8404**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0748	2.8198	0.5646	9.7300e-003	0.2410	2.8700e-003	0.2438	0.0696	2.7500e-003	0.0724	0.0000	924.7276	924.7276	0.0370	0.0000	925.6532
Worker	0.2603	0.1553	1.6981	5.9900e-003	0.7441	4.3700e-003	0.7485	0.1978	4.0200e-003	0.2019	0.0000	541.9792	541.9792	0.0105	0.0000	542.2409
Total	**0.3351**	**2.9751**	**2.2627**	**0.0157**	**0.9851**	**7.2400e-003**	**0.9923**	**0.2675**	**6.7700e-003**	**0.2742**	**0.0000**	**1,466.7068**	**1,466.7068**	**0.0475**	**0.0000**	**1,467.8941**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4300e-003	0.0569	0.0763	1.2000e-004		2.6400e-003	2.6400e-003		2.4700e-003	2.4700e-003	0.0000	10.1878	10.1878	2.9600e-003	0.0000	10.2619
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4300e-003**	**0.0569**	**0.0763**	**1.2000e-004**		**2.6400e-003**	**2.6400e-003**		**2.4700e-003**	**2.4700e-003**	**0.0000**	**10.1878**	**10.1878**	**2.9600e-003**	**0.0000**	**10.2619**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	3.6000e-004	3.9000e-003	1.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.1961	1.1961	2.0000e-005	0.0000	1.1967
Total	**5.9000e-004**	**3.6000e-004**	**3.9000e-003**	**1.0000e-005**	**1.5800e-003**	**1.0000e-005**	**1.5900e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.1961**	**1.1961**	**2.0000e-005**	**0.0000**	**1.1967**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4300e-003	0.0447	0.0763	1.2000e-004		2.6400e-003	2.6400e-003		2.4700e-003	2.4700e-003	0.0000	10.1878	10.1878	2.9600e-003	0.0000	10.2619
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4300e-003**	**0.0447**	**0.0763**	**1.2000e-004**		**2.6400e-003**	**2.6400e-003**		**2.4700e-003**	**2.4700e-003**	**0.0000**	**10.1878**	**10.1878**	**2.9600e-003**	**0.0000**	**10.2619**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	3.6000e-004	3.9000e-003	1.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.1961	1.1961	2.0000e-005	0.0000	1.1967
Total	**5.9000e-004**	**3.6000e-004**	**3.9000e-003**	**1.0000e-005**	**1.5800e-003**	**1.0000e-005**	**1.5900e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.1961**	**1.1961**	**2.0000e-005**	**0.0000**	**1.1967**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4200e-003	0.0560	0.0797	1.3000e-004		2.4900e-003	2.4900e-003		2.3300e-003	2.3300e-003	0.0000	10.6513	10.6513	3.1000e-003	0.0000	10.7287
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4200e-003**	**0.0560**	**0.0797**	**1.3000e-004**		**2.4900e-003**	**2.4900e-003**		**2.3300e-003**	**2.3300e-003**	**0.0000**	**10.6513**	**10.6513**	**3.1000e-003**	**0.0000**	**10.7287**

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	3.4000e-004	3.7600e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2009	1.2009	2.0000e-005	0.0000	1.2015
Total	**5.8000e-004**	**3.4000e-004**	**3.7600e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2009**	**1.2009**	**2.0000e-005**	**0.0000**	**1.2015**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4200e-003	0.0433	0.0797	1.3000e-004		2.4900e-003	2.4900e-003		2.3300e-003	2.3300e-003	0.0000	10.6513	10.6513	3.1000e-003	0.0000	10.7287
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4200e-003**	**0.0433**	**0.0797**	**1.3000e-004**		**2.4900e-003**	**2.4900e-003**		**2.3300e-003**	**2.3300e-003**	**0.0000**	**10.6513**	**10.6513**	**3.1000e-003**	**0.0000**	**10.7287**

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	3.4000e-004	3.7600e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2009	1.2009	2.0000e-005	0.0000	1.2015
Total	**5.8000e-004**	**3.4000e-004**	**3.7600e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2009**	**1.2009**	**2.0000e-005**	**0.0000**	**1.2015**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.4705					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4500e-003	9.7500e-003	0.0145	2.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	2.0426	2.0426	1.2000e-004	0.0000	2.0455
Total	**4.4719**	**9.7500e-003**	**0.0145**	**2.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**2.0426**	**2.0426**	**1.2000e-004**	**0.0000**	**2.0455**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2200e-003	4.4700e-003	0.0480	1.6000e-004	0.0194	1.2000e-004	0.0195	5.1500e-003	1.1000e-004	5.2600e-003	0.0000	14.6908	14.6908	3.0000e-004	0.0000	14.6984
Total	**7.2200e-003**	**4.4700e-003**	**0.0480**	**1.6000e-004**	**0.0194**	**1.2000e-004**	**0.0195**	**5.1500e-003**	**1.1000e-004**	**5.2600e-003**	**0.0000**	**14.6908**	**14.6908**	**3.0000e-004**	**0.0000**	**14.6984**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.4705					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4500e-003	9.7500e-003	0.0145	2.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	2.0426	2.0426	1.2000e-004	0.0000	2.0455
Total	**4.4719**	**9.7500e-003**	**0.0145**	**2.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**2.0426**	**2.0426**	**1.2000e-004**	**0.0000**	**2.0455**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2200e-003	4.4700e-003	0.0480	1.6000e-004	0.0194	1.2000e-004	0.0195	5.1500e-003	1.1000e-004	5.2600e-003	0.0000	14.6908	14.6908	3.0000e-004	0.0000	14.6984
Total	**7.2200e-003**	**4.4700e-003**	**0.0480**	**1.6000e-004**	**0.0194**	**1.2000e-004**	**0.0195**	**5.1500e-003**	**1.1000e-004**	**5.2600e-003**	**0.0000**	**14.6908**	**14.6908**	**3.0000e-004**	**0.0000**	**14.6984**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e-003	8.0200e-003	0.0127	2.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	1.7873	1.7873	1.0000e-004	0.0000	1.7897
Total	**3.9128**	**8.0200e-003**	**0.0127**	**2.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**1.7873**	**1.7873**	**1.0000e-004**	**0.0000**	**1.7897**

3.7 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9300e-003	3.5400e-003	0.0387	1.4000e-004	0.0170	1.0000e-004	0.0171	4.5100e-003	9.0000e-005	4.6000e-003	0.0000	12.3459	12.3459	2.4000e-004	0.0000	12.3518
Total	**5.9300e-003**	**3.5400e-003**	**0.0387**	**1.4000e-004**	**0.0170**	**1.0000e-004**	**0.0171**	**4.5100e-003**	**9.0000e-005**	**4.6000e-003**	**0.0000**	**12.3459**	**12.3459**	**2.4000e-004**	**0.0000**	**12.3518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.9116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2000e-003	8.0200e-003	0.0127	2.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	1.7873	1.7873	1.0000e-004	0.0000	1.7897
Total	**3.9128**	**8.0200e-003**	**0.0127**	**2.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**1.7873**	**1.7873**	**1.0000e-004**	**0.0000**	**1.7897**

3.7 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9300e-003	3.5400e-003	0.0387	1.4000e-004	0.0170	1.0000e-004	0.0171	4.5100e-003	9.0000e-005	4.6000e-003	0.0000	12.3459	12.3459	2.4000e-004	0.0000	12.3518
Total	**5.9300e-003**	**3.5400e-003**	**0.0387**	**1.4000e-004**	**0.0170**	**1.0000e-004**	**0.0171**	**4.5100e-003**	**9.0000e-005**	**4.6000e-003**	**0.0000**	**12.3459**	**12.3459**	**2.4000e-004**	**0.0000**	**12.3518**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

Implement Trip Reduction Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.6124	12.2028	31.8391	0.1560	13.7936	0.1023	13.8960	3.6955	0.0955	3.7910	0.0000	14,401.5678	14,401.5678	0.5025	0.0000	14,414.1295
Unmitigated	2.7760	13.5745	35.6621	0.1770	15.8396	0.1160	15.9556	4.2436	0.1083	4.3519	0.0000	16,336.3949	16,336.3949	0.5456	0.0000	16,350.0349

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	12,369.70	6,076.34	6076.34	42,192,202	36,742,376
Total	12,369.70	6,076.34	6,076.34	42,192,202	36,742,376

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	9.50	7.30	15.00	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.572580	0.033245	0.188169	0.107110	0.013644	0.004172	0.015876	0.056665	0.001183	0.001302	0.004809	0.000595	0.000651

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,840.0692	4,840.0692	0.2189	0.0453	4,859.0340
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,840.0692	4,840.0692	0.2189	0.0453	4,859.0340
NaturalGas Mitigated	0.1192	1.0833	0.9100	6.5000e-003		0.0823	0.0823		0.0823	0.0823	0.0000	1,179.2908	1,179.2908	0.0226	0.0216	1,186.2988
NaturalGas Unmitigated	0.1192	1.0833	0.9100	6.5000e-003		0.0823	0.0823		0.0823	0.0823	0.0000	1,179.2908	1,179.2908	0.0226	0.0216	1,186.2988

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	2.20991e+007	0.1192	1.0833	0.9100	6.5000e-003		0.0823	0.0823		0.0823	0.0823	0.0000	1,179.2908	1,179.2908	0.0226	0.0216	1,186.2988
Total		**0.1192**	**1.0833**	**0.9100**	**6.5000e-003**		**0.0823**	**0.0823**		**0.0823**	**0.0823**	**0.0000**	**1,179.2908**	**1,179.2908**	**0.0226**	**0.0216**	**1,186.2988**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	2.20991e+007	0.1192	1.0833	0.9100	6.5000e-003		0.0823	0.0823		0.0823	0.0823	0.0000	1,179.2908	1,179.2908	0.0226	0.0216	1,186.2988
Total		**0.1192**	**1.0833**	**0.9100**	**6.5000e-003**		**0.0823**	**0.0823**		**0.0823**	**0.0823**	**0.0000**	**1,179.2908**	**1,179.2908**	**0.0226**	**0.0216**	**1,186.2988**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	1.66376e+007	4,840.0692	0.2189	0.0453	4,859.0340
Total		**4,840.0692**	**0.2189**	**0.0453**	**4,859.0340**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	1.66376e+007	4,840.0692	0.2189	0.0453	4,859.0340
Total		**4,840.0692**	**0.2189**	**0.0453**	**4,859.0340**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.7919	3.0000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0646	0.0646	1.7000e-004	0.0000	0.0688
Unmitigated	5.7919	3.0000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0646	0.0646	1.7000e-004	0.0000	0.0688

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8382					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.9506					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0500e-003	3.0000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0646	0.0646	1.7000e-004	0.0000	0.0688
Total	**5.7919**	**3.0000e-004**	**0.0332**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0646**	**0.0646**	**1.7000e-004**	**0.0000**	**0.0688**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8382					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.9506					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0500e-003	3.0000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0646	0.0646	1.7000e-004	0.0000	0.0688
Total	**5.7919**	**3.0000e-004**	**0.0332**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0646**	**0.0646**	**1.7000e-004**	**0.0000**	**0.0688**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,265.5592	21.8509	0.5247	1,968.1865
Unmitigated	1,581.9490	27.3137	0.6559	2,460.2332

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	836.401 / 0	1,581.9490	27.3137	0.6559	2,460.2332
Total		**1,581.9490**	**27.3137**	**0.6559**	**2,460.2332**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	669.121 / 0	1,265.5592	21.8509	0.5247	1,968.1865
Total		**1,265.5592**	**21.8509**	**0.5247**	**1,968.1865**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	172.5352	10.1965	0.0000	427.4487
Unmitigated	690.1409	40.7862	0.0000	1,709.7948

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	3399.86	690.1409	40.7862	0.0000	1,709.7948
Total		**690.1409**	**40.7862**	**0.0000**	**1,709.7948**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	849.965	172.5352	10.1965	0.0000	427.4487
Total		**172.5352**	**10.1965**	**0.0000**	**427.4487**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	42	8.00	260	17	0.20	Diesel

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-961.0000	0.0000	0.0000	-961.0000

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Cropland	155 / 0	-961.0000	0.0000	0.0000	-961.0000
Total		**-961.0000**	**0.0000**	**0.0000**	**-961.0000**

APPENDIX D
BIOLOGICAL RESOURCE REPORTS

MOORE BIOLOGICAL CONSULTANTS

April 22, 2021

Mr. Charlie Simpson
BaseCamp Environmental
802 West Lodi Avenue
Lodi, CA 95240

Subject: "MARIPOSA INDUSTRIAL PARK", SAN JOAQUIN COUNTY, CALIFORNIA: BIOLOGICAL ASSESSMENT

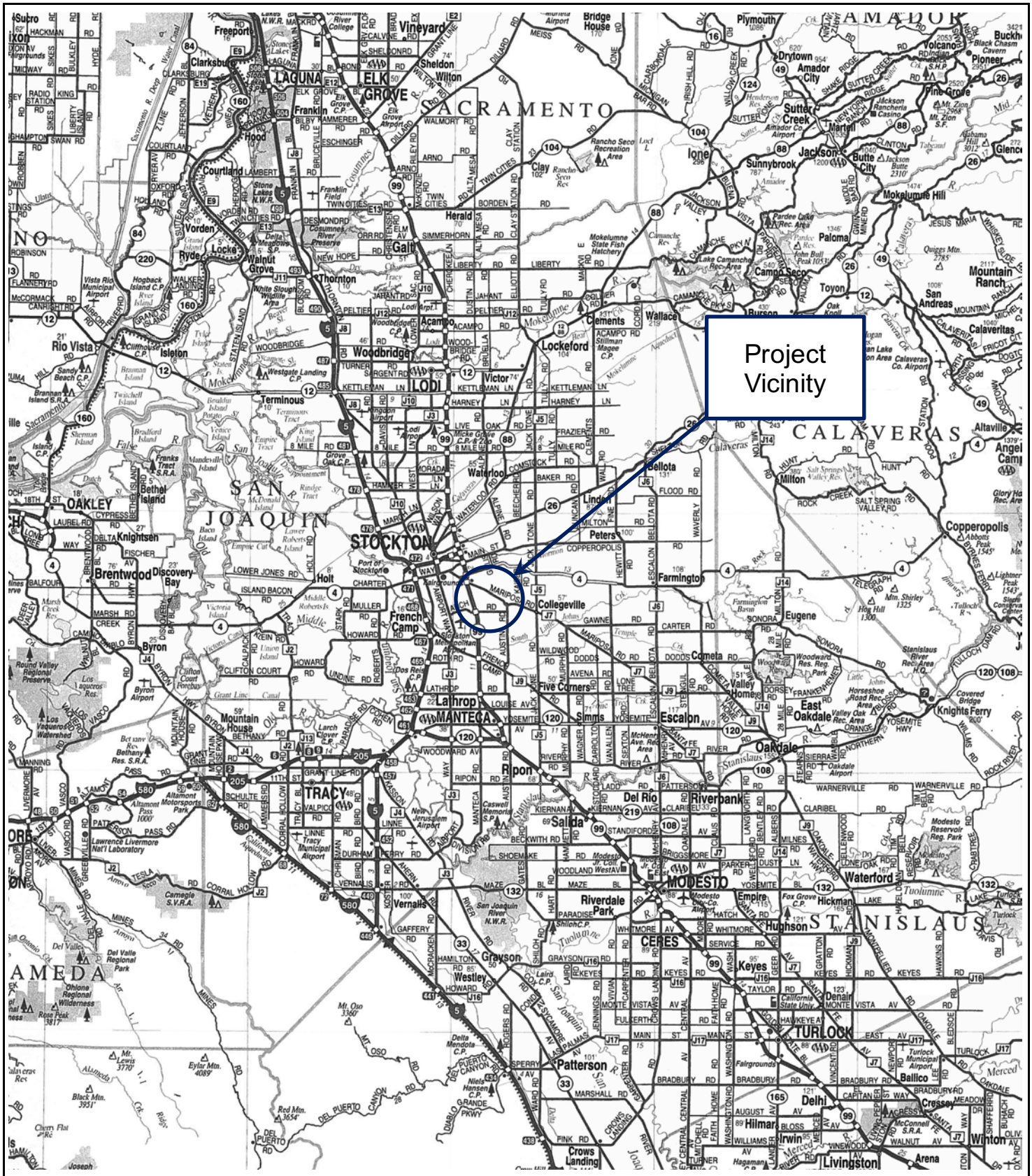
Dear Charlie:

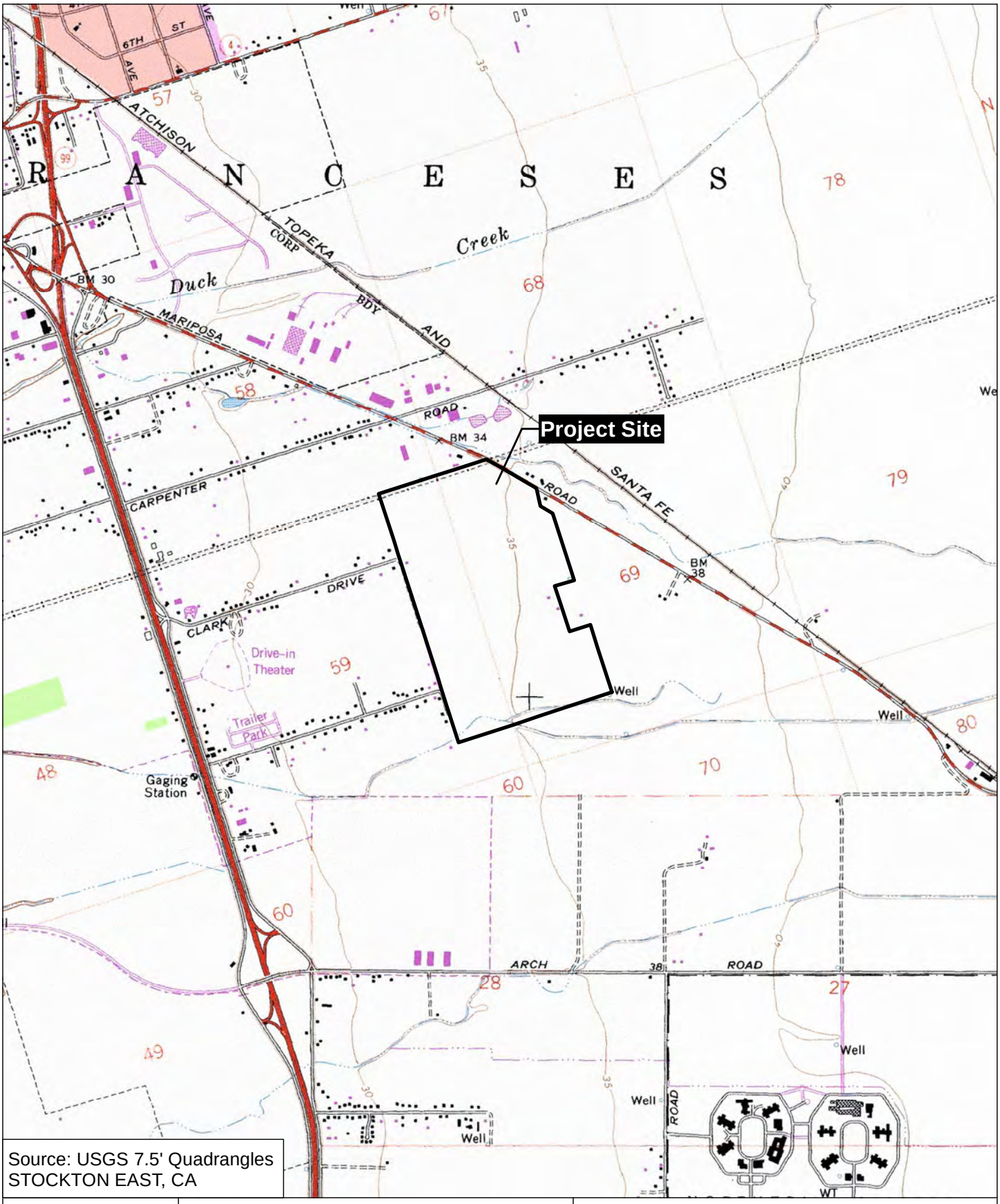
Thank you for asking Moore Biological Consultants to prepare a biological assessment for this site southeast of Stockton, in San Joaquin County, California (Figures 1 and 2). The purpose of this assessment is to describe existing biological resources in the site, identify potentially significant impacts to biological resources from industrial development, and provide recommendations for how to reduce those impacts to a less-than-significant level. The work involved reviewing databases, aerial photographs, and documents, and conducting field surveys to document vegetation communities, potentially jurisdictional Waters of the U.S. and/or wetlands, and potentially suitable habitat for or presence of special-status species. This report details the methodology and results of our investigation.

Project Overview

The 203+/- acre project site is envisioned for industrial development concurrent with industrial growth in this portion of San Joaquin County. The proposed development includes 7 industrial "high-cube" warehouses encompassing a total of 3,616,870 square feet (see Conceptual Site Plan in Attachment A). The buildings will range in size from 64,260 square feet to 1,021,444+/- square feet.

10330 Twin Cities Road, Suite 30 • Galt, CA 95632
(209) 745–1159 • Fax (209) 745-7513
e-mail: moorebio@softcom.net


Project Vicinity
SACRAMENTO
SAN JOAQUIN
CALAVERAS
STANISLAUS
AMADOR
STOCKTON
LODI
MANTECA
TRACY
MODESTO
TURLOCK
Lockeford
Woodbridge
Lathrop
Ripon
Escalon
Oakdale
Waterford
Hughson
Patterson
Newman
Crows Landing
Livingston
Atwater
Merced
Los Banos
Gustine
Dos Palos
Firebaugh
Mendota
Coalinga
Huron
Avenal
Kettleman City
Lemoore
Hanford
Corcoran
Tulare
Visalia
Porterville
Delano
Wasco
Shafter
Bakersfield
Arvin
Lamont
Pixley
Earlimart
Alpaugh
Tipton
Ivanhoe
Lindsay
Exeter
Farmersville
Dinuba
Reedley
Sanger
Selma
Kingsburg
Orange Cove
Parlier
Fowler
Caruthers
Riverdale
Laton
Kerman
Fresno
Clovis
Madera
Chowchilla
Oakhurst
Coarsegold
Yosemite Junction
Mariposa
Merced Falls
Snelling
Planada
Le Grand
Winton
Delhi
Hilmar
Irwin
Ballico
Cressey
Denair
Keyes
Empire
Grayson
Westley
Vernalis
Tracy
Banta
Byron
Discovery Bay
Brentwood
Oakley
Knightsen
Bethel Island
Rio Vista
Isleton
Walnut Grove
Thornton
Galt
Herald
Elk Grove
Laguna
Vineyard
Sheldon
Wilton
Courtland
Hood
Freeport
Clarksburg
Locke
Ryde
Vorden
Terminous
Acampo
Lodi
Victor
Clements
Wallace
Bellota
Linden
Peters
Farmington
Copperopolis
Milton
Valley Springs
Salt Springs Valley Res.
Calaveritas
Altaville
Angels Camp
Mountain Ranch
San Andreas
Paloma
Campo Seco
Toyon
Jackson
Sutter Creek
Amador City
Drytown
Plymouth
Volcano
Pine Grove
Pioneer
Ione
Sunnybrook
Clay
Mokelumne Hill
Rancho Seco Recreation Area
Rancho Seco Nuclear Generating Station
Lake Camanche
Lake Camanche Rec. Area
Pardee Lake
Pardee Rec. Area
Mokelumne State Fish Hatchery
Mokelumne Aqueduct
Bridge House
Meiss
Irish Hill
Willow Creek
Michigan Bar
Carbondale
Dillard
Eschinger
Franklin
Hammerer
Bilby
Bruceville
Elk Grove Airport
Elk Grove C.P.
Franklin C.P.
Franklin Field
Twin Cities
Arno
Walmort
Alta Mesa
Simmerhorn
Desmond
Cosumnes River Preserve
Delta Meadows S.P.
Stone Lakes N.W.R.
Vista Rio Municipal Airport
Hogback Island C.P.
White Slough Wildlife Area
Clifthouse C.P.
Westgate Landing C.P.
Sandy Beach C.P.
Brannan Island S.R.A.
Franks Tract S.R.A.
Mokelumne Aqueduct
Woodbridge C.P.
Micke Grove C.P. & Zoo
Grupe Oak C.P.
Lodi Airport
Kingdon Airport
Stockton Metropolitan Airport
Port of Stockton
Fairgrounds
Weber Point Events Center
Mormon Channel
Calaveras River
Mormon Slough
Duck Creek
Smith Canal
Old River
Middle River
Victoria Canal
Empire Cut
Grant Line Canal
Old Kasson
Old Alameda
Old Tracy
Old Paradise
Old Riverbed
Old Stockton
Old Calaveras
Old Mormon
Old Waterloo
Old Oak
Old Hammer
Old Jahant
Old Peltier
Old Woodbridge
Old Turner
Old Kettleman
Old Harney
Old Live Oak
Old Flood
Old Milton
Old Copperopolis
Old Escalon
Old Bellota
Old Linden
Old Peters
Old Farmington
Old Collegeville
Old Gawne
Old Carter
Old Sonora
Old Eugene
Old Cometa
Old Valley Home
Old Dorsey
Old Five Corners
Old Simms
Old Yosemite
Old Escalon
Old Oakdale
Old Ripon
Old Del Rio
Old Riverbank
Old Salida
Old Modesto
Old Waterford
Old Hickman
Old Empire
Old Riverdale Park
Old Ceres
Old Hughson
Old Keyes
Old Denair
Old Turlock
Old Delhi
Old Hilmar
Old Irwin
Old Ballico
Old Cressey
Old Winton
Old Livingston
Old Arena
Old Crows Landing
Old Patterson
Old Grayson
Old Westley
Old Vernalis
Old Tracy
Old Banta
Old Byron
Old Discovery Bay
Old Brentwood
Old Oakley
Old Knightsen
Old Bethel Island
Old Rio Vista
Old Isleton
Old Walnut Grove
Old Thornton
Old Galt
Old Herald
Old Elk Grove
Old Laguna
Old Vineyard
Old Sheldon
Old Wilton
Old Courtland
Old Hood
Old Freeport
Old Clarksburg
Old Locke
Old Ryde
Old Vorden
Old Terminous
Old Acampo
Old Lodi
Old Victor
Old Clements
Old Wallace
Old Lockeford
Old Woodbridge
Old Lathrop
Old Manteca
Old Tracy
Old Modesto
Old Turlock
Old Merced
Old Livingston
Old Arena
Old Crows Landing
Old Patterson
Old Newman
Old Gustine
Old Los Banos
Old Dos Palos
Old Firebaugh
Old Mendota
Old Coalinga
Old Huron
Old Avenal
Old Kettleman City
Old Lemoore
Old Hanford
Old Corcoran
Old Tulare
Old Visalia
Old Porterville
Old Delano
Old Wasco
Old Shafter
Old Bakersfield
Old Arvin
Old Lamont
Old Pixley
Old Earlimart
Old Alpaugh
Old Tipton
Old Ivanhoe
Old Lindsay
Old Exeter
Old Farmersville
Old Dinuba
Old Reedley
Old Sanger
Old Selma
Old Kingsburg
Old Orange Cove
Old Parlier
Old Fowler
Old Caruthers
Old Riverdale
Old Laton
Old Kerman
Old Fresno
Old Clovis
Old Madera
Old Chowchilla
Old Oakhurst
Old Coarsegold
Old Yosemite Junction
Old Mariposa
Old Merced Falls
Old Snelling
Old Planada
Old Le Grand
Old Winton
Old Delhi
Old Hilmar
Old Irwin
Old Ballico
Old Cressey
Old Denair
Old Keyes
Old Empire



Source: USGS 7.5' Quadrangles
STOCKTON EAST, CA

Figure 2

Moore Biological Consultants

0 1,000 2,000
Feet

N
W E
S

Map Date: 01/14/2021

USGS

Mariposa Industrial Park

San Joaquin County, CA

C:\Users\owner\Documents\EFC_INC\Projects\Moore Biological\Mariposa_Industrial_Park_Dark_Horse\MXD\RA\mariposa_ind_park_usgs_figure_2.mxd

Site development would involve the construction of required frontage improvements, including signalization improvements, concrete curb, gutter, and sidewalk along Mariposa Road. On-site wastewater and water lines would be installed and connected to offsite mains. Storm water will be treated on-site and then released in to North Littlejohn's Creek via a new storm drain outfall.

Work within potentially jurisdictional Waters of the U.S. and wetlands will be minimized to the maximum extent practicable through project design. With the exception of the storm drain outfall, the North Littlejohns Creek corridor will be avoided. Approximately 0.9+/- acres of seasonal wetlands will be filled. Depending on final site design, approximately 1,200+/- feet of a tributary to North Littlejohns Creek may need to be filled.

Methods

Prior to the field surveys, we conducted a search of California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB, 2021). The CNDDB search was conducted on the USGS 7.5-minute Stockton West, Stockton East, Lathrop, and Manteca topographic quadrangles, encompassing approximately 240+/- square miles surrounding the site (Attachment B). The United States Fish and Wildlife Service (USFWS*)* IPaC Trust Resource Report of Federally Threatened and Endangered species that may occur in or be affected by projects in the project vicinity was also reviewed (Attachment B). This information was used to identify special-status wildlife and plant species that have been previously documented in the vicinity or have the potential to occur based on suitable habitat and geographical distribution. Additionally, the CNDDB depicts the locations of sensitive habitats. The USFWS on-line-maps of designated critical habitat in the area were also downloaded.

Field surveys were conducted on August 26 and November 5, 2020 and February 22 and 23, and April 20, 2021. The surveys consisted of walking throughout the site making observations of habitat conditions and noting

surrounding land uses, habitat types, and plant and wildlife species. The fieldwork included an assessment of potentially jurisdictional Waters of the U.S. and wetlands as defined by the U.S. Army Corps of Engineers (ACOE, 1987; 2008) and a search for special-status species and suitable habitat for special-status species (e.g., blue elderberry shrubs, vernal pools).

Trees in and near the site were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*). The grassland areas in the site were searched for burrowing owls (*Athene cunicularia*) or ground squirrel burrows with evidence of past occupancy.

Under subcontract to Moore Biological, Helm Consulting, Inc. conducted dry-season and wet-season protocol-level surveys for vernal pool invertebrates (i.e., fairy shrimp and tadpole shrimp) in the seasonal wetland in the site. The dry-season surveys were conducted on November 5, 2020, and the wet-season surveys were conducted every two weeks from December 22, 2020 through March 20, 2021.

Results

GENERAL SETTING: The project site is just east of Stockton, in San Joaquin County, California. The site is within an unnumbered Section, in Township 1 North, Range 7 East of the USGS 7.5-minute Stockton East topographic quadrangle (Figure 2). With the exception of several excavated ponds in the central part of the site related to an old aquaculture facility, the remainder of the site is essentially level and is at an elevation of approximately 35 feet above mean sea level.

There are a few different habitat types within the project site (Figure 3 and photographs in Attachment C). The north part of the site consists of a mature walnut orchard. The remainder of the site contains areas of leveled fallow fields, remnant fish ponds from a prior aquaculture facility, and a few home sites. A few

Figure 3

Moore Biological Consultants

0 500 1,000
Feet

N
W E
S

Map Date: 01/14/2021
Aerial Source: Google Earth (08/2018)

AERIAL

Mariposa Industrial Park

San Joaquin County, CA

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seasonal wetlands, a section of North Littlejohns Creek and a small tributary to North Littlejohns Creek are situated in the south part of the site.

Land uses in this portion of San Joaquin County are primarily agricultural and residential. Lands generally south of the site have been converted into industrial use within the last several years. Mariposa Road borders the northeast part of the site and the remainder of the site is bordered by open grassland and agricultural and residential parcels. The east ends of Clark Drive and Marfargoa Road abut the west edge of the site.

VEGETATION: The grasslands in the site are best described as ruderal annual grassland that has been highly disturbed from periodic mowing and/or disking, livestock grazing, and development. California annual grassland series (Sawyer and Keeler-Wolf, 1995) best describes the disturbed grassland vegetation in the site. Grasses including oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), and foxtail barley (*Hordeum murinum*), are dominant grass species in the site. Other grassland species such as black mustard (*Brassica nigra*), prickly lettuce (*Lactuca serriola*), yellow star thistle (*Centaurea solstitialis*), field bindweed (*Convolvulus arvensis*), filaree (*Erodium botrys*), and common mallow (*Malva neglecta*) are intermixed with the grasses. Table 1 is a list of plant species observed in the site.

There are several trees in the site. Most of the trees are growing along the banks of North Littlejohns Creek and the tributary to North Littlejohns Creek (see photographs in Attachment C). Valley oak (*Quercus lobata*) is the dominant tree species along the creeks, along with a few pines (*Pinus sp.*), Fremont's cottonwood (*Populus fremontii*) and blue gums (*Eucalyptus sp.*). There are also walnut trees in the orchard, trees associated with the residences and structures in the south part of the site, a few oaks along the east fence line, and a cluster of trees in the east-central part of the site near the remnant basins. Dominant trees within these areas include blue gum, black walnut (*Juglans californica*), stonefruit and nut trees, and common ornamental landscape trees and shrubs.

TABLE 1

PLANT SPECIES OBSERVED IN THE PROJECT SITE

Alopecurus saccatus	Pacific meadow-foxtail
Asclepias fascicularis	narrow-leaf milkweed
Avena sp.	wild oat
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft brome
Capsella bursa-pastoris	shepherd's purse
Carduus pycnocephalus	Italian thistle
Centaurea solstitialis	yellow star thistle
Cirsium vulgare	bull thistle
Convolvulus arvensis	field bindweed
Cynara cardunculus	artichoke thistle
Cyperus eragrostis	tall flat sedge
Epilobium brachycarpum	fireweed
Erodium botrys	filaree
Eucalyptus sp.	blue gum tree
Galium aparine	common bedstraw
Geranium molle	soft geranium
Hordeum marinum	seaside barley
Hordeum murinum	foxtail barley
Lactuca serriola	prickly lettuce
Leontodon saxatilis	long-beaked hawkbit
Leymus triticoides	creeping wild rye
Lolium perenne	perennial ryegrass
Malva neglecta	common mallow
Mentha pulegium	pennyroyal
Paspalum dilatatum	golden crown grass

TABLE 1
PLANT SPECIES OBSERVED IN THE PROJECT SITE (continued)

Phalaris paradoxa	Mediterranean canary grass
Pinus sp.	ornamental pine
Plagiobothrys stipitatus	stalked popcorn-flower
Polypogon monspeliensis	annual rabbit's-foot grass
Populus fremontii	Fremont's cottonwood
Quercus lobata	valley oak
Raphanus sativa	radish
Rumex crispus	curly dock
Salsola tragus	Russian thistle
Trifolium hirtum	rose clover
Vicia americana	American purple *v*etch

There are seasonal wetlands in the south part of the site that contain hydrophytic species common to seasonal wetland habitats. Seaside barley (*Hordeum marinum*), bearded popcorn flower (*Plagiobothrys stipitatus*), curly dock (*Rumex crispus*), annual rabbit's-foot grass (*Polypogon monspeliensis*), and Pacific meadow foxtail (*Alopecurus saccatus*) are the dominant hydrophytes in the seasonal wetlands. The beds of North Littlejohns Creek and the tributary to North Littlejohns Creek support a few of these same hydrophytes, as well as tall flat sedge (*Cyperus eragrostis*) and pennyroyal (*Mentha pulegium*).

No blue elderberry (*Sambucus mexicana*) shrubs were observed in or adjacent to the project site.

WILDLIFE: Several bird species were observed during the field surveys, all of which are common species found in agricultural and riparian areas of San Joaquin County (Table 2). Turkey vulture (*Cathartes aura*), American kestrel

TABLE 2

WILDLIFE SPECIES DOCUMENTED IN THE PROJECT SITE

Birds	
Great egret	*Casmerodius albus*
Turkey vulture	*Cathartes aura*
White-tailed kite	*Elanus caeruleus*
Swainson's hawk	*Buteo swainsoni*
Red-shouldered hawk	*Buteo lineatus*
Red-tailed hawk	*Buteo jamaicensis*
American kestrel	*Falco sparverius*
Rock dove	*Columba livia*
Mourning dove	*Zenaida macroura*
Acorn woodpecker	*Melanerpes formicivorus*
Northern flicker	*Colaptes auratus*
Black phoebe	*Sayornis nigricans*
Say's phoebe	*Sayornis saya*
California scrub jay	*Aphelocoma californica*
American crow	*Corvus brachyrhynchos*
Northern mockingbird	*Mimus polyglottos*
European starling	*Sturnus vulgaris*
White-crowned sparrow	*Zonotrichia leucophrys*
Western meadowlark	*Sturnella neglecta*
Brewer's blackbird	*Euphagus cyanocephalus*
House finch	*Haemorhous mexicanus*
Mammals	
California ground squirrel	*Otospermophilus beecheyi*
Red fox	*Vulpes vulpes*
Coyote	*Canis latrans*
Raccoon	*Procyon lotor*
Reptiles	
western fence lizard	*Sceloporus occidentalis*

(*Falco sparverius*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), and white-crowned sparrow (*Zonotrichia leucophrys*) are representative of the avian species observed in the site.

There are several potential nest trees in the site and in close proximity to the site that are suitable for nesting raptors and other protected migratory birds, including Swainson's hawk. A raptor stick nest was observed in a tree along the tributary to North Littlejohns Creek and another raptor nest was observed in a tree just off-site to the south. While Swainson's hawk and white-tailed kite were observed soaring over the south part of the site during the April 20, 2021 survey, neither of these nests appeared to be occupied by raptors during any of the field surveys. Due to the presence of large trees and suitable raptor foraging habitat (i.e., open fields) in and near the site, it is possible one or more pairs of raptors nest in trees in or near the site during some years. Smaller birds, such as songbirds, likely nest within the small trees and grasslands in the site, particularly within trees along North Littlejohns Creek and the tributary to North Littlejohns Creek.

A limited variety of mammals common to agricultural areas are likely occur in the project site. A coyote (*Canis latrans*) and a red fox (*Vulpes vulpes*) were observed in an adjacent parcel during one of the fields surveys. Tracks from raccoon (*Procyon lotor*), sign of Botta's pocket gopher (*Thomomys bottae*), and California ground squirrels (*Otospermophilus beecheyi*) and their burrows were also observed within the site. Other common species such as black-tailed hare (*Lepus californicus*), striped skunk (*Mephitis mephitis*), desert cottontail (*Sylvilagus audubonii*), and Virginia opossum (*Didelphis virginiana*) are expected to occur in the project site on occasion.

Due to lack of suitable habitat, few amphibians and reptiles are expected to use habitats in the site and western fence lizard (*Sceloporus occidentalis*) was the only amphibian or reptile observed within the site. Other common species including Pacific chorus frog (*Pseudacris regilla*) and western terrestrial garter snake (*Thamnophis elegans*) may occur in the site on occasion.

North Littlejohns Creek and the tributary to North Littlejohns Creek are intermittent, and both creeks are dry much of the year. Both creeks convey agricultural tailwater from properties to the east on a periodic basis. Neither of these creeks provide suitable aquatic habitat for fish.

WATERS OF THE U.S. AND WETLANDS: Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into any waters of the U.S., including wetlands. Some jurisdictional waters of the U.S. also fall under the jurisdiction of CDFW and/or the California Regional Water Quality Control Board (RWQCB).

"Waters of the U.S.", as defined in 33 CFR 328.4, encompasses Territorial Seas, Tidal Waters, and Non-Tidal Waters; Non-Tidal Waters includes interstate and intrastate rivers and streams, as well as their intermittent tributaries. The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the "ordinary high water mark". The ordinary high water mark is established by physical characteristics such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris.

Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* and Regional Supplement (ACOE, 1987; 2008). Jurisdictional wetlands are usually adjacent to or hydrologically associated with Waters of the U.S. Isolated wetlands are outside federal jurisdiction, but may be regulated by RWQCB under the State Wetlands Program.

Potentially jurisdictional Waters of the U.S. and wetlands include North Littlejohns Creek, the tributary to North Littlejohns Creek, and five seasonal wetlands (Figure 4). There are approximately 1.5 acres of potentially jurisdictional Waters

Figure 4

Moore Biological Consultants

0 500 1,000
Feet

N
W E
S

Map Date: 04/22/2021
Aerial Source: Google Earth (03/2016)

Potential Waters of the U.S. and Wetlands

Mariposa Industrial Park

San Joaquin County, CA

C:\Users\owner\Documents\EFC_INC\Projects\Moore Biological\Mariposa_Industrial_Park_Dark_Horse\MXD\BA\mariposa_ind_park_waters_figure_4.mxd

of the U.S. and wetlands in the site including 0.6+/-acres of intermittent creeks and 0.9+/-acres of seasonal wetlands.

Review of the USGS topographic map (Figure 2) reveals that North Littlejohns Creek is mapped as an intermittent "blue-line" drainage. North Littlejohns Creek is also depicted in the National Wetland Inventory (NWI) as a “Freshwater Emergent Wetland”. The tributary to North Littlejohns Creek is also mapped as a “blue-line” drainage on the USGS topographic map (Figure 2) and is mapped as a “Riverine” feature in the NWI.

North Littlejohns Creek flows in the site from the south and flows generally west to the west edge of the site (Figure 4). The potential jurisdictional limit of this section of North Little Johns Creek is defined by an ordinary high water mark (OHWM). North Littlejohns Creek is intermittent, primarily conveying runoff water during the winter and agricultural tail water on occasion. The channel is essentially trapezoidal with an average width of approximately 25 feet, as defined by the OHWM along the banks. North Littlejohns Creek is channelized and incised 3 to 5 feet below the adjacent fields. Substrates in the active channel are dirt and a little bit of gravel. There is very little wetland vegetation in or along the on-site section of North Littlejohns Creek; vegetation in the channel primarily consists of upland grasses and weeds. Several large trees surround the creek corridor, primarily mature valley oaks. There is also trash in the channel and substantial quantities of woody debris

The tributary to North Littlejohns Creek flows in the site from the south and flows generally west, meeting up with North Littlejohns Creek near the south edge of the site (Figure 4). The potential jurisdictional limit of this creek is also defined by an ordinary high water mark. The characteristics of this tributary are similar to the North Littlejohns Creek channel, with large valley oaks along the creek corridor. The channel is much smaller than that of North Littlejohns Creek, with an average width of approximately 5 feet, as defined by the OHWM along the banks of the creek.

North Littlejohns Creek is a tributary to French Camp Slough, which is in turn tributary to the San Joaquin River. The San Joaquin is a navigable jurisdictional water of the U. S. and the tributary relationship of North Little Johns Creek to the San Joaquin River forms the basis for North Littlejohns Creek being potentially jurisdictional Waters of the U.S. and under the jurisdiction of agencies including ACOE, CDFW, and the RWQCB.

There are five seasonal wetlands in a fallow field in the south part of the site, just north of North Littlejohn's Creek and its tributary (Figure 4). The largest wetland of the five is crescent in shape and is the only wetland depicted on the NWI map; this wetland is depicted as a "Freshwater Emergent Wetland" in the NWI.

The seasonal wetlands encompass approximately 0.9 acres and are best described as highly disturbed as they have been subject to periodic disking in the past, and most or all are currently subject to extensive livestock grazing and trampling. Additionally, the east-most wetland contains debris piles (i.e., tree limbs and trash) that have been stacked within the wetland (see photograph in Attachment C). Despite high levels of disturbance, the wetlands contain cracked soils and support hydrophytic (i.e., "wetland") plant species. The wetlands also have wetland hydrology as evidenced by ponded water in wet season aerial photographs.

Under the Navigable Waters Protection Rule, the seasonal wetlands are believed to be outside ACOE jurisdiction due to being both hydrologically isolated and spatially separated from North Littlejohns Creek. If the seasonal wetlands are verified as non-jurisdictional, these wetlands would still be regulated by RWQCB under the State Wetlands Program.

SPECIAL-STATUS SPECIES: Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve

endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

Special-status species also include other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The presence of species with legal protection under the Endangered Species Act often represents a constraint to development, particularly when the species are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a take of these species.

Special-status plants are those, which are designated rare, threatened, or endangered and candidate species for listing by the USFWS. Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2021). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on CNPS List 3.

The likelihood of occurrence of listed, candidate, and other special-status species in the site is generally low. Table 3 provides a summary of the listing status and habitat requirements of special-status species that have been documented in the greater project vicinity or for which there is potentially suitable habitat in the greater project vicinity. This table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
PLANTS						
Alkali milk-vetch	*Astragalus tener var. tener*	None	None	1B	Alkali vernal pools.	Unlikely: the project site does not provide suitable habitat for this species; there are no vernal pools in the project site. The nearest occurrence of alkali milk-vetch in the CNDDB (2021) search area is approximately 6.5 miles northwest of the site.
Heartscale	*Atriplex cordulata var cordulata*	None	None	1B	Valley and foothill grassland, chenopod scrub.	Unlikely: the grassland in the project site is highly disturbed and does not provide suitable habitat for heartscale. The nearest occurrence of this species in the CNDDB (2021) search area is a historical record (1896) mapped nonspecifically in downtown Stockton, approximately 5 miles northwest of the site.
Big tarplant	*Blepharizonia plumosa*	None	None	1B	Valley and foothill grassland.	Unlikely: the grassland in the project site is highly disturbed and does not provide suitable habitat for big tarplant. The nearest occurrence of this species in the CNDDB (2021) search area is a historical record (1874) mapped non-specifically in downtown Stockton, approximately 5 miles northwest of the site.
Watershield	*Brasenia schreberi*	None	None	2	Marshes and swamps.	Unlikely: there are no marshes or swamps in the project site to support this species. The only occurrence of water shield in the CNDDB (2021) search area is an historical population mapped non-specifically in downtown Stockton, approximately 5 miles northwest of the site.
Palmate-bracted salty bird's-beak	*Chloropyron palmatum*	E	E	1B	Chenopod scrub, valley and foothill grassland.	Unlikely: the project site does not provide suitable habitat for this species. The nearest occurrence of palmate-bracted salty bird's-beak in the CNDDB (2021) search area is a historical record mapped non-specifically around the vicinity of Stockton, approximately 5 miles northwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Slough thistle	*Cirsium crassicaule*	None	None	1B	Chenopod scrub, marshes and swamps, and riparian scrub.	Unlikely: there is no suitable habitat for slough thistle in the site. The nearest occurrence of slough thistle in the CNDDB (2021) search area is approximately 9.5 miles southwest of the site.
Recurved larkspur	*Delphinium recurvatum*	None	None	1B	Chenopod scrub in alkaline soils.	Unlikely: the site does not contain suitable habitat for this species. The CNDDB (2021) search area contains only one historical (1937) sighting of recurved larkspur, mapped nonspecifically, approximately 2 miles southeast of the site.
Delta button celery	*Eryngium racemosum*	None	E	1B	Riparian scrub in seasonally inundated floodplain with clay substrates.	Unlikely: there is no suitable habitat in the site for this species. The nearest occurrence of delta button celery in the CNDDB (2021) search area is approximately 6.5 miles northeast of the site.
San Joaquin spearscale	*Extriplex joaquinana*	None	None	1B	Chenopod scrub, alkali meadow, valley and foothill grassland.	Unlikely: the project site does not provide suitable habitat for this species. The nearest occurrence of San Joaquin spearscale in the CNDDB (2021) search area is an historical population mapped non-specifically in downtown Stockton, approximately 5 miles northwest of the site.
Woolly rose mallow	*Hibiscus lasiocarpos var. occidentalis*	None	None	2	Freshwater marshes and swamps.	Unlikely: the site does not provide suitable habitat for woolly rose mallow. The nearest occurrence of this species in the CNDDB (2021) search area is in the Calaveras River, approximately 8.5 miles northwest of the site.
Delta tule pea	*Lathyrus jepsonii var. jepsonii*	None	None	1B	Marshes and swamps.	Unlikely: the project site does not provide suitable habitat for this species. The nearest occurrence of delta tule pea in the CNDDB (2021) search area is an historical population on Rough and Ready Island, approximately 7.5 miles northwest of the project site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Sanford's arrowhead	*Sagittaria sanfordii*	None	None	1B	Standing or slow moving freshwater ponds, marshes, and ditches.	Unlikely: the creeks in the site do not provide suitable habitat for this species. The nearest occurrence of Sanford's arrowhead in the CNDDB (2021) search area is an historical population mapped non-specifically in downtown Stockton, approximately 5 miles northwest of the project site.
Suisun marsh aster	*Symphotrichum lentum*	None	None	1B	Marshes and swamps.	Unlikely: the project site does not provide suitable habitat for this species. The nearest occurrence of Suisun marsh aster in the CNDDB (2021) search area is in the Calaveras River, approximately 6 miles northwest of the project site.
Wright's trichocoronis	*Trichocoronis wrightii var. wrightii*	None	None	2	Marshes and swamps, riparian forest, meadows and seeps and vernal pools.	Unlikely: there is no suitable habitat for Wright's trichocoronis in the site. The nearest occurrence of this species in the CNDDB (2021) search area is approximately 10.5 miles southwest of the site.
Saline clover	*Trifolium hydrophilum*	None	None	1B	Marshes and swamps, mesic (wet) areas in valley and foothill grassland, vernal pools.	Unlikely: the project site does not provide suitable habitat for this species. The nearest occurrence of saline clover in the CNDDB (2021) search area is an historical population mapped non-specifically in downtown Stockton, approximately 5 miles northwest of the site.
WILDLIFE						
Birds						
Burrowing owl	*Athene cunicularia*	None	SC	N/A	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Unlikely: portions of the project site provide marginally suitable habitat for burrowing owl. However, the grasslands in the site are highly disturbed and other fields within the site are cultivated. A few ground squirrel burrows were observed during the surveys, but none of the burrows showed signs of past or current burrowing owl occupancy; no burrowing owls were observed in the site. There are a few records of burrowing owls within a mile of the project site (CNDDB, 2021).

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Swainson's hawk	*Buteo swainsoni*	None	T	N/A	Breeds in stands of tall trees in open areas. Requires adjacent suitable foraging habitats such as grasslands or alfalfa fields supporting rodents.	High: the site provides suitable foraging and nesting habitat for Swainson's hawks. The grasslands in the site and annual cropland near the site provides foraging habitat and large trees in the site are suitable for nesting Swainson's hawks. Swainson's hawks were observed foraging on the site and a raptor stick nest was observed in a tree along the tributary North Littlejohn's Creek. The nearest record of nesting Swainson's hawks in the CNDDB (2021) search area is a record of a nesting pair in a tree in the south part of the site. There are also several records of Swainson's hawks in the CNDDB (2021) search area within a mile of the site.
Tricolored blackbird	*Agelaius tricolor*	None	T	N/A	Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat.	Low: the grassland in the site provides marginally suitable foraging habitat for tricolored blackbird. However, there is little to no emergent wetland vegetation in North Littlejohns Creek in or near the site that could be used by nesting tricolored blackbirds. The nearest occurrence of this species in the CNDDB (2021) search area is approximately 6 miles northwest of the site.
White-tailed kite	*Elanus leucurus*	None	FP	N/A	Herbaceous lowlands with variable tree growth and dense population of voles.	Moderate: the site provides suitable habitat for white-tailed kite and a white-tailed kite was observed flying over the site. The grassland in the site and annual croplands surrounding the project vicinity provides foraging habitat for white-tailed kite and there are large trees in the site that are suitable for nesting. The nearest occurrence of white-tailed kite in the CNDDB (2021) search area is approximately 2.5 miles northwest of the site.
Loggerhead shrike	*Lanius ludovicianus*	None	SC	N/A	Annual grasslands and agricultural areas; nests in trees and shrubs.	Low: the grasslands in the site provide suitable foraging habitat for loggerhead shrike and trees and shrubs in the site are suitable for nesting. However, this species is not common in the project vicinity; the nearest occurrence of loggerhead shrike in the CNDDB (2021) search area is approximately 9.5 miles southwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Song sparrow ("Modesto" population)	*Melospiza melodia*	None	SC	N/A	Resident of brackish water marshes surrounding Suisun Bay. Inhabits cattails, tules, and tangles bordering sloughs.	Unlikely: the site does not provide suitable aquatic habitat for this species. North Littlejohn's Creek and its tributary do not provide emergent wetland vegetation suitable for nesting by Modesto song sparrow. The nearest occurrence of this species in the CNDDB (2021) search area is approximately 8.5 miles southwest of the site.
Least Bell's vireo	*Vireo bellii pusillus*	E	E	N/A	Nests in willow thickets and other shrubs, primarily in southern California riparian forests.	Unlikely: there is no suitable habitat for least Bell's vireo in or near the site and this species is not known from the area. The nearest occurrence of least Bell's vireo in the CNDDB (2021) search area is a historical population from 1878 mapped non-specifically in downtown Stockton, approximately 5 miles northwest of the site.
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	None	SC	N/A	Brackish and fresh water marshes; usually nests in expansive patches of cattails or tules, often along borders of lakes and ponds.	Unlikely: the site does not provide suitable habitat for this species. The nearest occurrence of yellow-headed blackbird in the CNDDB (2021) search area is a historical record (1894) mapped non-specifically approximately 8 miles southwest of the site.
Mammals						
Riparian brush rabbit	*Sylvilagus bachmani riparius*	E	E	N/A	Riparian thickets in Stanislaus and southern San Joaquin Counties.	None: the project site and adjacent areas do not provide suitable habitat for riparian brush rabbit. The riparian corridors along North Littlejohns Creek and its tributary do not contain well-developed riparian forest vegetation; there is no expansive scrub-shrub vegetation to support this species. The nearest occurrence of riparian brush rabbit in the CNDDB (2021) search area is approximately 8 miles southwest of the project site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Reptiles & Amphibians						
California red-legged frog	*Rana aurora draytonii*	T	SC	N/A	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Unlikely: there is no suitable aquatic habitat for California red-legged frog in or near the project site. California red-legged frog is also presumed extinct on the floor of the Central Valley of California. There are no recorded occurrences of this species in the CNDDB (2021) search area. The site is not within designated critical habitat for California red-legged frog (USFWS, 2006).
California tiger salamander	*Ambystoma californiense*	T	T	N/A	Seasonal water bodies without fish (i.e., vernal pools and stock ponds) and grassland/ woodland habitats with summer refugia (i.e., burrows).	Unlikely: there is no suitable habitat within or near the site for California tiger salamander. This species occurs in the transitional bands between the valley floor and foothills. The nearest occurrence of California tiger salamander in the CNDDB (2021) search area is a historical record (1923) in downtown Stockton, approximately 6 miles northwest of the site. The site is not within designated critical habitat for California tiger salamander (USFWS, 2005a).
Giant garter snake	*Thamnophis gigas*	T	T	N/A	Freshwater marsh and low gradient streams; also adapted to drainage canals and irrigation ditches, primarily for dispersal or migration.	Unlikely: North Littlejohns Creek and its tributary are intermittent and do not contain suitable habitat for giant garter snake. The nearest occurrence of this species in the CNDDB (2021) search area is approximately 4 miles northwest of the site.
Western pond turtle	*Emys marmorata*	None	SC	N/A	Permanent or semi-permanent water bodies; require basking sites such as logs	Unlikely: North Littlejohns Creek and its tributary are intermittent and do not contain suitable habitat for western pond turtle. There are no occurrences of western pond turtle in the CNDDB (2019) search area.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Western spadefoot	*Spea hammondii*	None	SC	N/A	Breeds and lays eggs in seasonal water bodies such as deep vernal pools or stock ponds.	Unlikely: there is no suitable aquatic habitat for western spadefoot in the site. The nearest occurrence of this species in the CNDDB (2021) search area is approximately 4 miles west of the site.
Fish						
Delta smelt	*Hypomesus transpacificus*	T	E	N/A	Shallow lower delta waterways with submersed aquatic plants and other suitable refugia.	None: there is no suitable aquatic habitat in the site to support this species; delta smelt occurs in delta waterways. The nearest occurrence of delta smelt in the CNDDB (2021) approximately 9 miles northwest of the site. The project site is within designated critical habitat for delta smelt (USFWS, 1994).
Longfin smelt	*Spirinchus thaleichthys*	C	T	N/A	Brackish estuarine habitats.	None: there is no suitable aquatic habitat in the site to support this species. The nearest occurrence of longfin smelt in the CNDDB (2021) approximately 9 miles northwest of the site in the San Joaquin River.
Steelhead – Central Valley DPS	*Oncorhynchus mykiss irideus pop. 11*	T	None	N/A	Riffle and pool complexes with adequate spawning substrates within Central Valley drainages.	None: there is no suitable aquatic habitat in the site to support this species. The nearest occurrence of Central Valley steelhead in the CNDDB (2021) search area is approximately 2 miles northwest of the site in the San Joaquin River. The site is not in designated critical habitat for Central Valley steelhead (NOAA, 2005).
Invertebrates						
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	T	None	N/A	Elderberry shrubs, usually in Central Valley riparian habitats.	Unlikely: there are no blue elderberry shrubs in or near the site. The nearest occurrence of valley elderberry longhorn beetle in the CNDDB (2021) search area is approximately 10 miles southwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	None	N/A	Vernal pools	Moderate: the highly disturbed seasonal wetlands in the project site could potentially support vernal pool branchiopods, including vernal pool fairy shrimp. This species is known to occur in marginal wetland environments. There are no occurrences of vernal pool fairy shrimp recorded in the CNDDB (2021) in the search area. The site is not within designated critical habitat for vernal pool fairy shrimp (USFWS, 2005b).
Vernal pool tadpole shrimp	*Lepidurus packardi*	E	None	N/A	Vernal pools	Unlikely: the highly disturbed seasonal wetlands in the project site are too small and shallow to support vernal pool tadpole shrimp. There are no occurrences of vernal pool tadpole shrimp recorded in the CNDDB (2021) in the search area. The site is not within designated critical habitat for vernal pool tadpole shrimp (USFWS, 2005b).
Western bumble bee	*Bombus occidentalis*	None	CE	N/A	Meadows and grasslands with abundant floral resources, usually high elevations.	Unlikely: there is no suitable habitat in the site to support western bumble bee. The nearest occurrence of this species in the CNDDB (2021) search area is approximately 10 miles southeast of the site.

1 T= Threatened; E = Endangered; C = Candidate.

2 T = Threatened; E = Endangered; CE = Candidate for Endangered Status; SC=State of California Species of Special Concern; FP = Fully Protected Species.

3 CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere; List 2 includes plants that are rare, threatened or endangered in California but are more common elsewhere.

SPECIAL-STATUS PLANTS: Special-status plants identified in the CNDDB (2021) search include alkali milk-vetch (*Astragalus tener var. tener*), heartscale (*Atriplex cordulata var. cordulata*), big tarplant (*Blepharizonia plumosa*), watershield (*Brasenia schreberi*), palmate-bracted salty bird's-beak (*Chloropyron plamatum*), slough thistle (*Cirsium crassicaule*), recurved larkspur (*Delphinium recurvatum*), delta button celery (*Eryngium racemosum*), San Joaquin spearscale (*Extriplex joaquinana*), woolly rose mallow (*Hibiscus lasiocarpos var. occidentalis*), delta tule pea (*Lathyrus jepsonii var. jepsonii*), Sanford's arrowhead (*Sagittaria sanfordii*), Suisun marsh aster (*Symphotrichum lentum*), Wright's trichocornis (*Trichocoronis wrightii var. wrightii*), and saline clover (*Trifolium hydrophilum*) (Table 3 and Attachment B).

Special-status plants generally occur in relatively undisturbed areas in vegetation communities such as vernal pools, marshes and swamps, seasonal wetlands, riparian scrub, and areas with unusual soils. The grasslands in the site are highly disturbed and do not provide suitable habitat for any of the plants in Table 3 or other special-status plants. Due to their intermittent flow regimes, the creek segments in the site do not contain well-developed marsh or swamp habitat required by several of the special-status plant species in Table 3; most of the marsh and swamp plant species in Table 3 are associated with tidal marshes several miles to the west. Due to lack of suitable habitat, no special-status plants are expected to occur in the site.

SPECIAL-STATUS WILDLIFE: The potential for intensive use of habitats within the project site by special-status wildlife species is generally low. Special-status wildlife species that have been recorded in greater project vicinity in the CNDDB (2021) include burrowing owl, Swainson's hawk, tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), song sparrow ("Modesto population") (*Melospiza melodia*), least Bell's vireo (*Vireo bellii pusillus*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), riparian brush rabbit (*Sylvilagus bachmani riparius*), California tiger salamander (*Ambystoma californiense*), western spadefoot (*Spea*

hammondii), giant garter snake (*Thamnophis gigas*), delta smelt (*Hypomesus transpacificus*), longfin smelt (*Spirinchus thaleichthys*), Central Valley steelhead (*Oncorhynchus mykiss*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and western bumble bee (*Bombus occidentalis*). Although not included in the CNDDB within the search area, California red-legged frog (*Rana aurora draytonii*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*) are listed in the USFWS IPaC Trust Resource Report (Attachment B). Western pond turtle (*Actinemys marmorata*) was added to Table 3 because it is known to occur in creeks and rivers in the greater project vicinity.

While the project site may have provided habitat for special-status wildlife species at some time in the past, farming and development have substantially modified natural habitats in the greater project vicinity. Of the wildlife species identified in the CNDDB, Swainson's hawk, white-tailed kite, burrowing owl, and vernal pool fairy shrimp are the only species with potential to occur in the site on more than a transitory or occasional basis. Swainson's hawk, burrowing owl and white-tailed kite could be adversely affected by conversion of habitat to development and/or disturbed by construction if construction occurs in close proximity to active nests. Vernal pool fairy shrimp, if present in the seasonal wetlands, could be impacted by construction in or near the wetlands. Although not expected to occur in the site, giant garter snake and western pond turtle are also addressed below for completeness.

SWAINSON'S HAWK: The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The Migratory Bird Treaty Act and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawk are found in the Central Valley primarily during their breeding season, a population is known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their breeding territories by late August.

The site is within the nesting range of Swainson's hawks and the CNDDB (2021) contains several records of nesting Swainson's hawks near the greater project vicinity (Attachment B). There are several occurrences of nesting Swainson's hawks in the CNDDB (2021) search area is within a mile of the site and there is a record within a tree along the south edge of the site. Large trees in and near the site could be used by nesting Swainson's hawks and the grassland areas in and adjacent to the site provides suitable foraging habitat for this species.

A large raptor stick nest was observed along the tributary to North Littlejohns Creek (see photographs in Attachment C) and another raptor nest was observed in a tree just off-site to the south. While Swainson's hawk and white-tailed kite were observed soaring over the south part of the site during the April 20, 2021 survey, neither of these nests appeared to be occupied by raptors during any of the field surveys.

The project is expected to participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (HCP) (SJCOG, 2000). The HCP involves payment of fees and compliance with standard Incidental Take Minimization Measures (ITMMs) that will be issued for the project. Pursuant to the HCP, if construction is scheduled to commence during the nesting season (i.e., between February 15 through August 31), and Swainson's hawks are nesting in or near the site, a construction setback of twice the diameter of the

drip-line of the nest tree (as measured from under the nest) would be required until nesting is complete.

BURROWING OWL: The Migratory Bird Treaty Act and Fish and Game Code of California protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere.

The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows including pipes, culverts, and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk.

A few ground squirrels were observed within the site during field surveys in 2020 and several ground squirrel burrows were observed within the project site, primarily scattered within the fallow field in the central part of the site and along the elevated berms along the aquaculture ponds. No sign of burrowing owl, past or present, was observed within any of the burrows within the site. However, burrowing owls are known to occur in this part of Stockton and may nest in the site in the future. The nearest occurrence of nesting burrowing owls in the CNDDB (2021) search area is a few records within 1 mile of the site.

Pursuant to the San Joaquin County Multi-species Habitat Conservation Plan, if construction is scheduled to commence outside the nesting season (i.e., if construction starts between September 1 and January 31) and burrowing owls are present on-site, they can be passively relocated. In the event that construction commences during the nesting season and burrowing owls are

present on-site, a 250-foot construction setback from the natal burrow would be required until nesting is complete.

WHITE-TAILED KITE: White-tailed kite is a State of California Species of Concern, but is not a listed species at the state or federal level. The Migratory Bird Treaty Act and Fish and Game Code protect white-tailed kite year-round, as well as their nests during nesting season; nesting for this species peaks from May to August. White-tailed kites can be found in a variety of habitats across California including grasslands, open woodlands, riparian areas, marshes and cultivated fields. Populations of white-tailed kites are concentrated in the Central Valley, but their range spans west of the Sierra Nevada's to the California coastline.

White-tailed kite may nest in trees in or near the site and may forage in grasslands in and adjacent to the site. Nesting usually commences in the early-spring, concurrent with other resident Central Valley raptors, and most young fledge by early-July. The nearest occurrence of white-tailed kite in the CNDDB (2021) search area is approximately 2.5 miles northwest of the site. A white-tailed kite was observed flying over the site during the February 22 and April 2020 surveys.

Pursuant to the HCP, if construction is scheduled to commence during the nesting season (i.e., between February 15 through September 15), and white-tailed kites are nesting in or near the site, a construction setback of a 100-foot construction setback from the nest would be required until nesting is complete.

GIANT GARTER SNAKE: The giant garter snake is listed as threatened both under FESA and CESA. Critical habitat has not been designated for this species; a draft recovery plan for giant garter snake was prepared (USFWS, 1999), but has not been finalized. Giant garter snake is endemic to the Sacramento and San Joaquin valleys where it is found in lowland areas (USFWS, 1999; 2017). Historically, this species was found throughout the Central Valley from Butte County in the north to Kern County in the south. Currently, giant garter snake is

only known to occur in 9 discrete populations in the Sacramento and San Joaquin valleys in Butte, Colusa, Contra Costa, Fresno, Glenn, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, and Yolo counties (USFWS, 2017).

The giant garter snake is one of the most aquatic of garter snakes and is usually found in streams, marshes, and sloughs with mud bottoms. This species prefers slow moving waters with emergent herbaceous wetland vegetation for cover and foraging, and grassy banks and openings for basking (Hansen, 1988). Giant garter snakes feed primarily on small fishes, tadpoles, and frogs. Since they are aquatic hunters, they must have access to permanent, though not necessarily extensive, water.

Giant garter snake is apparently absent from large rivers, other water bodies that support introduced populations of large predatory fish, and from wetlands with sand, gravel or rock substrates (Rossman and Stewart, 1987; Brode 1988; G. Hansen, 1988). Historically, oxbows, overflow areas, and backwater sloughs or channels could have provided suitable habitat. Riparian woodlands do not typically provide suitable habitat because of excessive shade, lack of basking sites, and the absence of prey populations.

Essential habitat components of giant garter snake consist of: (1) adequate water during the snake's active season (early-spring through mid-fall) to provide food and cover; (2) emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; (3) grassy banks and openings in waterside vegetation for basking; and (4) higher elevation uplands for cover and refuge from flood waters during the snake's dormant season in the winter; giant garter snakes inhabit small mammal burrows and other soil crevices for aestivation.

The project site does not provide the aquatic habitat required by giant garter snake due to its intermittent nature. Additionally, the grasslands and croplands in

the site are highly disturbed. Neither of these uplands habitat types provide high quality aestivation habitat for giant garter snake. The nearest occurrence of giant garter snake in the CNDDB (2021) search area is approximately 4 miles northwest of the project site.

Pursuant to the HCP, North Littlejohns Creek is considered "potential habitat" for giant garter snake, triggering an automatic "no construction" buffer extending 200 feet from the centerline of the creek, unless a buffer reduction is granted by SJCOG. In November 2020, the applicant requested a buffer reduction along North Littlejohns Creek from 200 feet to 25 feet (Attachment D). The buffer reduction was granted by SJCOG. Standard ITMMs related to preconstruction surveys for giant garter snake will still be required.

WESTERN POND TURTLE: The western pond turtle is a state species of concern, but is not a listed species at the state or federal level. Western pond turtles are associated with permanent or nearly permanent bodies of water with adequate basking sites such as logs, rocks or open mud banks. Pond turtles construct nests in sandy banks along slow moving streams and ponds in the spring and the young usually hatch in 2 to 3 months. There are no records of western pond turtle in the CNDDB (2021) search area.

North Littlejohns Creek does not have suitable aquatic features that western pond turtle requires; North Littlejohns Creek is intermittent and is dry much of the year. North Littlejohns Creek is surrounded by highly disturbed grasslands that does not provide suitable nesting habitat for this species.

Pursuant to the HCP, North Littlejohns Creek is considered "potential habitat" for western pond turtle, triggering an automatic "no construction" buffer extending 300 feet from the centerline of the creek, unless a buffer reduction is granted by SJCOG. In November 2020, the applicant requested a buffer reduction on North Littlejohns Creek from 300 feet to 25 feet, concurrent with the GGS buffer reduction request (Attachment D). The western pond turtle buffer was also

granted by SJCOG. Standard ITMMs related to preconstruction surveys for western pond turtle will still be required, and temporary construction setbacks from nests will be implemented in the event active nests are located.

VERNAL POOL BRANCHIOPODS: In 1994, USFWS listed three species of Central Valley fairy shrimp and one species of tadpole shrimp as threatened or endangered species under FESA. The vernal pool fairy shrimp was listed as threatened, while Conservancy fairy shrimp (*Branchinecta conservatio*), longhorn fairy shrimp (*B. longiantenna*), and vernal pool tadpole shrimp were listed as endangered. All of these species occur in vernal pools and other seasonal wetland habitats throughout much of the Central Valley. In most years, following cold winter rains which fill vernal pools, shrimp hatch, grow for a period ranging from a couple of weeks to a couple of months, then lay eggs and die. The eggs drift to the mud at the bottom of the pools, and remain in the dirt throughout the summer when the pools dry out. They hatch the following winter.

Although the five seasonal wetlands in the site are highly disturbed from past farming and extensive grazed by livestock, they provide potentially suitable habitat for vernal pool fairy shrimp. The seasonal wetlands in the project site are too small and shallow to provide suitable habitat for vernal pool tadpole shrimp. There are no records of vernal pool fairy shrimp or vernal pool tadpole shrimp in the CNDDB (2021) search area.

Soils collected from the seasonal wetlands during dry-season sampling were processed and analyzed (Attachment E). Visual examinations of the soils revealed the presence of cysts (i.e., eggs) belonging to the genus *Branchinecta* in the largest wetland in the site. No evidence of cysts or carapaces belonging to the genus *Lepidurus* were observed in the soils collected. The cysts belonging to the genus *Branchinecta* most likely belong to either the vernal pool fairy shrimp or the midvalley fairy shrimp (*B. mesovallensis*).

Wet sampling for federally-listed large branchiopods was conducted in the seasonal wetlands during the 2020/2021 wet-season. Due to drought conditions, only the largest seasonal wetland in the site ponded for any duration. Despite the presence of cysts, as documented during the dry-season sampling effort, no federally-listed large branchiopods were detected within the sampled wetland. Efforts to hatch some of the cysts in a laboratory are now underway in an attempt to identify the species of *Branchinecta* in the crescent-shaped wetland.

Pursuant to the HCP, the seasonal wetlands on the site are considered "potential habitat" for federally-listed large branchiopods, triggering an automatic "no construction" buffer extending 250 feet from the wetlands, until sampling is done. If the sampling results are negative (i.e., no shrimp are found), the buffer is eliminated. If the sampling results are positive, take is granted under the HCP.

Pursuant to the HCP, the filling seasonal wetlands containing vernal pool invertebrates shall be delayed until the wetlands are dry. SJCOG biologists then collect the surface soils from the wetlands and store them for future use on off-site seasonal wetland creation on SJOCG Preserve Lands.

OTHER SPECIAL-STATUS SPECIES: The site does not provide highly suitable habitat for other special-status wildlife species. Other special-status birds, such as loggerhead shrike, may fly over the area on occasion, but few, if any, would be expected to use on-site habitats on more than an occasional basis, primarily due to lack of habitat. The riparian corridor along North Littlejohns Creek does not contain expansive stands of emergent wetland vegetation that would provide suitable nesting habitat for species such as tricolored blackbird, least-bell's vireo or yellow-headed blackbird.

There is no well-developed riparian forest vegetation required for riparian brush rabbit; there is no expansive scrub-shrub vegetation to support this species. The site does not provide suitable aquatic habitat for any species of fish, western

spadefoot, California red-legged frog, California tiger salamander, or western pond turtle. There are no blue elderberry shrubs in the site, precluding the potential occurrence of valley elderberry longhorn beetle.

CRITICAL HABITAT: The site is not within designated critical habitat for California red-legged frog (USFWS, 2006), California tiger salamander (USFWS, 2005a), federally listed vernal pool shrimp or plants (USFWS, 2005b), delta smelt (USFWS, 1994), valley elderberry longhorn beetle (USFWS, 1980), Central Valley steelhead (NOAA, 2005), or other federally listed species (Attachment F).

Conclusions and Recommendations

- The site consists of a walnut orchard and open fields vegetated in upland grasses and weeds that are highly disturbed. There are a few residences and structures, two creek segments, and five seasonal wetlands in the south part of the site.

- There are approximately 1.5 acres of potentially jurisdictional Waters of the U.S. and wetlands in the site including 0.6+/-acres of intermittent creeks and 0.9+/-acres of seasonal wetlands.

- North Littlejohns Creek and its tributary are intermittent and are believed to be jurisdictional Waters of the U.S.

- Pursuant to the Navigable Waters Protection Rule, the seasonal wetlands are believed to be outside ACOE jurisdiction as they are hydrologically isolated and spatially separated from North Littlejohns Creek. If the seasonal wetlands are verified as non-jurisdictional, these wetlands would still be regulated by RWQCB under the State Wetlands Program.

- Avoidance of jurisdictional Waters of the U.S. and wetlands and wetlands is recommended, to the maximum extent practicable. With the exception of the storm drain outfall, the North Littlejohns Creek corridor will be avoided. Construction of the storm drain outfall will involve approximately 0.02+/- acres of permanent impact to jurisdictional Waters of the U.S.

- Depending on final site design, approximately 1,200+/- feet of a tributary to North Littlejohns Creek may need to be filled. Conversion of the open channel to pipe would involve approximately 0.15+/- acres of permanent impact to jurisdictional Waters of the U.S.

- Permits from ACOE, CDFW, RWQCB, and/or the Central Valley Flood Protection Board (CVFPB) would be needed prior to the placement of any fill material (e.g., culverts, fill dirt, rock) in North Littlejohns Creek. Permits from ACOE, CDFW, and RWQCB would be needed prior to the placement of any fill material in the tributary to North Littlejohns Creek. As the estimated fill in Waters of the U.S. is less than 0.2 acres, the work would be authorized by ACOE under a Nationwide Permit (NWP).

- Approximately 0.9+/- acres of seasonal wetlands will be filled. If the seasonal wetlands are verified as non-jurisdictional, these wetlands would still be regulated by RWQCB under the State Wetlands Program and Waste Discharge Requirements (WDRs) would be needed prior to the placement of any fill material in the seasonal wetlands.

- The project would need to comply with all conditions of the permits, including the provision of compensatory mitigation for impacts to jurisdictional Waters of the U.S. seasonal wetlands. The compensatory mitigation is expected to be at a ratio of 1:1 and would be best accomplished through the purchase of credits from an agency approved mitigation bank.

- Development of the annual grassland and cropland portions of the project site will result in a loss of Swainson's hawk foraging habitat, and will contribute to a cumulative loss of Open Space and associated biological resource values. The fill of seasonal wetlands would result in a loss of actual or potential vernal pool fairy shrimp habitat. Mitigation for the loss of Open Space is expected to be accomplished through participation in the San Joaquin County Multi-species Habitat Conservation Plan (SJCOG, 2000). The project has been approved to participate in the Habitat Conservation Plan (HCP).

- With the exception of Swainson's hawk, burrowing owl, white-tailed kite, and vernal pool fairy shrimp, no special-status wildlife species are expected to occur in the body of the site on more than a very occasional or transitory basis. Swainson's hawk and white-tailed kite could potentially nest in trees in or near the site and may use the grasslands in the site for foraging. Burrowing owls could nest in the site if burrow habitat is available. Vernal pool fairy shrimp may be present in one of the seasonal wetlands.

- Standard Take Avoidance measures outlined in the HCP for nesting Swainson's hawks and burrowing owl will be required. These will include pre-construction surveys for nesting Swainson's hawks within 0.5 miles of the site for construction

activities between March 1 and September 15 and pre-construction surveys for nesting burrowing owls within 250 feet of the site for construction activities between February 1 through August 31. If active nests are found, temporal restrictions on construction may be required.

- Standard Take Avoidance measures outlined in the HCP for nesting white-tailed kite may be required. These would include pre-construction surveys for nesting white-tailed kites within 100 feet of the site for construction activities during the nesting season. If active nests are found, temporal restrictions on construction may be required.

- Due to a lack of suitable habitat, giant garter snake and western pond turtle are not expected to occur in the site. Nevertheless, standard Take Avoidance measures for these species outlined in the HCP, primarily consisting of pre-construction surveys, are expected to be included in the ITMMs.

- Pursuant to the HCP, the filling seasonal wetlands containing vernal pool invertebrates shall be delayed until the wetlands are dry. SJCOG biologists then collect the surface soils from the wetlands and store them for future use on off-site seasonal wetland creation on SJOCG Preserve Lands.

- Trees and grasslands in the site could be used by birds protected by the Migratory Bird Treaty Act of 1918 and/or Fish and Game Code of California. If vegetation removal or construction commences during the general avian nesting season (March 1 through July 31), a pre-construction survey for all species of nesting birds is recommended. If active nests are

found, work in the vicinity of the nests should be delayed until the young fledge.

- The site is not within designated critical habitat for any federally listed species.

We hope this information is useful. Please call me at (209) 745-1159 with any questions.

Sincerely,

Diane S. Moore, M.S.
Principal Biologist

References and Literature Consulted

ACOE (U.S. Army Corps of Engineers). 1987. Technical Report Y87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MI.

ACOE. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. U.S. Army Engineer Research and Development Center, Vicksburg, MS. September.

Brode, J. 1988. Natural history of the giant garter snake (*Thamnophis couchi gigas*). Pages 25-28, *in* Proceedings of the conference on California herpetology, H.F. DeListe, P.R. Brown, B. Kaufman, and B. M. McGurty (eds). Southwestern Herpetologists Society, Special Publication No. 4.

CDFG (California Department of Fish and Game). 1994. Staff Report regarding Mitigation for Impacts to Swainson's Hawks (*Buteo Swainsoni*) in the Central Valley of California. November.

CDFG. 2012. Staff Report on Burrowing Owl Mitigation. State of California, Natural Resource Agency, Department of Fish and Game. March 7.

CNDDB (California Natural Diversity Database). 2021. California Department of Fish and Wildlife's Natural Heritage Program, Sacramento, California.

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org

Hansen, G. E. 1988. Review of the status of the giant garter snake (*Thamnophis couchi gigas*) and its supporting habitat during 1986-1987. Final report for California Department of Fish and Game Contract C-2060. Unpublished. 31 p.

National Oceanic and Atmospheric Administration (NOAA). 2005. Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California; Final Rule. Federal Register 70 (170): 52488-52585. September 2, 2005.

Rossman, D. and G. Stewart. 1987. Taxonomic reevaluation of Thamnophis couchi (Serpentes:Colubridae). Occasional Papers of the museum of Zoology, Louisiana State University, Baton Rouge, Louisiana. No. 63. 25 pp.

Sawyer & Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento. California.

SJCOG (San Joaquin Council of Governments). 2000. San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Stockton, California. November 15.

USFWS (United States Fish and Wildlife Service). 1980. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17. Listing the Valley Elderberry Longhorn Beetle as a Threatened Species with Critical Habitat. Federal Register 45 No. 155, pp. 52803-52807, August 8.

USFWS. 1994. Final Critical Habitat for the Delta Smelt (*Hypomesus transpacificus*). Federal Register Vol. 59, No. 242, December 19, 1994, pp. 65256 – 65279.

USFWS. 2005a. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Tiger Salamander, Central Population; Final Rule. Federal Register Vol. 70, No. 162, August 23, 2005, pp. 49390 – 49458.

USFWS. 2005b. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17: Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Evaluation and Economic Exclusions from August 2003 Final Designation, Final Rule. Federal Register Vol. 70, No. 154, August 11.

USFWS. 2006. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17: Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for California Red-Legged Frog, and Special Rule Exemption Associated with Final Listing for Existing Routine Ranching Activities, Final Rule. Federal Register Vol. 71, No. 71, April 13.

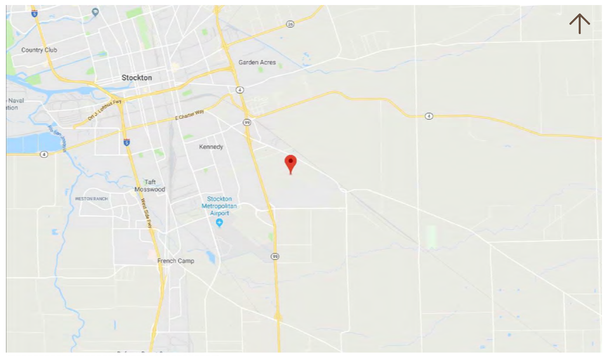
USFWS. 2017. Recovery Plan for the Giant Garter Snake (*Thamnophis gigas*). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. vii + 71 pp. September.

Attachment A

Site Plan

PROJECT DATA:

SITE AREA:		
GROSS:		208.24 AC
		9,070,892 SF
DETENTION:	@ 10%	875,088 SF
NET:		188.15 AC
		8,195,804 SF
BUILDING FOOTPRINT:		
BUILDING 1		670,320 SF
BUILDING 2		637,450 SF
BUILDING 3		1,021,440 SF
BUILDING 4		1,021,440 SF
BUILDING 5		64,260 SF
BUILDING 6		100,980 SF
BUILDING 7		100,980 SF
TOTAL FOOTPRINT:		3,616,870 SF
BUILDING USE:		
WAREHOUSE		3,436,027 SF
OFFICE	@ 5%	180,844 SF
COVERAGE:		
GROSS:		40%
NET:		44%
PARKING REQUIRED:		
WAREHOUSE	1/2000 SF	1,718 STALLS
PARKING PROVIDED:		
AUTO:		1,831 STALLS
		@0.51/1000 SF
REQ. ACCESSIBLE		*37 STALLS*
TRAILER:		1,107 STALLS



This conceptual design is based upon a preliminary review of entitlement requirements and on unverified and possibly incomplete site and/or building information, and is intended merely to assist in exploring how the project might be developed.

1" = 150'

0 75 150 300 750

NORTH

scheme: 1

Conceptual Site Plan

Marfargoa Road
Stockton, CA 95215

WARE MALCOMB

SNR19-0015-00
07.10.2020

SHEET
1

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Attachment B

CNDDB Summary Report and Exhibits & USFWS

IPaC Trust Report

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Stockton West (3712183) OR Stockton East (3712182) OR Lathrop (3712173) OR Manteca (3712172))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
Ambystoma californiense California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Blepharizonia plumosa big tarplant	PDAST1C011	None	None	G1G2	S1S2	1B.1
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
Brasenia schreberi watershield	PDCAB01010	None	None	G5	S3	2B.3
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Chloropyron palmatum palmate-bracted bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1	1B.1
Cirsium crassicaule slough thistle	PDAST2E0U0	None	None	G1	S1	1B.1
Delphinium recurvatum recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S3	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Eryngium racemosum Delta button-celery	PDAPI0Z0S0	None	Endangered	G1	S1	1B.1
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
Hypomesus transpacificus Delta smelt	AFCHB01040	Threatened	Endangered	G1	S1	

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Lathyrus jepsonii var. jepsonii Delta tule pea	PDFAB250D2	None	None	G5T2	S2	1B.2
Lytta moesta moestan blister beetle	IICOL4C020	None	None	G2	S2	
Melospiza melodia song sparrow ("Modesto" population)	ABPBXA3010	None	None	G5	S3?	SSC
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Sylvilagus bachmani riparius riparian brush rabbit	AMAEB01021	Endangered	Endangered	G5T1	S1	
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Trichocoronis wrightii var. wrightii Wright's trichocoronis	PDAST9F031	None	None	G4T3	S1	2B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
Xanthocephalus xanthocephalus yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 34

Suisun Marsh aster
Mason's lilaeopsis
Mason's lilaeopsis
Mason's lilaeopsis
Mason's lilaeopsis
Suisun Marsh aster
woolly rose-mallow
alkali milk-vetch
Sanford's arrowhead
big tarplant
palmate-bracted bird's-beak heartscale San Joaquin spearscale
watershield
saline clover
Delta tule pea
Delta button-celery
Project Site
recurved larkspur
slough thistle
Delta button-celery
Wright's trichocoronis
slough thistle
Great Valley Mixed Riparian F
Great Valley Valley Oak
reat Valley Cottonwood Riparian Forest
Delta but

LODI SOUTH
STOCKTON
WATERLOO
LINDEN
HOLT
STOCKTON WEST
STOCKTON EAST
PETERS
UNION ISLAND
LATHROP
MANTECA
AVENA
TRACY
VERNALIS
RIPON
SALIDA

CNDDB PLANT

Mariposa Industrial Park

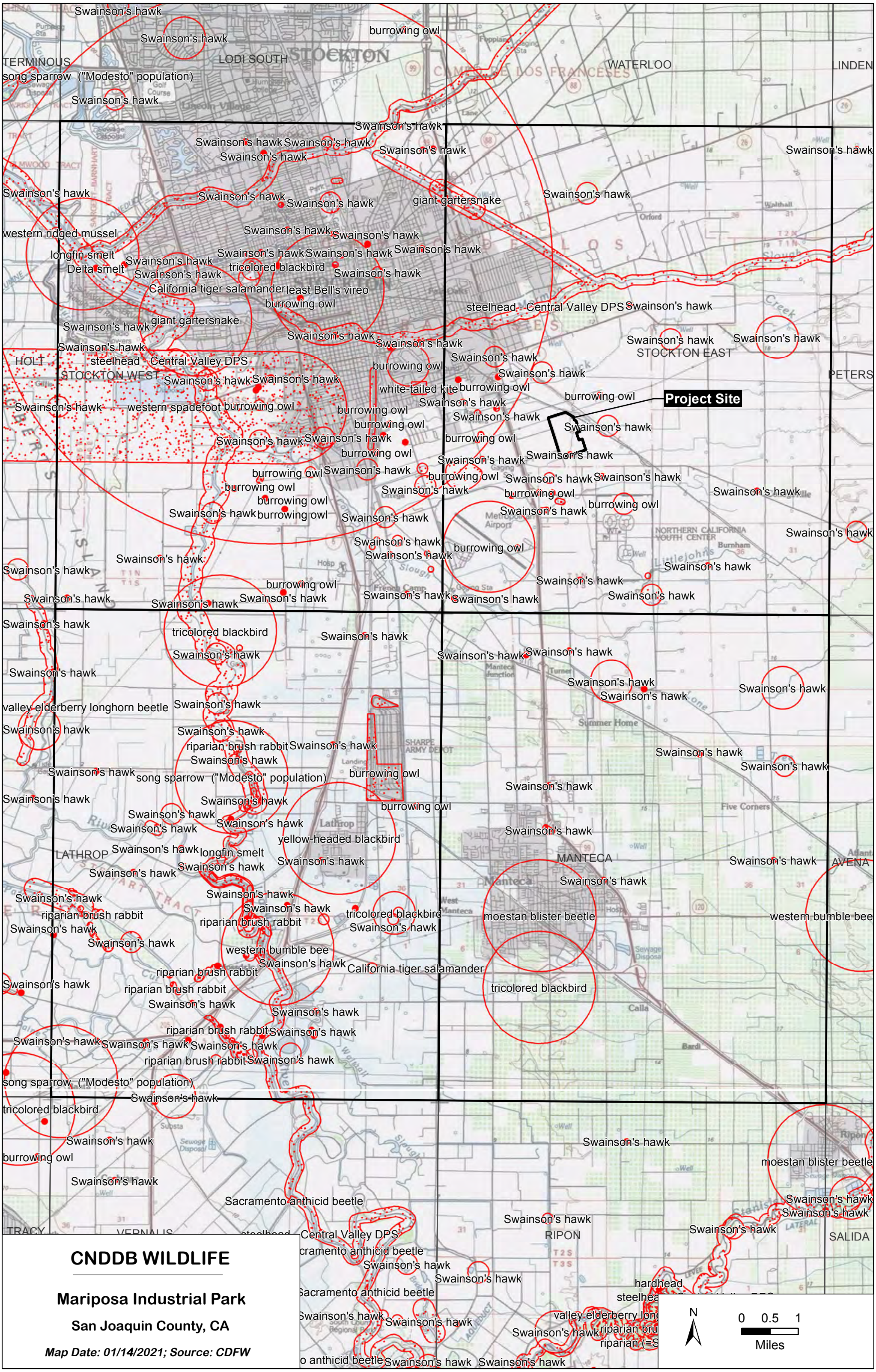
San Joaquin County, CA

Map Date: 01/14/2021; Source: CDFW

N

0 0.5 1

Miles



CNDDB WILDLIFE

Mariposa Industrial Park

San Joaquin County, CA

Map Date: 01/14/2021; Source: CDFW

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

San Joaquin County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

NOT FOR CONSULTATION

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Riparian Brush Rabbit Sylvilagus bachmani riparius — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6189

Reptiles

NAME	STATUS
Giant Garter Snake Thamnophis gigas	Threatened

Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii	Threatened

Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2076

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus	Threatened

Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus	Threatened

Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7850

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Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

NOT FOR CONSULTATION

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

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NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Burrowing Owl Athene cunicularia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
Common Yellowthroat Geothlypis trichas sinuosa This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Lawrence's Goldfinch Carduelis lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

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Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

NOT FOR CONSULTATION

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1Cx
- PEM1C
- PEM1A

FRESHWATER POND

- PUBFx
- PUBHx
- PUBFh
- PUSCh

RIVERINE

- R4SBCx
- R5UBFx
- R4SBC
- R5UBF

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

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Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Attachment C

Photographs

Large stick nest within a tree along the tributary creek in the south part of the site, looking southwest; 04/20/21. This nest appeared unoccupied, but a white-tailed kite and Swainson's hawks were observed foraging in the area.

Field in the southwest part of the site, looking southwest toward a row of trees along North Littlejohns Creek; 04/20/21.

Water trickling in the small tributary creek to North Littlejohns Creek in the south part of the site, looking southwest from the southeast part of the site; 04/20/21.

North Littlejohns Creek corridor, looking southeast from near the confluence of North Littlejohns Creek and the small tributary creek in the south part of the site; 04/20/21.

Ruderal grassland field in the south part of the site, looking west from the east edge of the site; 02/22/21.

East part of the horseshoe shaped wetland in the south part of the site, looking northeast; 04/20/21.

Remnant structure related to a previous aquaculture facility in the south-central part of the site, looking east; 02/22/21.

Abandoned aquaculture pond in the south-central part of the site, looking southwest; 02/22/21. There are a few of these ponds in the south-central part of the site and they are surrounded by slightly elevated berms.

East edge of the site, looking northwest from the southest corner of the site; 02/22/21.

Fence line separating the north orchard from the remaining part of the site further south, looking northeast from the west edge of the site; 02/22/21.

West edge of the site, looking north along the west edge of the almond orchard from the southwest corner of the orchard; 02/23/21.

South edge of the orchard site, looking southwest from the southeast corner of the orchard; 02/23/21. Off-site trees were inspected for raptor stick nests and none were observed in the trees associated with this residence.

Ruderal grassland strip under the powerlines in the north part of the site, looking southwest from the northeast part of the site; 02/23/21.

Row of walnut trees within the orchard, looking south from the north part of the site; 02/23/21.

Constructed pit in the northwest part of the site, looking northwest; 02/23/21. Farm-related debris has been placed in this pit.

Large eucalyptus trees just off-site, looking northwest from the northwest corner of the site 02/23/21. There are several large trees in the site and in close proximity to the site that are suitable for nesting raptors; no raptors were observed nesting in these trees.

Attachment D

HCP Buffer Reduction Staff Report

November 2020
HTAC

STAFF REPORT

SUBJECT: Mariposa Road Industrial Park Project, Plan Participation and Buffer Reduction

RECOMMENDED ACTION: Motion to Approve Recommendation to SJCOG, Inc. to 1) Allow the Mariposa Road Industrial Park Project to Participate in the Plan, 2) A Revision to the Incidental Take Minimization Measures for Giant Garter Snake (GGS) and Western Pond Turtle (WPT) Buffers

DISCUSSION:

SUMMARY:

The project applicant, Greenlaw Partners, is requesting coverage under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) through the City of Stockton's Community Development Department. Although the site is in a mapped area of the Plan, the project is needs to be allowed to participate due to the United States Army Corps of Engineers (USACE) Clean Water Act, Section 401/404 permit. The project site is located on the north side of Arch Road and east of State Route Highway 99, in the City of Stockton in the Central Zone (attachments 1 &2).

RECOMMENDATION:

SJCOG, Inc. staff recommends the HTAC recommend to the SJCOG, Inc. Board to

1) Allow the project to participate in the habitat plan;
2) Allow a revision to the Incidental Take Minimization Measures for Giant Garter Snake (GGS) and Western Pond Turtle (WPT).

FISCAL IMPACT:

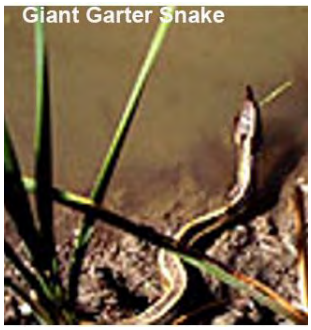
If the project is approved, SJCOG, Inc. will be provided mitigation for the project impacts as required under the SJMSCP for approximately 208.00 acres. The impacts for this project would consist of 208.00 acres of Agricultural (C34) habitat impacts.

BACKGROUND:

This project consists of a complex of industrial warehouses with a total building footprint of 3,600,000 square feet and access via Mariposa Road. Storm water will be treated onsite prior to discharge into North Little John's Creek (attachment 3).

For the proponents to construct the Mariposa Road Industrial Park Project, the project will impact potential Giant Garter Snake (GGS) habitat within the suggested 200-foot buffer and Western Pond Turtle (WPT) within the 300-foot buffer. As identified in Section 5.59 of the Plan, HTAC, on a case by case review, can establish a setback and buffer zone to be used by the project in place of the 200 and 300 feet suggested.

Because construction of portions of the project will be within the suggested 200-foot and 300-foot buffer areas, the project proponent has requested a reduction in the buffer to a 25 foot setback along both creeks (North LittleJohn's Creek and its tributary) for the construction of the industrial buildings and a 0 foot setback for the construction of the storm drain outfall on North LittleJohn's Creek. The preferred outfall location is on the North LittleJohn's Creek in the southwest corner of the site. Alternately, the outfall may be located along the tributary to North LittleJohn's Creek. Further hydrological analysis will be needed to finalize the outfall location.



The reduction of these buffers is necessary for the construction of this project. All other ITMM measures for GGS *(e.g. construction window between May and October and required survey work)* and WPT will remain standard. Reducing the buffer for GGS and WPT will allow the project to construct up to 25' feet of the banks of North LittleJohn's Creek and its tributary and up to 0' feet on the southwestern corner of the project site for an outfall during the species' active period. However, the project will be required to meet all other ITMM measures for GGS and WPT, such as biological surveying efforts, constructing within the standard May 1 to October 1 active period and mitigating for project impacts.

The SJMSCP GIS habitat layer classifies the project site as Agricultural (C34) Habitat.

If allowed to participate in the SJMSCP, the total disturbed area will consist of approximately 208.00 acres of Agricultural (C34) impacts. The project applicant will be responsible for mitigating for the habitat impacts that is consumed by this project by either paying the appropriate fees at the time of ground disturbance or dedicating land in lieu of a fee at the appropriate SJMCP ratio.

Adjacent Vegetation and Land Use

Location	SJMSCP Vegetation Map Classification	Habitat Type Category	Actual Use Of Property
Site	Agriculture (C34)	Agriculture (C34)	Agriculture (C34)
North	Urban (U), Agriculture (C34)	Urban (U), Agriculture (C34)	Urban (U), Agriculture (C34)
South	Agriculture (C34)	Agriculture (C34)	Agriculture (C34)
East	Agriculture (C34)	Agriculture (C34)	Agriculture (C34)
West	Urban (U)	Urban (U)	Urban (U)

COMMITTEE ACTIONS:

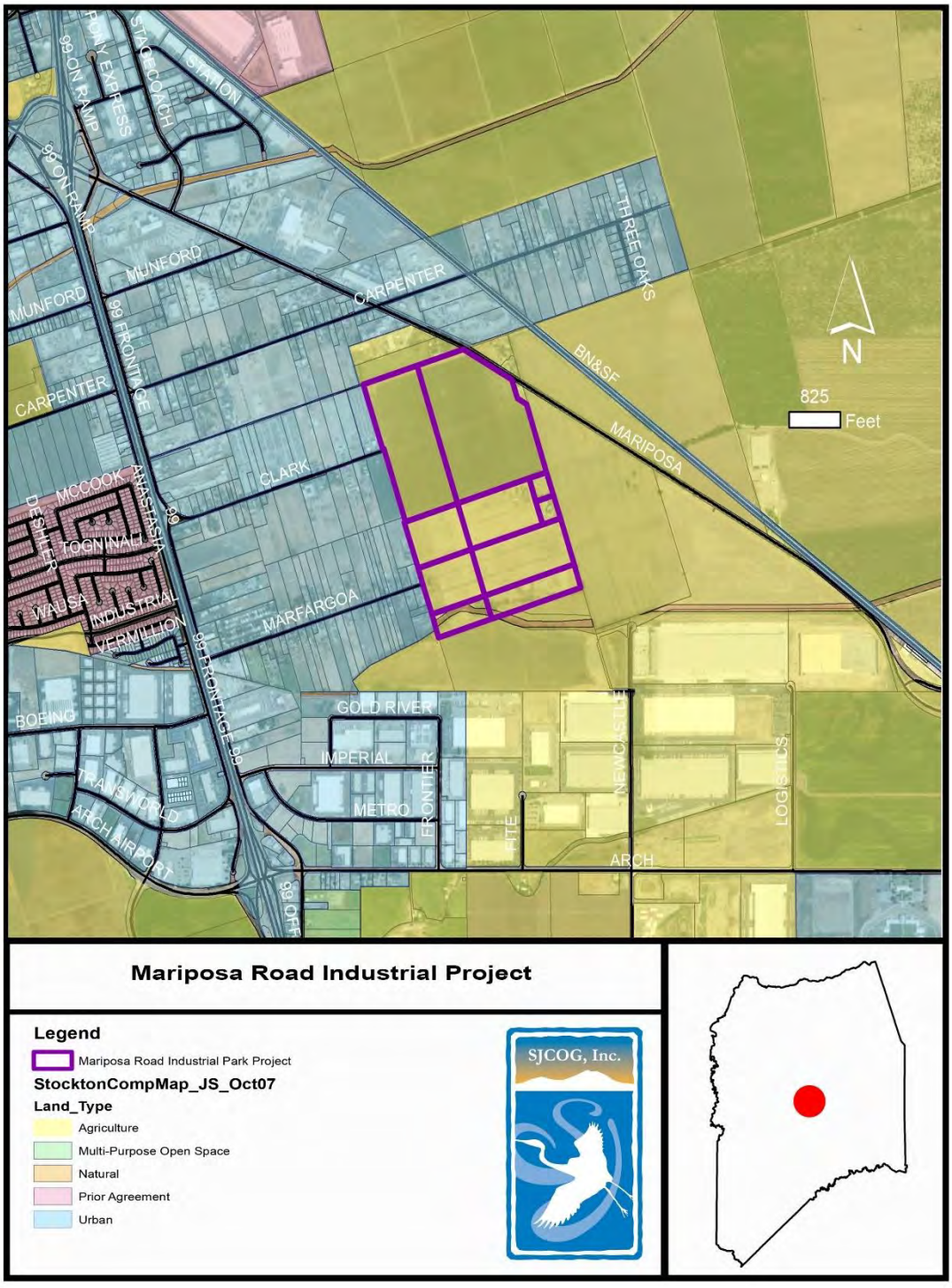
- Habitat Technical Advisory Committee: Action Required
- SJCOG, Inc. Board: December 3rd if Recommended

ATTACHMENTS:

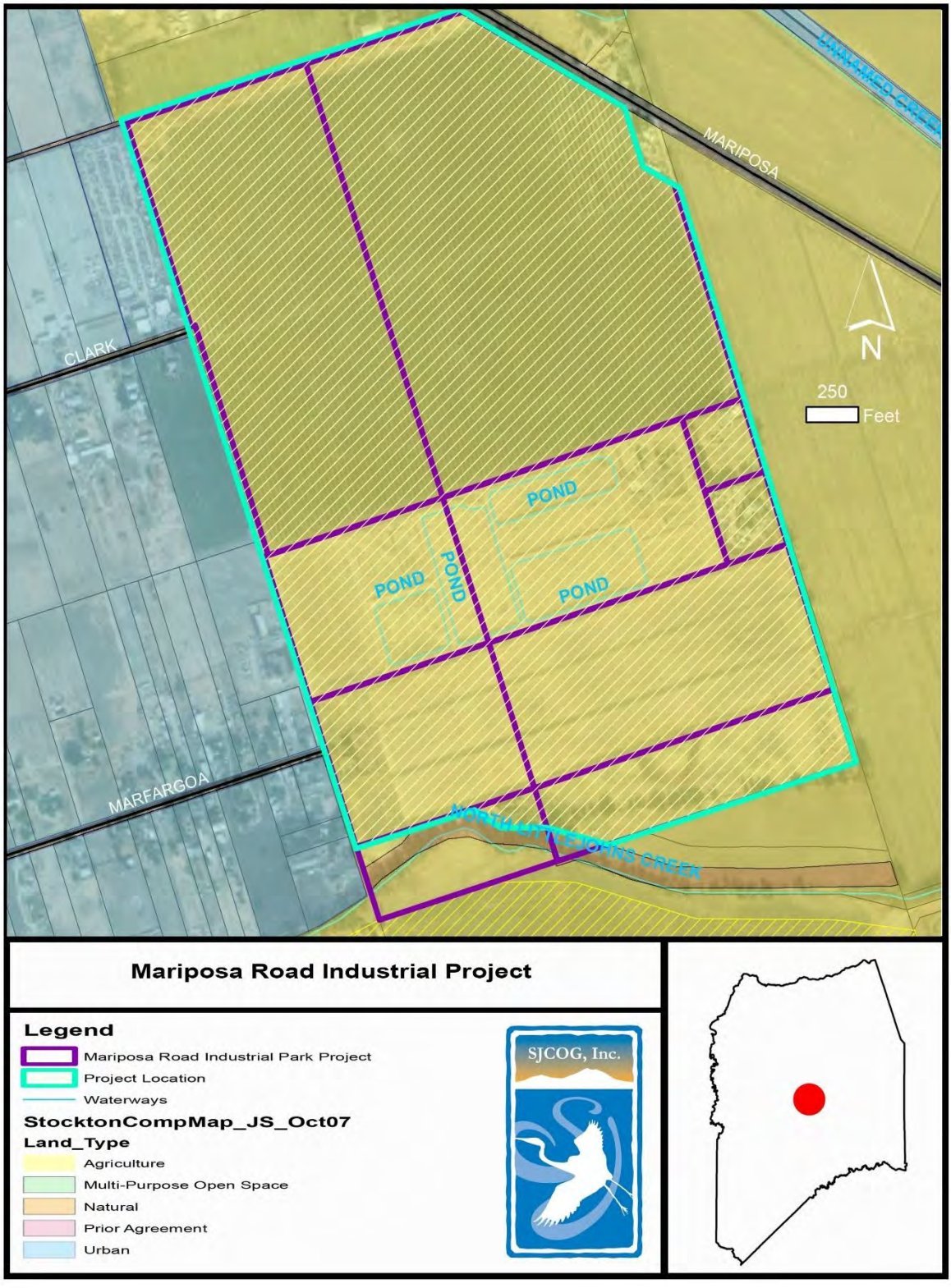
1. General Location Map
2. Project Location Map
3. Project Site Map

Prepared by: Laurel Boyd, Associate Habitat Planner

ATTACHMENT 1



ATTACHMENT 2



ATTACHMENT 3

Attachment E

Dry-Season and Wet-Season Protocol-Level Vernal Pool Invertebrate Survey Reports

PROTOCOL-LEVEL
DRY-SEASON SAMPLING
FOR
FEDERALLY-LISTED LARGE BRANCHIOPODS
AT THE
MARIPOSA INDUSTRIAL PARK PROJECT,
SAN JOAQUIN COUNTY, CALIFORNIA
(USFWS# 2021-TA-0271)

Prepared for:

MOORE BIOLOGICAL CONSULTANTS
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Contact: **Diane Moore**
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Prepared by:

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Contact: **Dr. Brent Helm**
(530) 633-0220

December 2020

HELM
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A Tansley Team Division
4600 Karchner Rd, Sheridan, CA 95681

PROTOCOL-LEVEL DRY-SEASON SAMPLING FOR FEDERALLY-LISTED LARGE BRANCHIOPODS AT THE MARIPOSA INDUSTRIAL PARK PROJECT, SAN JOAQUIN COUNTY, CALIFORNIA

(USFWS# 2021-TA-0271)

INTRODUCTION

Helm Biological Consulting (HBC), a division of Tansley Team, Inc., was contracted by Moore Biological Consultants to conduct protocol-level dry-season sampling for large branchiopods (fairy shrimp, tadpole shrimp) that are listed as threatened or endangered under the federal Endangered Species Act (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the Mariposa Industrial Park Project (hereafter "Project").

The Project is located east of Clark Drive and southwest of East Mariposa Road, just east of the City of Stockton, San Joaquin County, California (Exhibit A). Additionally, the Project is located within an unsectioned portion of Township 1 North, Range 7 East, Mount Diablo Base and Meridian of the Stockton East U.S. Geological Survey 7.5-minute quadrangle maps (Exhibit B); approximate center coordinates (World Geodetic System 1984 [WGS84]) are: 37.921171°, -121.211436°).

The remainder of this report discusses the methods and results of the dry-season sampling for the presence of federally-listed large branchiopods at the Project.

"We certify that the information in this survey report and attached exhibits fully and accurately represents our work."

Brent P. Helm Signature _____ Date 12-14-2020
(TE-795930-10.2)

Sean M. O'Brien Signature _____ Date 12-14-2020
(TE-795930-10.2)

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METHODS

Dr. Brent Helm of HBC conducted dry-season sampling on November 5, 2020 as authorized by the U.S. Fish and Wildlife Service (USFWS) (Appendix A) under recovery permit TE-795930-10.2 of Section 10(a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 et seq., and its implementing regulations. Dry-season sampling methods followed USFWS's (2017) *Survey Guidelines for the Listed Large Branchiopods* (hereafter "Survey Guidelines") for dry-season sampling as described below.

Dry-season sampling was conducted in all basins (habitats) within the Project with the potential to support federally-listed large branchiopods. A map of these basins (provided by Moore Biological Consulting, 2020, Exhibit C) was utilized to target appropriate habitats for sampling.

Habitat characteristics of large branchiopods are based on the life history of Central Valley endemics (Eriksen and Belk 1999; Helm 1998, 1999; Helm and Vollmar 2002, Helm and Noyes 2016). The presence of water marks, algae mats, driftlines, hydrophytic vegetation ("water-loving plants"), slope, contributing watershed, maximum potential ponding depth, and aquatic arthropods (i.e., crustaceans and insects) exoskeletons were helpful indicators for evidence of ponding depth and duration. Habitats that swiftly flow water (e.g., creeks, streams, and ephemeral drainages), semi-to-permanently inundated areas that support population of predators (e.g., bullfrogs, fish, and crayfish), and habitats that receive water during the dry season (i.e., artificial water sources) were not generally considered suitable habitat for federally listed large branchiopods.

Soil samples were collected mainly from the lowest topographic areas within each sampled basin. Soil samples were placed in liter size plastic sealable bags and marked with the project name, basin, and date. Representative photographs were taken of the basins sampled (Appendix B). The soil was then transported to HBC for processing and analysis as described below.

In HBC's laboratory, a brine solution was prepared by mixing table salt (NaCl) with lukewarm tap water in a large container. The collected soil material was placed in the brine solution. The soil material was then gently worked by hand to breakdown any persistent soil structure. The organic material rising to the top of the brine solution was skimmed off and placed in a 600-micron diameter pore-size sieve stacked atop a 75-micron diameter pore-size sieve. The soil material was processed through the top sieve by flushing it with lukewarm tap water while gently rubbing it with a soft-bristle brush. The soil retained from the 75-micron diameter pore size sieve was then removed and thinly (≈1.0 mm) spread into plastic petri dishes.

The contents of each petri dish were examined under a 10 to 252-power zoom binocular microscope. A minimum of 0.5-hour was spent searching the contents of each petri dish for large branchiopod cysts (embryonic eggs). Dr. Helm's large branchiopod cyst reference collection and scanning electron micrographs of cysts (Belk 1989, Brendock *et al*. 2008, Gilchrist 1978,

Hill and Shepard 1998, Mura 1991, and Rabet 2010) were used to identify and compare any cysts observed within the soil samples. This processing method (described above) favors the detection of cysts belonging to the genera *Branchinecta*, *Lepidurus*, and *Streptocephalus* since these three genera have species that are federally listed. Evidence of other macroscopic aquatic invertebrates encountered was also noted on the laboratory data sheet.

RESULTS

Soils collected from a total of five basins were processed and analyzed (Exhibit C). Visual examinations of the soils revealed the presence of cysts belonging to the genus *Branchinecta* in one of the five basins sampled (SW-4) (Table 1). No evidence of cysts or carapaces belonging to the genus *Lepidurus* were observed in the soils collected. Representative photographs of the basins sampled are provided in Appendix B.

Table 1. Results of Dry-season Sampling at the Mariposa Industrial Park Project

Basin No.	Invertebrates Present (X)						
	Insects Exo-skeletons	Micro-turbellarian Cysts	Cladocera Ephippia	Ostracod Cysts/ Carapaces	Nematoda	Collembola	Abundance* of *Branchinecta* sp. cysts
SW-1	X		X				
SW-2	X	X	X				
SW-3	X		X	X		X	
SW-4	X		X	X			Medium
SW-5	X				X	X	

*Abundance categories are derived from USFWS's Survey Guidelines for the Listed Large Branchiopods - Section VI(d) (none = no cysts found in sample; low abundance = estimate of 1-10 cysts/100 ml soil; medium abundance = estimate of 11-50 cysts/100 ml soil; high abundance = estimate of more than 50 cysts/100 ml soil)

DISCUSSION

Based upon the Project's location (San Joaquin County) and the types of habitats sampled (non-alkaline, non-playa seasonal wetlands), the cysts belonging to the genus *Branchinecta* most likely belong to either the vernal pool fairy shrimp or the midvalley fairy shrimp (*B. mesovallensis*). According to California Department Fish and Wildlife's (CDFW 2020) California Natural Diversity Database (CNDDB), the closest known occurrences of vernal pool fairy shrimp (Occurrence #: 231) and midvalley fairy shrimp (Occurrence #: 43) are located 12 miles northeast and 10 miles north of the Project, respectively. The vernal pool fairy shrimp is listed as threatened under the federal Endangered Species Act and the midvalley fairy shrimp has no state or federal listing status. Both of these species have cysts with similar external morphologies. Therefore, positive species identification would consist of: 1) Hatching the cysts and raising the cysts to maturity; 2) Genetic analysis of the cysts; or 3) Conducting wet-season sampling when the shrimp are active.

LITERATURE CITED

Belk, D. 1989. Identification of species in the Conchostraca genus *Eulimnadia* by egg shell morphology. Journal of Crustacean Biology. 9(1): 115-125.

Brendock, L., D. C. Rogers, J. Olesen, S. Weeks, and W. R. Hoch. 2008. Global diversity of large branchiopods (Crustacea: Branchiopoda) in freshwater. Hydrobiologia. 595: 167-176.

California Department of Fish and Wildlife (CDFW) Natural Diversity Data Base RareFind 5. 2020. Available at: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

Eriksen, C. H., and D. Belk. 1999. Fairy shrimps of California's puddles, pools, and playas. Mad River Press, Inc. Eureka, CA. 196 pp.

Gilchrist, B. M. 1978. Scanning electron microscope studies of the egg shell in some Anostraca (Crustacea: Branchiopoda). Cell Tiss. Res. 193: 337-351.

Helm, B. P. 1998. Biogeography of eight large branchiopods endemic to California. Pages 124-139 *in* Witham, C. W., E. T. Bauder, D. Belk, W.R. Ferren Jr., and R. Ornduff. (eds.). Ecology, conservation, and management of vernal pool ecosystems –proceeding from a 1996 conference. California Native Plant Society, Sacramento, CA. 285 pp.

Helm, B. P. 1999. Feeding ecology of *Linderiella occidentalis* (Dodds) (Crustacea: Anostraca). Doctoral thesis. University of California, Davis. 158 pp.

Helm, B. P., and J. E. Vollmar. 2002. Vernal pool large brachiopods. Pages 151-190 *in* John E. Vollmar (ed.). Wildlife and rare plant ecology of eastern Merced County's vernal pool grasslands. Sentinel Printers, Inc. CA. 446 pp.

Helm, B., and M. Noyes. 2016. California large branchiopod occurrences: A comparison of method detection rates. Pages 31-56. In: Robert Schlising (ed.). Vernal Pools in changing landscapes: from Shasta to Baja –proceeding from a 2014 conference. AquaAlliance, Chico, California. 291 pp.

Hill, R. E., and W. D. Shepard. 1998. Observation on the identification of California anostracan cysts. Hydrobiologia 359: 113-123.

Moore Biological Consulting. 2020. "Dark Horse", San Joaquin County, California: Preliminary Wetlands and Special-status Species Review. Prepared by Diane S. Moore, Principal Biologist. 36 pp. Dated: September 28, 2020.

Mura, G. 1991. SEM morphology of resting eggs in the species of the genus *Branchinecta* from North America. J. Crust. Biol. 11: 432-436.

Rabet, N. 2010. Revision of the egg morphology of *Eulimnadia* (Crustacea, Branchiopoda, Spinicaudata). Zoosystema 32 (3): 373-391.

U.S. Department of the Interior, U.S. Fish and Wildlife Service (USFWS). 2017. Survey guidelines for the listed large branchiopods. 24 pp. Dated: 31 May 2015 (Revised November 13, 2017).

EXHIBIT A.
LOCATION OF PROJECT ON AERIAL PHOTOGRAPHY

Exhibit A

Moore Biological Consultants

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Map Date: 09/16/2020
Aerial SOurce: Google Earth (08/2018)

AERIAL

Dark Horse

San Joaquin County, CA

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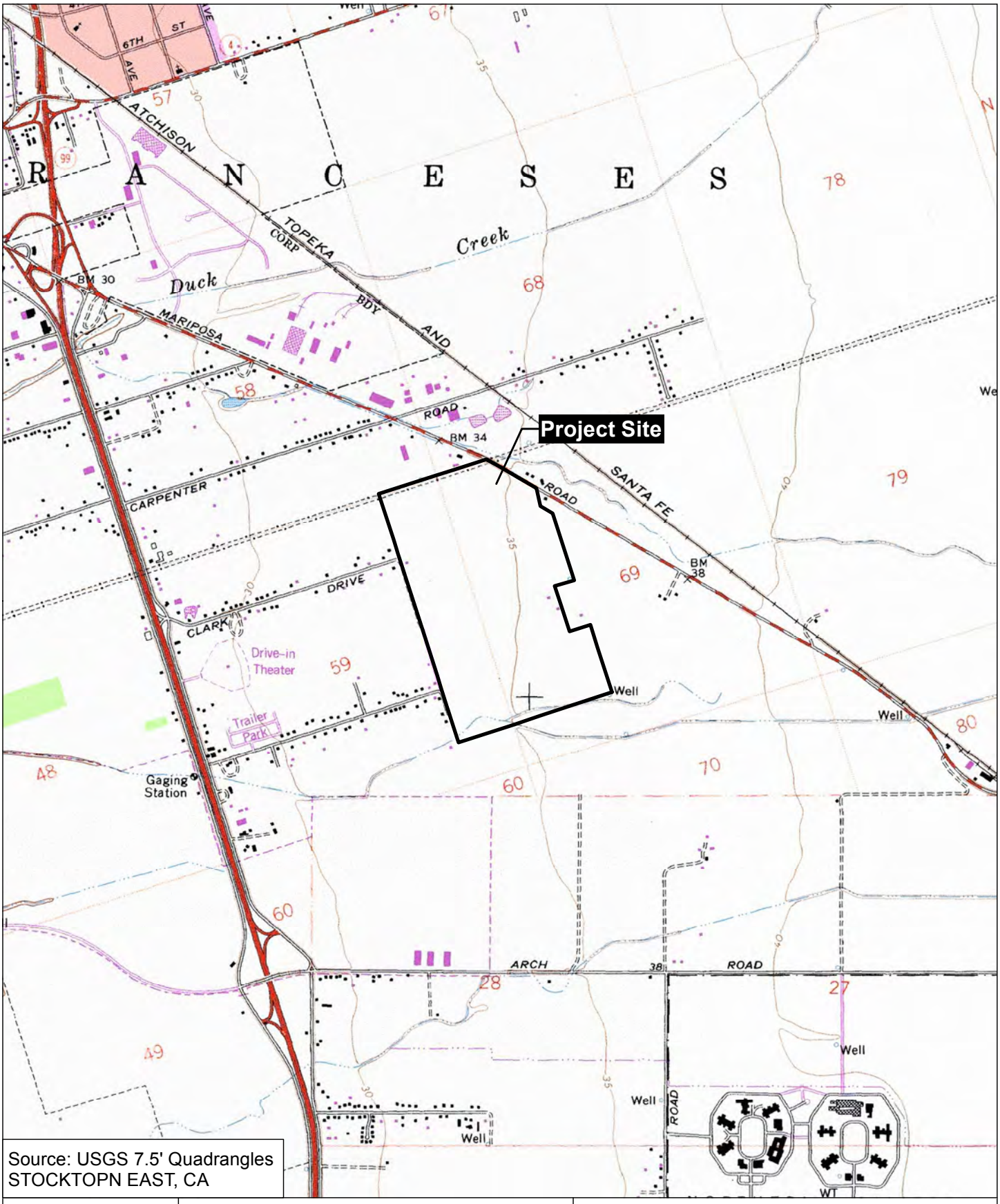
EXHIBIT B.
LOCATION OF PROJECT
ON USGS TOPOGRAPHIC QUADRANGLE MAP



Source: USGS 7.5' Quadrangles
STOCKTOPN EAST, CA

Exhibit B

Moore Biological Consultants

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Map Date: 09/16/2020

USGS

Dark Horse

San Joaquin County, CA

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EXHIBIT C.
POTENTIAL LISTED LARGE BRANCHIOPOD HABITAT AT THE PROJECT (MOORE BIOLOGICAL CONSULTANTS 2020)

Exhibit C

Moore Biological Consultants

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Map Date: 09/28/2020
Aerial Source: Google Earth (03/2016)

Potential Waters of the U.S.

Dark Horse

San Joaquin County, CA

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APPENDIX A.
USFWS AUTHORIZATION

Gmail **Sean O'Brien <sobrien@tansleyteam.com>**

USFWS Sampling Request for Dr. Brent Helm (TE-795930-10.2) - Dark Horse Project

Lantz, Samantha M <samantha_lantz@fws.gov> Mon, Nov 2, 2020 at 9:57 AM
To: Sean O'Brien <sobrien@tansleyteam.com>
Cc: "Cole, Patricia" <Patricia_Cole@fws.gov>, Brent Helm <bhelm@tansleyteam.com>, "moorebio@softcom.net" <moorebio@softcom.net>

Sean O'Brien,

By this email message, you are authorized to conduct 2020-2021 protocol-level vernal pool branchiopod surveys per the conditions of recovery permit TE-795930 and as specified in your request dated October 29, 2020. The surveys will be conducted at the Dark Horse Project site in San Joaquin County, California.

Please remember to carry a copy of your permit while doing the work, and to follow the terms and conditions of the permits, including the reporting requirements. Let us know if the surveys are not performed as authorized, or if they are done by a different permittee under a separate authorization. This authorization does not include access to the property which must be arranged with the landowner or manager.

Please send electronic copies of the report(s) to myself and Patricia Cole (cc'd). **We ask that you use UTM coordinates for all spatial data and that you use Service reference number 2021-TA-0271 in future correspondence regarding these surveys.** In your report, please include which surveys were authorized, the names of all persons involved in the surveys, their recovery permit numbers, if applicable, and the date of this authorization, to help ensure that we correctly record the fulfillment of the reporting requirement under this authorization.

Sam

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Samantha Lantz, PhD
Fish and Wildlife Biologist
USFWS, Sacramento Field Office
Listing and Recovery Division
2800 Cottage Way W-2605
Sacramento, CA 95825-1888
Phone: 916-414-6526
Pronouns: she/her/hers

In an effort to slow the spread of the coronavirus (COVID-19), staff in the Sacramento Fish and Wildlife Office have implemented an aggressive telework schedule. At this time, we are responding to requests for information via email or phone as often as possible as we do not have the in-office capacity to support regular mail service. We appreciate your understanding.

From: Sean O'Brien <sobrien@tansleyteam.com>
Sent: Thursday, October 29, 2020 1:42 PM
To: Lantz, Samantha M <samantha_lantz@fws.gov>
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APPENDIX B.
REPRESENTATIVE PHOTOGRAPHS

Representative photograph of the Project's general condition taken on November 5, 2020.

Representative photograph of the Project's general condition taken on November 5, 2020.

Photograph of SW-1 taken facing northwest on November 5, 2020.

Photograph of SW-2 taken facing north on November 5, 2020.

Photograph of SW-4 taken facing north on November 5, 2020.

Photograph of SW-4 taken facing east on November 5, 2020.

Photograph of SW-5 taken facing north on November 5, 2020.

PROTOCOL-LEVEL
WET-SEASON SAMPLING
FOR
FEDERALLY-LISTED LARGE BRANCHIOPODS
AT THE
MARIPOSA INDUSTRIAL PARK PROJECT,
SAN JOAQUIN COUNTY, CALIFORNIA
(USFWS# 2021-TA-0271)

Prepared for:

MOORE BIOLOGICAL CONSULTANTS
10330 Twin Cities Road, Ste. 30
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Contact: **Diane Moore**
(209) 745-1159

Prepared by:

HELM BIOLOGICAL CONSULTING
4600 Karchner Road
Sheridan, CA 95681
***Contact*: Dr. Brent Helm**
(530) 633-0220

January 2021

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PROTOCOL-LEVEL WET-SEASON SAMPLING FOR FEDERALLY-LISTED LARGE BRANCHIOPODS AT THE MARIPOSA INDUSTRIAL PARK PROJECT, SAN JOAQUIN COUNTY, CALIFORNIA

(USFWS# 2021-TA-0271)

INTRODUCTION

Helm Biological Consulting (HBC), a division Tansley Team, Inc., was contracted by Moore Biological Consultants to conduct protocol-level wet-season sampling for large branchiopods (fairy shrimp, tadpole shrimp, and clam shrimp) that are listed as threatened or endangered under the federal Endangered Species Act (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardi*]) at the Mariposa Industrial Park Project (hereafter "Project").

The Project is located east of Clark Drive and southwest of East Mariposa Road, just east of the City of Stockton, San Joaquin County, California (Exhibit A). Additionally, the Project is located within an unsectioned portion of Township 1 North, Range 7 East, Mount Diablo Base and Meridian of the Stockton East U.S. Geological Survey 7.5-minute quadrangle maps (Exhibit B); approximate center coordinates (World Geodetic System 1984 [WGS84]) are: 37.921171°, -121.211436°).

Background

HBC conducted dry-season sampling at the Project during the fall of 2020 (HBC 2020). Cysts belonging to the genus *Branchinecta* were observed in soils collected from one (SW-4) of the five wetlands sampled.

The remainder of this report discusses the methods and results of the wet-season sampling for the presence of federally-listed large branchiopods at the Project.

"We certify that the information in this survey report and attached exhibits fully and accurately represents our work."

Brent P. Helm Signature _____ Date 04-20-2021
(TE-795930-10.2)

Sean M. O'Brien Signature _____ Date 04-20-2021
(TE-795930-10.2)

METHODS

Dr. Brent Helm and/or Mr. Sean O'Brien of HBC conducted 6 rounds of protocol-level wet-season sampling during the 2020/2021 wet-season as follows:

- 1st round: December 22
- 2nd round: January 5
- 3rd round: February 4
- 4th round: February 12
- 5th round: February 22
- 6th round: March 19

The wet-season sampling was conducted under permit TE-795930-10.2 of Section 10(a)(1)(A) of the federal Endangered Species Act, 16 U.S.C. 1531 et seq., and its implementing regulations as authorized by the U.S. Fish and Wildlife Service (USFWS) (Appendix A). Methods generally followed USFWS's (2017) *Survey Guidelines for Listed Large Branchiopods* (hereafter "Survey Guidelines") for wet-season sampling.

Wet sampling was conducted in all basins (habitats) at the Project that had potential to support federally-listed large branchiopods. A map of these basins (provided by Moore Biological Consulting, 2020, Exhibit C) and aerial imagery of the Project obtained from Google Earth© (2021) were utilized to target appropriate habitats for sampling.

Potential habitat for federally-listed large branchiopods is defined as any seasonal inundated depression that on average ponds water at a sufficient depth and duration for a listed large branchiopod to complete its lifecycle (generally 2.0 inches or greater in depth for 14 or more consecutive days for fairy shrimp and 30 or more consecutive days for tadpole shrimp) (USFWS 2017). Generally these habitats occur within the California Floristic Province at elevations below 1,707 meters in the Coast Ranges (CNDDB #178) and below 914 meters for the rest of California and Oregon (CNDDB #244) and Oregon (USFWS 2017). Habitats that swiftly flow water (e.g., creeks, streams, and ephemeral drainages), semi-to-permanently inundated areas that support perennial population of predators (e.g., bullfrogs, fish, and crayfish), and habitats that receive water during the dry season (i.e., artificial water sources) were not generally considered suitable habitat for federally listed large branchiopods (USFWS 2017).

According the Survey Guidelines, the Project is within Survey Zone B (San Joaquin Valley, Central and Southern Sierra Nevada foothills and Tehachapi Mountains) (USFWS 2017). Therefore wet-season sampling was initiated 10 days after any of the habitats on site (determined to potential large branchiopod habitat) ponded a minimum of 3 centimeters (cm) of standing water. The habitats were first inundated following large storm events between December 12-17, 2020 (Weather Underground 2021), therefore wet-season sampling was initiated on December 22, 2020. Wet-season sampling was then continued at a minimum of 10-day intervals until the habitats were dry or 90 continuous ponding days had occurred. In cases when the habitats dried and refilled the 90 days would start over. Specific sampling methods are described below.

Each habitat was viewed for active large branchiopods prior to entering the water. Any large branchiopods observed were quickly netted, viewed with the aid of a 30x hand lens to determine species, and released unharmed back into the environment from which they were obtained. If no large branchiopods were observed, then a semi-quantitative sample was taken to determine the relative abundance of large branchiopods as follows.

A dip net was lowered vertically into the deepest portion of the inundated habitat (usually the center) and rested on the bottom. The 80-µm mesh size dip net was then moved in the direction of the longest axis of the habitat for approximately one-meter. In instances where half of the habitat length is less than one meter in length, the dip net was repositioned in the deepest portion of the habitat and moved in the opposite direction for the remainder of the one-meter sample. Given the aperture of the dip net of 0.025 m^2 and distance the dip net was moved, roughly 0.025 m^3 or 25 liters of the water column was sampled horizontally each time. In those cases when the water column was shallower than the dip net aperture height, the volume of water per sweep was calculated by the horizontal distance the net is moved multiplied by the width of the dip net (25-cm) multiplied by the depth of water. After the completion of each sample sweep, the contents of the net were examined for large branchiopods. All large branchiopods captured in the dip net were identified to the lowest justifiable taxon in the field, and recorded on standardized data sheets. The relative numbers of individuals observed within each taxonomic group was recorded in one of five categories: rare (≤2 individuals), not common (3-10 individuals), common (11-50 individual), very common (51 -100 individuals), and abundant (>100 individuals). This method allows for the relative abundances and richness of large branchiopods to be compared between and among wetlands through time. Additionally, this method allows for concentration estimates of large branchiopods to be calculated as number of individuals per liter of water (= number of individuals/net aperture area x length of sweep).

If federally-listed large branchiopods were not detected during the semi-quantified sampling method, then the entire habitat was sampled as follows. Starting at one end of the habitat, the net was moved from one side of the habitat to the other in a zigzag fashion, until the opposite end of the habitat was reached. During this procedure, the net was often bounced along the habitat bottom (to encourage large branchiopods to move up into the water column from hiding places for easier capture) and viewed often for evidence of large branchiopods. If still no federally listed large branchiopods were captured, then additional netting took place in specific locations within the habitat that may have not been sampled during prior efforts. Additional taxonomic groups of large branchiopods detected using this alternative method is noted as present by an "X" on the standardized field data sheet. After the taxonomic identification and enumeration were completed, the contents of the net were placed back into the habitat from which they were collected.

Data concerning air and water temperatures, present depths (maximum and average [ft]), present ponding surface area (percent inundation), and habitat conditions were collected during each field visit. The potential depths (maximum and average [ft]) and potential ponding surface area

percentage were visually estimated. Additionally, presence and abundance data were recorded for all other aquatic species using the same methods as described above for large branchiopod sampling. Representative photographs were taken of the habitats sampled and species observed.

RESULTS

A total of five habitats (SW-1, SW-2, SW-3, SW-4, and SW-5) occurring within the Project were considered potential habitat for federally-listed large branchiopods (Exhibit C). Of these five habitats, only one habitat (SW-2) ponded for any duration during the 2020/2021 wet-season. No federally-listed large branchiopods were detected within the sampled habitat. Field data forms from each wet-season sampling date are provided in Appendix B. Representative photographs of the potential large branchiopod habitats are provided in Appendix C.

LITERATURE CITED

Google Earth©. 2021. V 7.3.3.7786. Available at http://www.earth.google.com.

Helm Biological Consulting (HBC). 2020. Protocol-level Dry-season Sampling for Federally-listed Large Branchiopods at the Mariposa Industrial Park Project, San Joaquin County, California (USFWS# 2021-TA-0271). 22 pp. Dated: December 2020.

Moore Biological Consulting. 2020. "Dark Horse", San Joaquin County, California: Preliminary Wetlands and Special-status Species Review. Prepared by Diane S. Moore, Principal Biologist. 36 pp. Dated: September 28, 2020.

U.S. Department of the Interior, U.S. Fish and Wildlife Service (USFWS). 2017. Survey guidelines for the listed large branchiopods. 24 pp. Dated: 31 May 2015 (Revised November 13, 2017)

Weather Underground. 2021. Weather History for Vacaville, CA. Nut Tree Station. Available online: https://www.wunderground.com/history/monthly/KVCB/date/1982-1

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EXHIBIT A.
LOCATION OF PROJECT ON AERIAL PHOTOGRAPHY

Exhibit A

Moore Biological Consultants

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Map Date: 09/16/2020
Aerial SOurce: Google Earth (08/2018)

AERIAL

Dark Horse

San Joaquin County, CA

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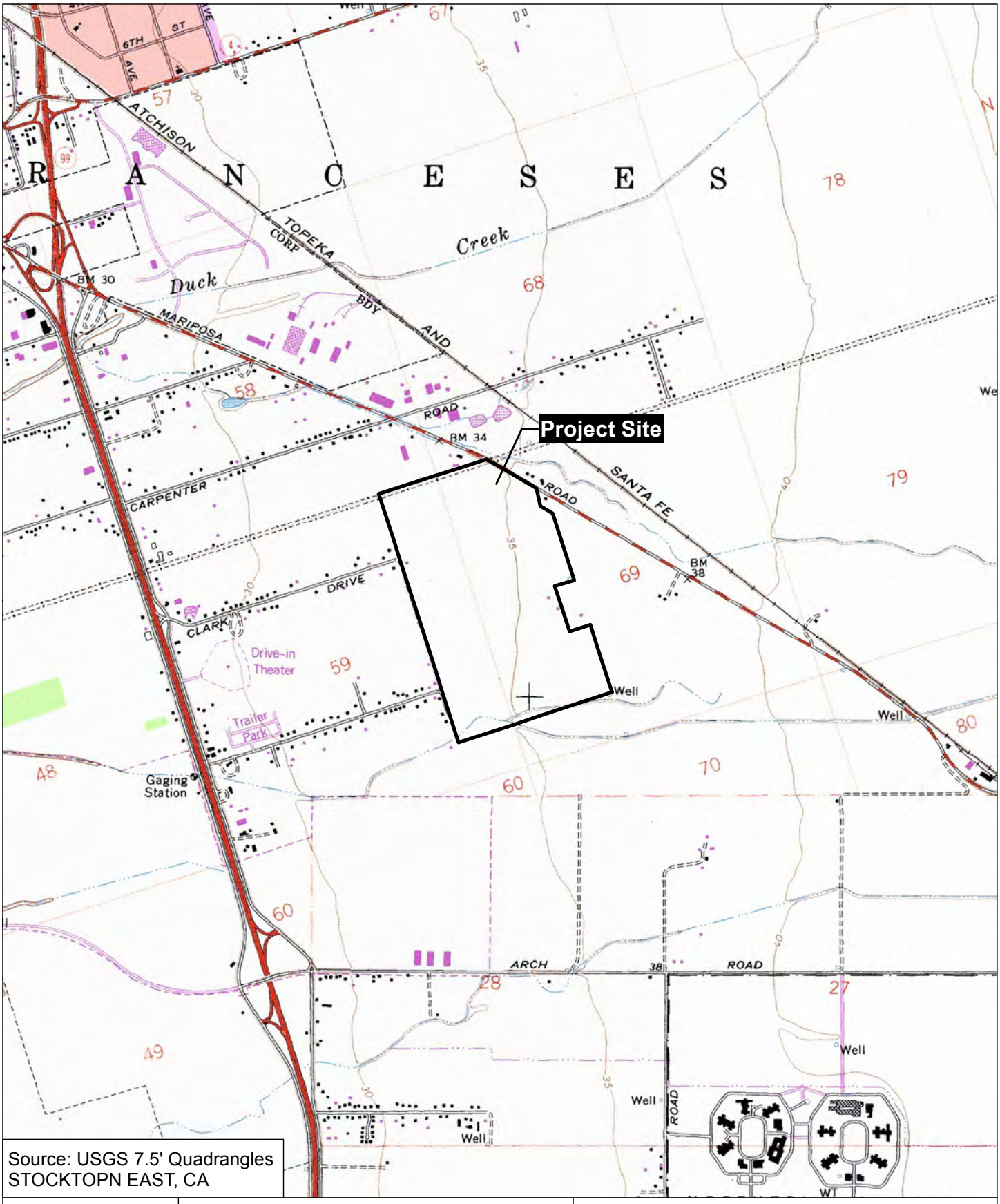
EXHIBIT B.
LOCATION OF PROJECT
ON USGS TOPOGRAPHIC QUADRANGLE MAP



Source: USGS 7.5' Quadrangles
STOCKTOPN EAST, CA

Exhibit B

Moore Biological Consultants

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Map Date: 09/16/2020

USGS

Dark Horse

San Joaquin County, CA

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EXHIBIT C.
POTENTIAL LISTED LARGE BRANCHIOPOD HABITAT AT THE PROJECT (MOORE BIOLOGICAL CONSULTANTS 2020)

Ph: (530) 633-0220
Fax: (530) 633-0230

Exhibit C

Moore Biological Consultants

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Map Date: 09/28/2020
Aerial Source: Google Earth (03/2016)

Potential Waters of the U.S.

Dark Horse

San Joaquin County, CA

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APPENDIX A.
USFWS AUTHORIZATION LETTER

Gmail **Sean O'Brien <sobrien@tansleyteam.com>**

USFWS Sampling Request for Dr. Brent Helm (TE-795930-10.2) - Dark Horse Project

Lantz, Samantha M <samantha_lantz@fws.gov> Mon, Nov 2, 2020 at 9:57 AM
To: Sean O'Brien <sobrien@tansleyteam.com>
Cc: "Cole, Patricia" <Patricia_Cole@fws.gov>, Brent Helm <bhelm@tansleyteam.com>, "moorebio@softcom.net" <moorebio@softcom.net>

Sean O'Brien,

By this email message, you are authorized to conduct 2020-2021 protocol-level vernal pool branchiopod surveys per the conditions of recovery permit TE-795930 and as specified in your request dated October 29, 2020. The surveys will be conducted at the Dark Horse Project site in San Joaquin County, California.

Please remember to carry a copy of your permit while doing the work, and to follow the terms and conditions of the permits, including the reporting requirements. Let us know if the surveys are not performed as authorized, or if they are done by a different permittee under a separate authorization. This authorization does not include access to the property which must be arranged with the landowner or manager.

Please send electronic copies of the report(s) to myself and Patricia Cole (cc'd). **We ask that you use UTM coordinates for all spatial data and that you use Service reference number 2021-TA-0271 in future correspondence regarding these surveys.** In your report, please include which surveys were authorized, the names of all persons involved in the surveys, their recovery permit numbers, if applicable, and the date of this authorization, to help ensure that we correctly record the fulfillment of the reporting requirement under this authorization.

Sam

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Samantha Lantz, PhD
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USFWS, Sacramento Field Office
Listing and Recovery Division
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Sacramento, CA 95825-1888
Phone: 916-414-6526
Pronouns: she/her/hers

In an effort to slow the spread of the coronavirus (COVID-19), staff in the Sacramento Fish and Wildlife Office have implemented an aggressive telework schedule. At this time, we are responding to requests for information via email or phone as often as possible as we do not have the in-office capacity to support regular mail service. We appreciate your understanding.

From: Sean O'Brien <sobrien@tansleyteam.com>
Sent: Thursday, October 29, 2020 1:42 PM
To: Lantz, Samantha M <samantha_lantz@fws.gov>
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

APPENDIX B.
WET-SEASON
FIELD DATA FORMS

Project: Mariposa Industrial Park | **Surveyor(s): O'Brien** | **Quad: Stockton East** | **County: San Joaquin**

Date: 12/22/2020 | **Weather Cond: 100% cloud cover, foggy** | **Township: 1 North** | **Lat.: 37.921171**

Time: 8:00 AM to 9:30 AM | **Air Temperature(°F): 45** | **Range: 7 East** | **Long.: -121.211436**

Abundance: R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Hydrology: D = dry, N/P = not ponding, M=moist, S = saturated to surface, I/P = intermittent ponding, X = Present but not observed in 1 meter sample

LB Redroductive Status: i = immature, m = mature, g = gravid (with eggs)

Habitat Condition: UD = undisturbed, D = disturbed - tt = tire tracks, t = trash, p = plowing

UG = ungrazed, G = grazed - C = cattle, H = horse, S = sheep, l = light grazing,

l = light grazing, m = moderate grazing, h = heavy grazing

		Present Depth (inches)		Potential Depth (Inches)			Crustacea										Insecta											Mollusca			Turbellaria	Acari	Collembola	Other	Herps			
								Copepods			Large Branchiopods (LB)						Coleoptera			Hemiptera			Odanota		Diptera														
Feature No.	Water Temp (°F)	Max	Ave.	Max	Ave.	Surface Area Inundation (% of maximum)	Ostracods	Calanoida	Cydopoda	Cladocera	*LIOC*	*BRLY*	*BRME*	*LEPA*	*LYBR*	*CYCA*	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularians	Hydracarini		Other Invertebrate	Pseudacris	Other	Habitat Condition	Comments
SW-1	Dry																																			G-H-m	
SW-2	Dry																																			D-t, G-H-m	
SW-3	Dry																																			G-H-m	
SW-4	Dry																																			G-H-m	
SW-5	Dry																																			D-t, G-H-m	

Project: Mariposa Industrial Park | **Surveyor(s): O'Brien** | **Quad: Stockton East** | **County: San Joaquin**

Date: 1/5/2021 | **Weather Cond: 100% cloud cover, foggy** | **Township: 1 North** | **Lat.: 37.921171**

Time: 8:00 AM to 9:30 AM | **Air Temperature(°F): 43** | **Range: 7 East** | **Long.: -121.211436**

Abundance: R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Hydrology: D = dry, N/P = not ponding, M=moist, S = saturated to surface, I/P = intermittent ponding, X = Present but not observed in 1 meter sample

LB Redroductive Status: i = immature, m = mature, g = gravid (with eggs)

Habitat Condition: UD = undisturbed, D = disturbed - tt = tire tracks, t = trash, p = plowing

UG = ungrazed, G = grazed - C = cattle, H = horse, S = sheep, l = light grazing,

l = light grazing, m = moderate grazing, h = heavy grazing

		Present Depth (inches)		Potential Depth (Inches)			Crustacea										Insecta											Mollusca			Turbellaria	Acari	Collembola	Other	Herps			
								Copepods			Large Branchiopods (LB)						Coleoptera			Hemiptera			Odanota		Diptera														
Feature No.	Water Temp (°F)	Max	Ave.	Max	Ave.	Surface Area Inundation (% of maximum)	Ostracods	Calanoida	Cydopoda	Cladocera	*LIOC*	*BRLY*	*BRME*	*LEPA*	*LYBR*	*CYCA*	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularians	Hydracarini		Other Invertebrate	Pseudacris	Other	Habitat Condition	Comments
SW-1	Dry																																			G-H-m	
SW-2	Dry																																			D-t, G-H-m	
SW-3	Dry																																			G-H-m	
SW-4	Dry																																			G-H-m	
SW-5	Dry																																			D-t, G-H-m	

Project: Mariposa Industrial Park | **Surveyor(s): O'Brien** | **Quad: Stockton East** | **County: San Joaquin**

Date: 2/4/2021 | **Weather Cond: Clear** | **Township: 1 North** | **Lat.: 37.921171**

Time: 8:00 AM to 9:30 AM | **Air Temperature(°F): 42** | **Range: 7 East** | **Long.: -121.211436**

Abundance: R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Hydrology: D = dry, N/P = not ponding, M=moist, S = saturated to surface, I/P = intermittent ponding, X = Present but not observed in 1 meter sample

LB Redroductive Status: i = immature, m = mature, g = gravid (with eggs)

Habitat Condition: UD = undisturbed, D = disturbed - tt = tire tracks, t = trash, p = plowing

UG = ungrazed, G = grazed - C = cattle, H = horse, S = sheep, l = light grazing,

l = light grazing, m = moderate grazing, h = heavy grazing

		Present Depth (inches)		Potential Depth (Inches)			Crustacea										Insecta											Mollusca			Turbellaria	Acari	Collembola	Other	Herps			
								Copepods			Large Branchiopods (LB)						Coleoptera			Hemiptera			Odanota		Diptera														
Feature No.	Water Temp (°F)	Max	Ave.	Max	Ave.	Surface Area Inundation (% of maximum)	Ostracods	Calanoida	Cydopoda	Cladocera	*LIOC*	*BRLY*	*BRME*	*LEPA*	*LYBR*	*CYCA*	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularians	Hydracarini		Other Invertebrate	Pseudacris	Other	Habitat Condition	Comments
SW-1	Dry																																			G-H-m	
SW-2	40	3	2	6	4	50																														D-t, G-H-m	
SW-3	Dry																																			G-H-m	
SW-4	Dry																																			G-H-m	
SW-5	Dry																																			D-t, G-H-m	

Project: Mariposa Industrial Park | **Surveyor(s): O'Brien** | **Quad: Stockton East** | **County: San Joaquin**

Date: 2/12/2021 | **Weather Cond: 10% cloud cover** | **Township: 1 North** | **Lat.: 37.921171**

Time: 8:00 AM to 9:30 AM | **Air Temperature(°F): 46** | **Range: 7 East** | **Long.: -121.211436**

Abundance: R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Hydrology: D = dry, N/P = not ponding, M=moist, S = saturated to surface, I/P = intermittent ponding, X = Present but not observed in 1 meter sample

LB Redroductive Status: i = immature, m = mature, g = gravid (with eggs)

Habitat Condition: UD = undisturbed, D = disturbed - tt = tire tracks, t = trash, p = plowing

UG = ungrazed, G = grazed - C = cattle, H = horse, S = sheep, l = light grazing,

l = light grazing, m = moderate grazing, h = heavy grazing

		Present Depth (inches)		Potential Depth (Inches)			Crustacea										Insecta											Mollusca			Turbellaria	Acari	Collembola	Other	Herps			
								Copepods			Large Branchiopods (LB)						Coleoptera			Hemiptera			Odanota		Diptera														
Feature No.	Water Temp (°F)	Max	Ave.	Max	Ave.	Surface Area Inundation (% of maximum)	Ostracods	Calanoida	Cydopoda	Cladocera	*LIOC*	*BRLY*	*BRME*	*LEPA*	*LYBR*	*CYCA*	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularians	Hydracarini		Other Invertebrate	Pseudacris	Other	Habitat Condition	Comments
SW-1	Dry																																			G-H-m	
SW-2	42	2	1	6	4	25											X																			D-t, G-H-m	
SW-3	Dry																																			G-H-m	
SW-4	Dry																																			G-H-m	
SW-5	Dry																																			D-t, G-H-m	

Project: Mariposa Industrial Park | **Surveyor(s): O'Brien** | **Quad: Stockton East** | **County: San Joaquin**

Date: 2/22/2021 | **Weather Cond: Clear** | **Township: 1 North** | **Lat.: 37.921171**

Time: 8:00 AM to 9:30 AM | **Air Temperature(°F): 52** | **Range: 7 East** | **Long.: -121.211436**

Abundance: R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Hydrology: D = dry, N/P = not ponding, M=moist, S = saturated to surface, I/P = intermittent ponding, X = Present but not observed in 1 meter sample

LB Redroductive Status: i = immature, m = mature, g = gravid (with eggs)

Habitat Condition: UD = undisturbed, D = disturbed - tt = tire tracks, t = trash, p = plowing

UG = ungrazed, G = grazed - C = cattle, H = horse, S = sheep, l = light grazing,

l = light grazing, m = moderate grazing, h = heavy grazing

		Present Depth (inches)		Potential Depth (Inches)			Crustacea										Insecta											Mollusca			Turbellaria	Acari	Collembola	Other	Herps			
								Copepods			Large Branchiopods (LB)						Coleoptera			Hemiptera			Odanota		Diptera														
Feature No.	Water Temp (°F)	Max	Ave.	Max	Ave.	Surface Area Inundation (% of maximum)	Ostracods	Calanoida	Cydopoda	Cladocera	*LIOC*	*BRLY*	*BRME*	*LEPA*	*LYBR*	*CYCA*	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularians	Hydracarini		Other Invertebrate	Pseudacris	Other	Habitat Condition	Comments
SW-1	Dry																																			G-H-m	
SW-2	Dry																																			D-t, G-H-m	
SW-3	Dry																																			G-H-m	
SW-4	Dry																																			G-H-m	
SW-5	Dry																																			D-t, G-H-m	

Project: Mariposa Industrial Park | **Surveyor(s): O'Brien** | **Quad: Stockton East** | **County: San Joaquin**

Date: 3/19/2021 | **Weather Cond: 75% cloud cover** | **Township: 1 North** | **Lat.: 37.921171**

Time: 8:00 AM to 9:30 AM | **Air Temperature(°F): 51** | **Range: 7 East** | **Long.: -121.211436**

Abundance: R = Rare (≤2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)

Hydrology: D = dry, N/P = not ponding, M=moist, S = saturated to surface, I/P = intermittent ponding, X = Present but not observed in 1 meter sample

LB Redroductive Status: i = immature, m = mature, g = gravid (with eggs)

Habitat Condition: UD = undisturbed, D = disturbed - tt = tire tracks, t = trash, p = plowing

UG = ungrazed, G = grazed - C = cattle, H = horse, S = sheep, l = light grazing,

I = light grazing, m = moderate grazing, h = heavy grazing

		Present Depth (inches)		Potential Depth (Inches)			Crustacea										Insecta											Mollusca			Turbellaria	Acari	Collembola	Other	Herps			
								Copepods			Large Branchiopods (LB)						Coleoptera			Hemiptera			Odanota		Diptera														
Feature No.	Water Temp (°F)	Max	Ave.	Max	Ave.	Surface Area Inundation (% of maximum)	Ostracods	Calanoida	Cydopoda	Cladocera	*LIOC*	*BRLY*	*BRME*	*LEPA*	*LYBR*	*CYCA*	Dytiscidae	Hydrophilidae	Haliplidae	Notonectidae	Corixidae	Ephemeroptera	Zygoptera	Anisoptera	Culicidae	Chironomidae	Trichoptera	Lymnaeidae	Physidae	Planorbidae	Micro-turbularians	Hydracarini		Other Invertebrate	Pseudacris	Other	Habitat Condition	Comments
SW-1	Dry																																			G-H-m	
SW-2	Dry																																			D-t, G-H-m	
SW-3	Dry																																			G-H-m	
SW-4	Dry																																			G-H-m	
SW-5	Dry																																			D-t, G-H-m	

APPENDIX C.
REPRESENTATIVE PHOTOGRAPHS

Photograph of SW-1 (dry) taken facing northeast on December 22, 2020 (1st sampling round).

Photograph of SW-2 (dry) taken facing northwest on December 22, 2020 (1st sampling round).

Photograph of SW-3 (dry) taken facing north on December 22, 2020 (1st sampling round).

Photograph of SW-4 (dry) taken facing northeast on December 22, 2020 (1st sampling round).

Photograph of SW-5 (dry) taken facing north on December 22, 2020 (1st sampling round).

Photograph of SW-1 (dry) taken facing north on January 5, 2021 (2nd sampling round).

Photograph of SW-3 (dry) taken facing north on January 5, 2021 (2nd sampling round).

Photograph of SW-4 (dry) taken facing northeast on January 5, 2021 (2nd sampling round).

Photograph of SW-2 taken facing north on February 4, 2021 (3rd sampling round).

Photograph of SW-4 (dry) taken facing northeast on February 4, 2021 (3rd sampling round).

Photograph of SW-2 taken facing north on February 12, 2021 (4th sampling round).

Photograph of SW-3 (dry) taken facing north on February 12, 2021 (4th sampling round).

Photograph of SW-1 (dry) taken facing north on February 22, 2021 (5th sampling round).

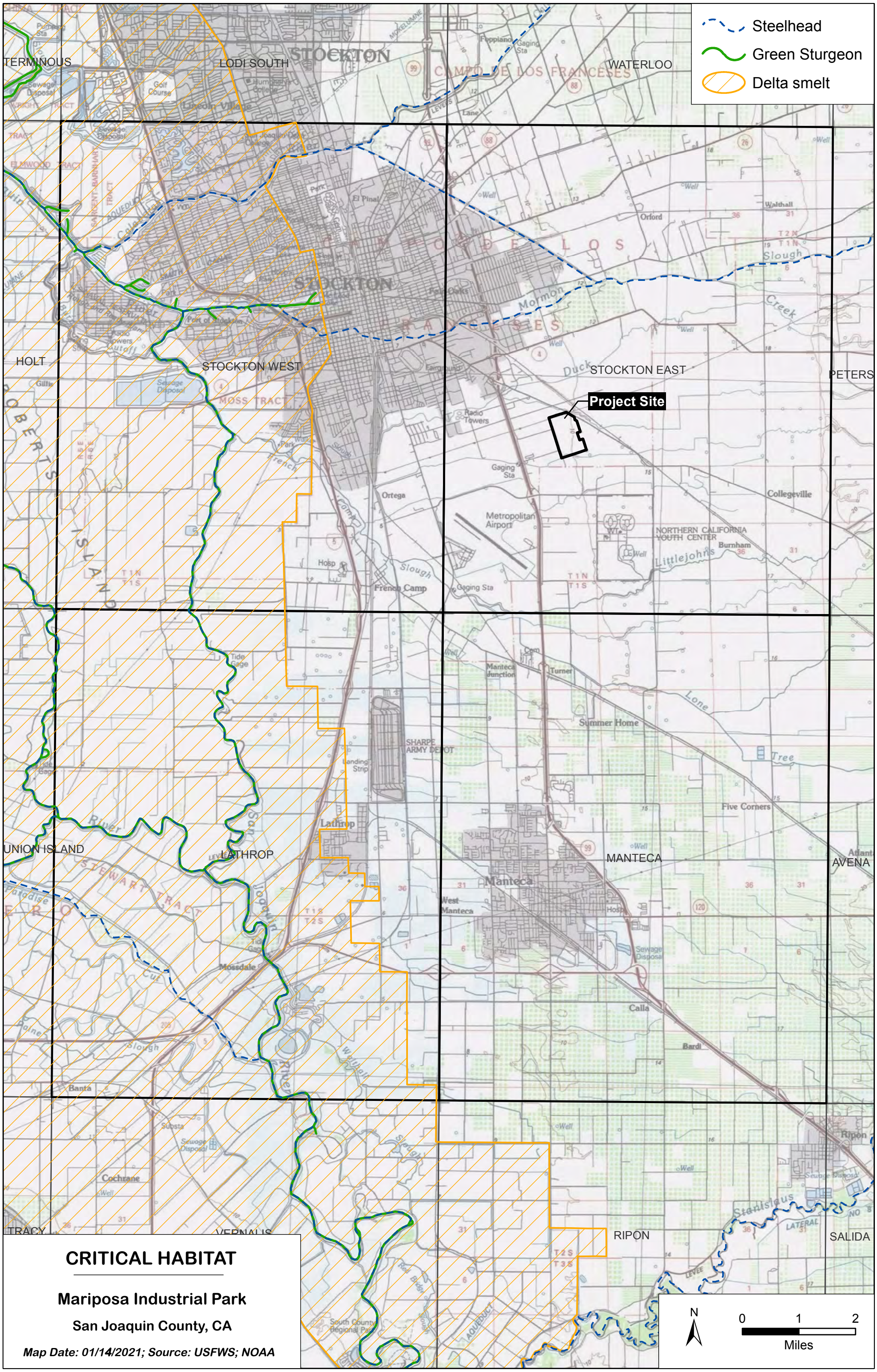
Photograph of SW-2 (dry) taken facing north on February 22, 2021 (5th sampling round).

Photograph of SW-2 (dry) taken facing north on March 19, 2021 (6th sampling round).

Photograph of SW-4 (dry) taken facing north on March 19, 2021 (6th sampling round).

Attachment F

Designated Critical Habitat


Steelhead
Green Sturgeon
Delta smelt
Project Site
TERMINOUS
LODI SOUTH
STOCKTON
WATERLOO
HOLT
STOCKTON WEST
STOCKTON EAST
PETERS
UNION ISLAND
LATHROP
MANTECA
AVENA
RIPON
SALIDA
Metropolitan Airport
Manteca
Lathrop
Ripon
Mossdale
Collegeville
Orford
Walthall
Slough
Mormon Creek
Duck
Littlejohns
Burnham
Summer Home
Five Corners
Calla
Bardi
Banta
Cochrane
Tracy
Ortega
French Camp
Manteca Junction
Turner
West Manteca
SHARPE ARMY DEPOT
NORTHERN CALIFORNIA YOUTH CENTER
Foppiano
Gaging Sta
Radio Towers
Golf Course
Sewage Disposal
Hospital
Tide Gage
Landing Strip
Fairgrounds
Port of Stockton
Stanislaus
Lone Tree
Delta-Mendota Canal
Old River
Middle River
Paradise Cut
Walthall Slough
Stewart Tract
Moss Tract
Smith Canal
Mokelumne
Levees
Well
Park
Golf Course
Sewage Disposal
Hospital
Gaging Sta
Radio Towers
Tide Gage
Landing Strip
Fairgrounds
Port of Stockton
Substa
Lane
Canal
Levee
Aqueduct
Lateral
T1N T1S
T1S T2S
T2S T3S
T2N T1N
CAMPO DE LOS FRANCESES
RANCHO EL PINAL
RANCHO DEL PASO
ELMWOOD TRACT
SARGENT-BARNHART TRACT
WRIGHT TRACT
ROBERTS ISLAND
CRITICAL HABITAT
Mariposa Industrial Park
San Joaquin County, CA
Map Date: 01/14/2021; Source: USFWS; NOAA
N
0
1
2
Miles

APPENDIX E
CULTURAL RESOURCE REPORT (excerpt)

The full cultural resources report is available to qualified, reviewers at the Stockton Department of Community Development, 345 N El Dorado Street, Stockton, 209-937-8266

AB 52 CONSULTATION MATERIALS

CULTURAL RESOURCES INVENTORY AND EVALUATION REPORT
MARIPOSA INDUSTRIAL PARK PROJECT

SAN JOAQUIN COUNTY, CALIFORNIA

—♦♦♦—

Prepared for:

Basecamp Environmental, Inc.
802 West Lodi Ave.
Lodi, CA 95240

Submitted by:

Brian Ludwig, Ph.D.
Jason Coleman, M.A., RPA

Solano Archaeological Services LLC
P.O. Box 367
Elmira, CA 95625
707-718-1416

April 2021

Stockton East, California USGS 7.5' Quadrangle
Projected T. 1 North, R. 7 East

MANAGEMENT SUMMARY

The City of Stockton (the "City"), San Joaquin County, California, has proposed the annexation of nine parcels presently under San Joaquin County jurisdiction totaling approximately 203.48 acres. The purpose of this action would be to encourage large-scale commercial/industrial development (the "Project"). The Project Area of Potential Effects (APE) includes North Littlejohns Creek and a tributary, both classified as waters of the U.S. Due to U.S. Army Corps of Engineers permitting requirements, the Project is subject to Section 106 of the National Historic Preservation Act. The Project is also subject to the California Environmental Quality Act (CEQA) as a discretionary property annexation. To facilitate the Section 106 and CEQA compliance processes, Solano Archaeological Services (SAS) was contracted by Basecamp Environmental to complete background research, an archaeological survey, and a Native American community outreach program to document and evaluate cultural resources that might be located within the APE.

Background research was conducted through the Central California Information Center of the California Historical Resources Information System. This archival research indicated that no previously documented cultural resources were known to be present within the APE but that three historic-era resources were documented within a half-mile search area. An intensive field survey of the APE resulted in the documentation of two historic-era cultural resources - presently active electrical power transmission lines, and an irrigation pump. The electrical lines constitute the northernmost boundary of the APE and would not be affected by the proposed Project and neither resource was recommended eligible for National Register of Historic Places or California Register of Historical Resources listing. A Sacred Lands File search conducted by the Native American Heritage Commission (NAHC) indicated a culturally significant property was known to be present within or near the APE, but no Native American representatives contacted per the NAHC expressed any specific concerns regarding the Project. Given the lack of significant cultural resources within and near the APE, and a low level of archaeological sensitivity, SAS recommends a finding of *no effect* on historic properties and *no impacts* on historical resources for the proposed Project.

Information contained in this document is subject to Section 304 of the NHPA (Public Law 89-665), which allows a federal agency official to withhold sensitive information about the location, character, or ownership of a historical resource from public disclosure when it is determined that disclosure may cause a significant invasion of privacy, risk harm to a historical resource, or impede the use of a traditional religious site by practitioners.

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From: **Nicole Moore** Nicole.Moore@stocktonca.gov
Subject: Mariposa Industrial Park EIR & Annexation - Notice of Preparation, Scoping Session and Neighborhood Meeting
Date: December 10, 2020 at 11:08 AM
To: mariposapowwow@gmail.com, mike@buenavistatribe.com, office@cvmt.net, canutes@verizon.net, tribaloffice@wiltonrancheria-nsn.gov, nahc@nahc.ca.gov, lball@auburnrancheria.com, Sara@ionemiwok.net, cultrualcommittee@ionemiwok.net, webmaster@torresmartinez.org

NM

Dear:
Chairman Lois Martin of the American Indian Council of Mariposa County;
Mr. Mike Despain of the Buena Vista Rancheria Band of Me-Wuk Indians;
Chairperson Sylvia Burley of the California Miwok Tribe;
Dr. Katherine Erolinda Perez of the North Valley Yokuts Tribe;
Tribal Monitors Mariah Mayberry and Herbert "Lou" Griffin of the Wilton Rancheria, Environmental Resources Department;
Executive Secretary Christina Snider of the State of California Native American Heritage Commission;
Chairperson Gene Whitehouse of the Auburn Indian Community;
Chairwoman Sara Dutschke Setshwaelo of the Ione Band of Miwok Indians; and
Chairman Thomas Tortez, Jr. of the Torres Martinez Desert Cahuilla Indians.

Please find the attached PDF's related to the Notice of Preparation and AB 52 Notification for the Mariposa Industrial Park Annexation project. The NOP comment period is running from Monday, December 14, 2020 to Wednesday, January 13, 2021.

Should you have any questions or comments, please don't hesitate to reach out to me at this email address, or give me a call at 209-937-8195.

Kindest regards,
Nicole

Nicole D. Moore, LEED-AP
SENIOR PLANNER
Community Development Department
345 N. El Dorado Street, Stockton CA 95202
Office: 209.937.8561 Direct: 209.937.8195

For City of Stockton Updates on COVID-19 please visit:
Twitter @stocktonUpdates
Facebook @CityofStockton
City Website http://www.stocktonca.gov

PDF P20-0805 (Marip...ion.pdf

PDF P20-0805 Maripo...OP.pdf

From: **Nicole Moore** Nicole.Moore@stocktonca.gov
Subject: RE: Mariposa Industrial Park EIR
Date: December 11, 2020 at 7:49 AM
To: Katherine Perez canutes@verizon.net
Cc: Charlie Simpson csimpson@basecampenv.com

NM

Thank you for your time and comments, Dr. Perez. I have included our CEQA consultant in this response as acknowledgement of your comments.

We will be in touch with you directly as this EIR progresses.

Have a wonderful weekend and holiday season.
Nicole

Nicole D. Moore, LEED-AP
SENIOR PLANNER
Community Development Department
345 N. El Dorado Street, Stockton CA 95202
Office: 209.937.8561 Direct: 209.937.8195

For City of Stockton Updates on COVID-19 please visit:
Twitter @stocktonUpdates
Facebook @CityofStockton
City Website http://www.stocktonca.gov

From: Katherine Perez <canutes@verizon.net>
Sent: Thursday, December 10, 2020 9:41 PM
To: Nicole Moore <Nicole.Moore@stocktonca.gov>
Subject: Mariposa Industrial Park EIR

CAUTION: This email originated from outside the City of Stockton. Do not click any links or open attachments if this is unsolicited email.

December 10, 2020

Community Development Department
City Hall
425 N. El Dorado Street
Stockton, CA 95202-1997
209/937-8444

RE: AB 52 Consultation Request for the Proposed Mariposa Industrial Park EIR Project, City of Stockton, CA

Dear Nicole Moore,

Northern Valley Yokuts Tribe and Nototomne Cultural Preservation received a letter from the Community Development Department in the City of Stockton, Ca. dated December 10, 2020, formally notifying us of a proposed project, the Mariposa Industrial Park. Located south of Mariposa Road and east of the termini of Clark Drive and Marfagoa Road. The

south of Mariposa Road and east of the terminus of Stark Drive and Mariposa Road. The Mariposa Industrial Park project proposes the annexation , pre-zoning and industrial development of approximately 203.5 acres. In the City of Stockton, CA and an opportunity to consult under AB 52. This letter is notice that Northern Valley Yokuts Tribe and Nototomne Cultural Preservation would like to initiate consultation under AB 52.

We would like to discuss the topics listed in Cal. Public Resources Code section 21080.3.2(a), including the type of environmental review to be conducted for the project; project alternatives; the project's significant effects; and mitigation measures for any direct, indirect, or cumulative impacts the project may cause to tribal cultural resources. As consultation progresses, we may also wish to discuss design options that would avoid impacts to tribal cultural resources; the scope of any environmental document that is prepared for the project; pre-project surveys; and tribal cultural resource identification, significance evaluations and culturally-appropriate treatment.

This letter is also a formal request to allow Northern Valley Yokuts Tribe and Nototomne Cultural Preservation tribal representatives to observe and participate in all cultural resource surveys, including initial pedestrian surveys for the project. Please send us all existing cultural resource assessments, as well as requests for, and the results of, any records searches that may have been conducted prior to our first consultation meeting. If tribal cultural resources are identified within the project area, it is our policy that tribal monitors must be present for all ground disturbing activities. Finally, please be advised that our strong preference is to preserve tribal cultural resources in place and avoid them whenever possible. Subsurface testing and data recovery must not occur without first consulting with and receiving written consent from Northern Valley Yokuts Tribe and Nototomne Cultural Preservation.

In the letter you are identified as the lead contact person for consultation on the proposed project. I will be our point of contact for this consultation. Please contact me by phone 209.649.8972 or email at canutes@verizon.net begin the consultation process.

Thank you for involving Northern Valley Yokuts Tribe and Nototomne Cultural Preservation in the planning process at an early stage. We ask that you make this letter a part of the project record and we look forward to working with you to ensure that tribal cultural resources are protected.

Sincerely,
Katherine Perez, Chairperson

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

Received
DEC 21 2020
City of Stockton
Community Development

December 17, 2020

Nicole Moore
City of Stockton Community Development Department
345 N. El Dorado Street
Stockton, CA 95202

Re: 2020120283, Mariposa Industrial Park Project, San Joaquin County

Dear Ms. Moore:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
Marshall McKay
Wintun

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

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AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

a. A brief description of the project.

b. The lead agency contact information.

c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).

d. A "California Native American tribe" is defined 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 Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

a. Alternatives to the project.

b. Recommended mitigation measures.

c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

a. Type of environmental review necessary.

b. Significance of the tribal cultural resources.

c. Significance of the project's impacts on tribal cultural resources.

d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources 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 Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

a. Whether the proposed project has a significant impact on an identified tribal cultural resource.

b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

APPENDIX F
NOISE STUDY TO BE SUBMITTED
SUBJECT TO FINAL REVISIONS

Mariposa Industrial
Environmental Noise Assessment

City of Stockton, California

July 7, 2021

jcb Project # 2021-103

Prepared for:

BaseCamp Environmental

CITY OF STOCKTON

Attn:
Mr. Charlie Simpson
802 West Lodi Avenue
Lodi, CA 95240

Prepared by:

j.c. brennan & associates, Inc.

Jim Brennan, INCE
President
Member, Institute of Noise Control Engineering (INCE)

INTRODUCTION

The project proposes to develop the eight parcels within the project site for light industrial land uses, primarily "high-cube" warehouses. Table 1 shows the proposed development of the project site. Of the total 3,616,870 square feet proposed for development, approximately 180,844 square feet would be for ancillary office space; the remainder would be for light industrial/warehouse use. A total of 2,938 parking stalls would be provided throughout the project site. Of that total, 1,831 stalls would be for automobiles, 37 of which would be accessible to drivers with disabilities. The remaining 1,107 stalls would be for trucks and trailers.

Access would be from two driveways off Mariposa Road in the northeastern portion of the project site. The southernmost of the two driveways would provide the main access to the project site, with an access road leading to most of the proposed development.

The area is mostly industrial and agricultural. Some residential uses border the west, north, and east sides of the project site.

Figure 1 shows the project location and surrounding area. Figure 2 shows the project site plan.

Table 1
Proposed Mariposa Industrial Project Development

Building	Building Footprint (square feet)	Clearance Height (feet)
Building 1	670,320	36
Building 2	637,450	36
Building 3	1,021,440	36
Building 4	1,021,440	36
Building 5	64,260	32
Building 6	100,980	32
Building 7	100,980	32
Total	**3,616,870**	**--**

This analysis evaluates the potential for the project to produce noise levels which may exceed the City of Stockton noise level criteria, and the potential for the project to be exposed to noise levels which exceed the City of Stockton noise level criteria.

SOURCE: Google Maps

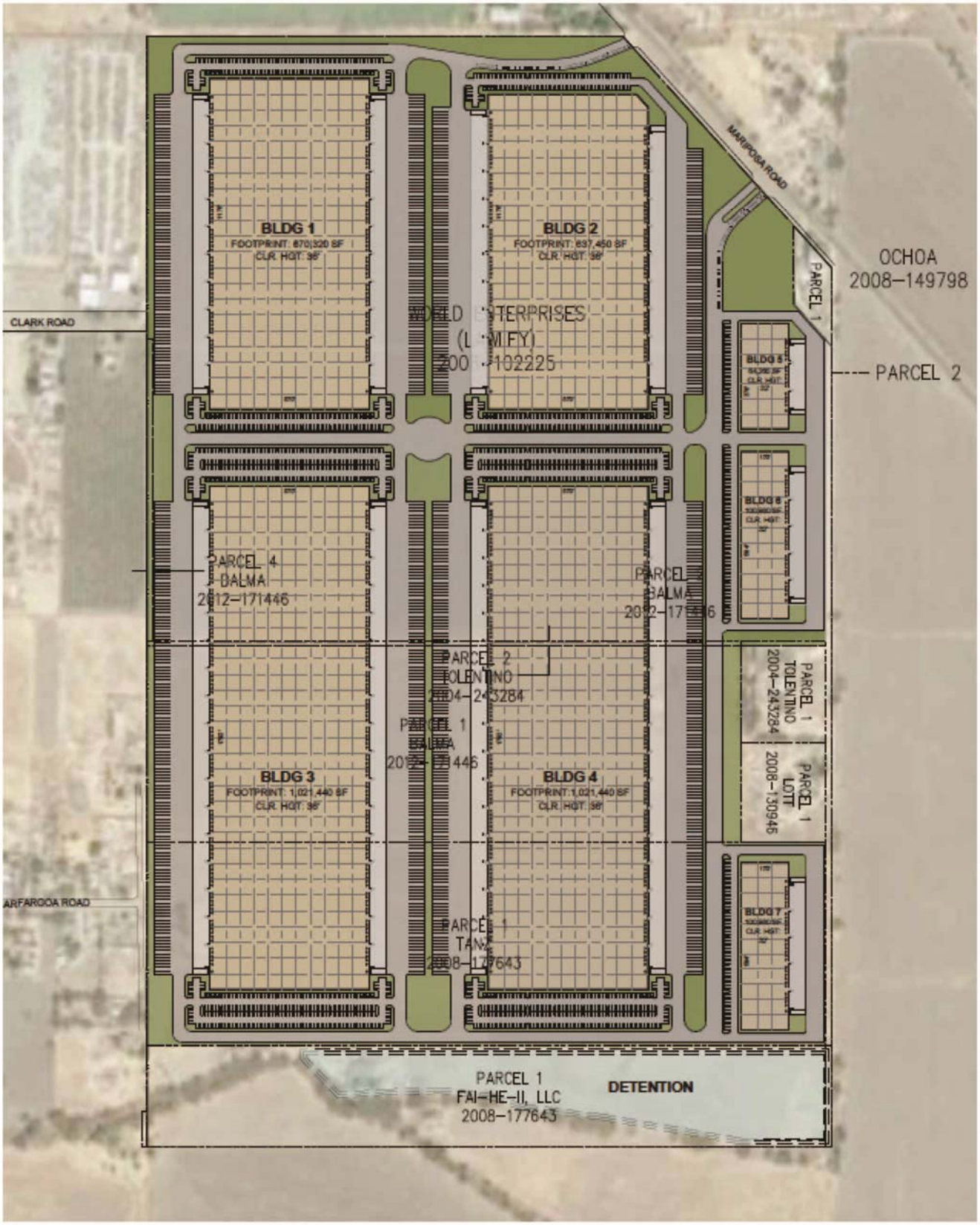
Continuous 24-hour Noise Monitoring Site

Short-term Noise Monitoring Site

Figure 1
Mariposa Industrial
Site Location

j.c. brennan & associates
consultants in acoustics

Date:
6/15/2020



SOURCE: Ware Malcomb

Figure 2
Mariposa Industrial
Site Plan

j.c. brennan & associates
consultants in acoustics

Date:
6/15/2020

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB1. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.
The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, 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.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 2 lists several examples of the noise levels associated with common noise sources.

1 For an explanation of these terms, see Appendix A: "Acoustical Terminology"

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

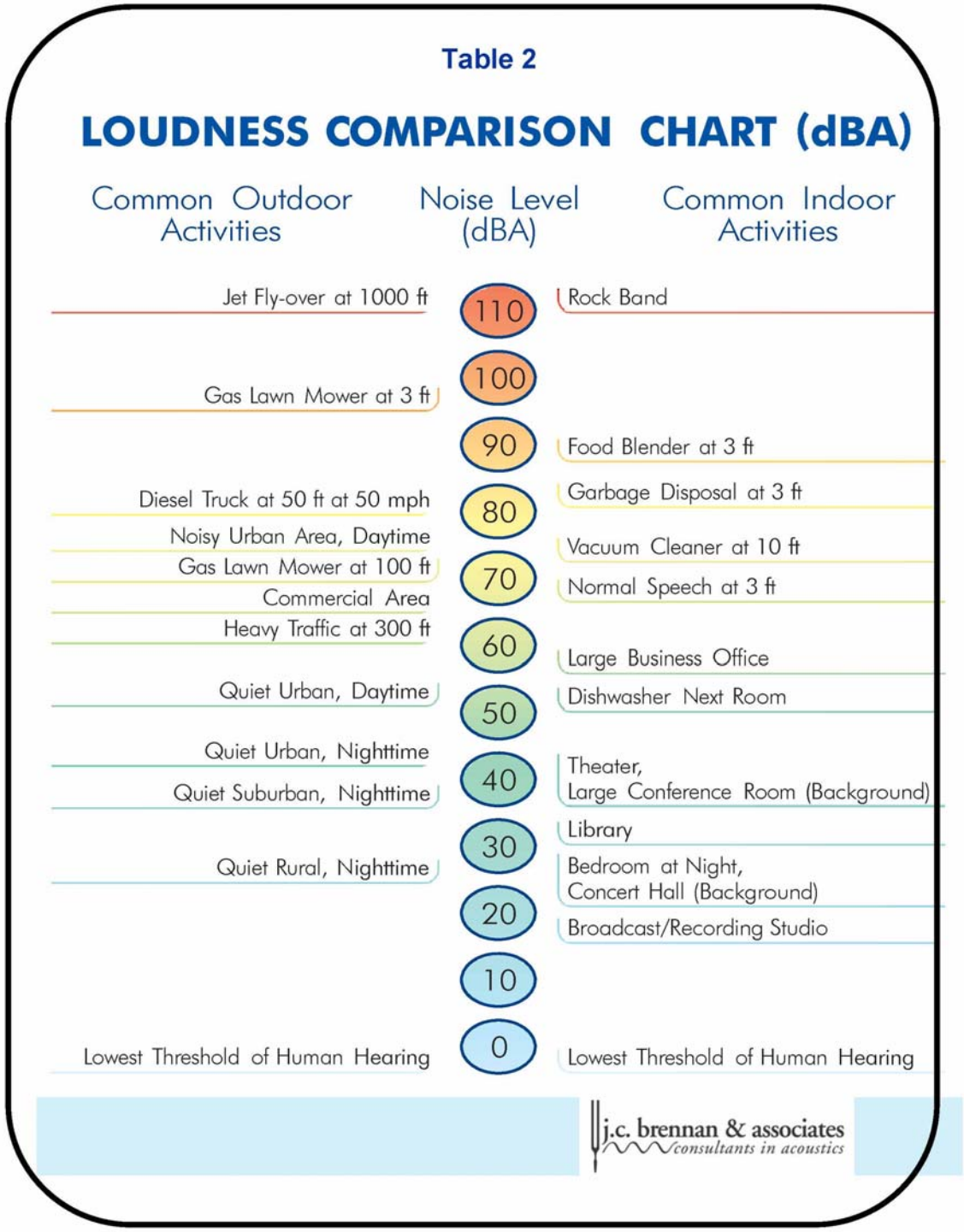
With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- 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 human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

Table 2

LOUDNESS COMPARISON CHART (dBA)



CRITERIA FOR ACCEPTABLE NOISE EXPOSURE

City of Stockton General Plan Noise Level Standards:

The City of Stockton adopted a new 2040 General Plan on December 4, 2018, which is in effect at this time. The relevant Goals and Policies are discussed below. In addition, the City of Stockton Development Code (Chapter 16 of the Municipal Code) establishes the noise performance standards shown in Table 3.

Policy SAF-2.5
Protect the community from health hazards and annoyance associated with excessive noise levels.

Action SAF-2.5A
Prohibit new commercial, industrial, or other noise generating land uses adjacent to existing sensitive noise receptors such as residential uses, schools, health care facilities, libraries, and churches if noise levels are expected to exceed 70 dBA Community Noise Equivalent (CNEL) when measured at the property line of the noise sensitive land use.

Action SAF-2.5B
Require projects that would locate noise sensitive land uses where the projected ambient noise level is greater than the "normally acceptable" noise level indicated on Table 5-1 to provide an acoustical analysis that shall:

- Be the responsibility of the applicant;
- Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
- Include representative noise level measurements with sufficient sampling periods and locations to adequately described local conditions;
- Estimate existing and projected (20-year) noise levels in terms of Ldn/CNEL and compare the levels to the adopted noise policies and actions in this General Plan;
- Recommend appropriate mitigation to achieve compatibility with the adop0ted noise policies and standards;
- Where the noise source in question consists of intermittent single events, address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance;
- Estimate noise exposure after the prescribed mitigation measures have been implemented;
- If the project does not comply with the adopted standards and policies of the General Plan, provide acoustical information for a statement of overriding considerations for the project; and
- Describe a post-project assessment program, which could be used to evaluate the effectiveness of the proposed mitigation measures.

Action SAF-2.5C
Require noise produced by commercial uses to not exceed 75 dB Ldn/CNEL at the nearest property line.

Action SAF-2.5D

Grant exceptions to the noise standards for commercial and industrial uses only if a recorded noise easement is conveyed by the affected property owners.

Action SAF-2.5E
Require all new habitable structures to be set back from railroad tracks to protect residents from noise, vibration, and safety impacts.

Table 3
(Table 5-1 of the Stockton General Plan)

Land Use Type	Noise Levels (Ldn)						
	0-55	56-60	61-65	66-70	71-75	75-80	>81
Residential							
Urban Residential Infill							
Hotels, Motels							
Schools, Libraries, Churches, Hospitals, Extended Care Facilities							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Mining, Industrial, Manufacturing, Utilities, Agriculture							

		Normally Acceptable. Specified land use is satisfactory, based on the assumption that any buildings involved are of normal, conventional construction, without any special noise insulation requirements.
		Conditionally Acceptable. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed insulation features have been included in the design.
		Unacceptable. New construction or development should not be undertaken.

If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA

City of Stockton Municipal Code:

The City of Stockton Municipal Code Chapter 16, Development Code contains performance standards for new developments, shown in Table 4. Noise affecting the proposed residential uses must be mitigated to the standards shown in Table 3 for stationary or non-transportation noise sources.

City of Stockton Noise Ordinance

The City of Stockton noise ordinance is codified in Chapter 16, Article III, Division 16-340 of the City's Municipal Code (City of Stockton, 2004). The following sections present prohibited activities and noise standards applicable to the project.

Activities Deemed Violations of This Division: The following acts are a violation of this Division and are therefore prohibited.

A. **Construction noise.** Operating or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling, or repair work between the hours of 10:00 p.m. and 7:00 a.m., so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities.

Standards: The following provisions shall apply to all uses and properties, as described below, and shall establish the City's standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses and transportation-related sources:

B. **Standards for proposed noise-generating land uses and transportation-related sources.** Excluding noise-generating projects on infill sites, the following shall apply:

1.**Transportation-related noise sources (except infill sites).** Transportation- related projects that include the development of new transportation facilities or the expansion of existing transportation facilities shall be required to mitigate their noise levels so that the resulting noise:

a. Does not adversely impact noise-sensitive land uses; and

b. Does not exceed the standards in **Table 3.11-3**, (*Table 4 of this Report*) Part 1.

Noise levels shall be measured at the property line of the nearest site, which is occupied by, and/or zoned or designated to allow the development of, noise-sensitive land uses.

Table 4
(Table 3.11-3 of the Municipal Code)
MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NOISE-SENSITIVE LAND USES

Noise-Sensitive Land Use Type	Outdoor Activity Areas	Indoor Spaces
Part I: Transportation-Related Noise Standards, Maximum Allowable Noise Exposure (Ldn dB)		
Residential (all types)	65	45
Child care	--	45
Educational facilities	--	45
Libraries and museums	--	45
Live-work facilities	65	45
Lodging	65	45
Medical services	--	45
Multi-use (with residential)	65	45

	Noise Descriptor	
	Daytime (7:00 a.m. to 10:00 p.m.)	**Nighttime (10:00 p.m. to 7:00 a.m.)**
Part II: Land Use-Related Noise Standard, Outdoor		
Hourly Equivalent Sound Level (Leq), dB	55	45
Maximum Sound Level (Lmax), dB	75	65

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 increased by 5 for impulse noise, simple tone noise, or noise consisting primarily of speech or music.
SOURCE: City of Stockton, 2004.

2. **Commercial, industrial, and other land use-related noise sources (except infill sites).**

a. **New and expanded noise sources.** Land use-related projects that will create new noise sources or expand existing noise sources shall be required to mitigate their noise levels so that the resulting noise:

1. Does not adversely impact noise-sensitive land uses; and

2. Does not exceed the standards specified in **Table 3.11-3**, (*Table 4 of this report*) Part 2.

Noise levels shall be measured at the property line of the nearest site which is occupied by, zoned for, and/or designated on the City's General Plan Diagram to allow the development of, noise-sensitive land uses.

b. **Maximum sound level.**

2. **Industrial**.

a. The maximum sound level (Lmax) produced by industrial land uses or by other permitted noise-generating activities on any industrial

(IL, IG or PT) or public facilities (PF) zoning district shall not exceed 80 dB; and

b. The hourly equivalent sound level (Leq) from these land uses shall not exceed 70 dB during daytime or nighttime hours as measured at the property line of any other adjoining IL, IG, PT, or PF district.

c. **Adjacent to other uses.** If commercial, industrial, or public facilities land uses are adjacent to any noise-sensitive land uses or vacant residential (RE, RL, RM, or RH) or open space (OS) zoning districts, these uses shall comply with the performance standards contained in Table 3.11-3 (Table 4 of this report) Part 2.

Determination of a Significant Increase in Noise Levels

Another means of determining a potential noise impact is to assess a person's reaction to changes in noise levels due to a project. Table 5 is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dBA, as this is the usual range of voice and interior noise levels.

Table 5
Subjective Reaction to Changes in Noise Levels of Similar Sources

Change in Level, dBA	Subjective Reaction	Factor Change in Acoustical Energy
1	Imperceptible (Except for Tones)	1.3
3	Just Barely Perceptible	2.0
6	Clearly Noticeable	4.0
10	About Twice (or half) as Loud	10.0
Source: Architectural Acoustics, M. David Egan, 1988.		

Vibration Standards

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City of Stockton does not have specific policies pertaining to vibration levels. However, vibration levels associated with construction activities are addressed as potential vibration impacts associated with project implementation.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of

perceived vibration events. The threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). The general threshold at which human annoyance could occur is noted as 0.1 in/sec p.p.v.

EXISTING NOISE ENVIRONMENT

As a means of determining the typical background noise environment in the project vicinity, j.c. brennan & associates, Inc. conducted continuous hourly noise measurements for a period of 24-hours. In addition, short-term noise measurements were conducted at one other location. The noise measurements were conducted on March 17-18, 2021. Noise measurements were conducted using Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters. The equipment was calibrated before and after use using an LDL Model 200 acoustical calibrator. All equipment meets ANSI standards for Type 1 instrumentation. Table 6 shows the results of the noise measurements, and Appendix B graphically shows the results of the continuous 24-hour noise measurement data. Figure 1 shows the noise monitoring locations.

Table 6
Summary of Ambient Noise Measurement Data

Site	Location	L_{dn}/ CNEL	Average Measured Hourly Noise Levels, dBA					
			Daytime (7am-10pm)			Nighttime (10pm-7am)		
			L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
A	Northwest portion of site	56.0	50	46	68	50	45	65
ST-1	Southeast portion of site	NA	49.2	47.0	59.2	@ 11:20 a.m.		
ST-1	Southeast portion of site.	NA	49.0	47.0	61.3	@ 14:30 p.m.		

Source: j.c. brennan & associates, Inc., 2021.

Existing Traffic Noise Levels

Traffic noise levels were determined using the Federal Highway Administration (FHWA RD77-108) Traffic Noise Prediction Model. Traffic volumes were based upon inputs from the traffic consultant (kd Anderson). Truck mix percentages were based upon overall traffic counts and vehicle classification conducted for the area roadways. Table 7 provides the results of the existing traffic noise analysis. Appendix C shows the inputs and results of the traffic noise modeling.

Table 7
Predicted Existing Traffic Noise Levels at 100-feet from the Roadway Centerline

Roadway	Segment	Traffic Noise Level (Ldn/CNEL)	Distance to Noise Contours (feet)		
			60 dB Ldn/CNEL	65 dB Ldn/CNEL	70 dB Ldn/CNEL
SR 99	North of Mariposa Rd	81 dB	2,356	1,094	508
SR 99	South of Mariposa Rd	80 dB	2,153	999	464
Mariposa Road	SR 99 to Farmington Rd	65 dB	229	106	49
Mariposa Road	Carpenter Rd to SR 99	63 dB	166	77	36
Mariposa Road	Project Site to Carpenter Rd	63 dB	155	72	33
Mariposa Road	East of Project Site	63 dB	155	72	33
Mariposa Road	East of Austin Rd.	62 dB	144	67	31
Arch-Airport Road	Qantas Rd to SR 99	68 dB	320	149	69

Source: j.c. brennan & associates, Inc., 2021

IMPACTS and MITIGATION MEASURES

Significance Criteria

Consistent with Appendix G of the CEQA Guidelines, the project will have a significant impact related to noise if it will result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels within two miles of a public airport or public use airport; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

The Project site is not located within two miles of a public or private airport or airstrip. Therefore, airport and airport noise is not discussed further in this analysis.

Determination of a Significant Increase in Noise Levels

California Environmental Quality Act (CEQA) guidelines define a significant impact of a project if dB General Plan Noise provides specific guidance for assessing increases in ambient noise in Table 5-1 of the General Plan (*Table 2 of this report*) as follows:

- If existing noise standards are currently exceeded, a proposed project shall not incrementally increase noise levels by more than 3 dBA

Traffic Noise Impacts

Once again, traffic noise levels were determined using the Federal Highway Administration (FHWA RD77-108) Traffic Noise Prediction Model. Traffic volumes were based upon inputs from the traffic consultant (kd Anderson). Truck mix percentages were based upon ITE industrial trip generation rates and truck percentages. The overall truck percentage is 17% of the total trip generation. Table 8 provides the results of the traffic noise analysis.

Based upon Table 8, the project will result in increases in traffic noise levels between 0 dB and 4 dB Ldn, under the Existing Plus Approved Projects Plus Project Scenario. Under the Cumulative Plus Project Scenario, the project would result in an increase in traffic noise levels between 0 and 3 dB Ldn.

Noise increases of 4 dB would occur along two segments of Mariposa Road and expected to experience noise levels of 65 dB under EPAP conditions without the project. As a result of the project, noise levels along the two segments, both of which have adjacent residential uses, would be increased to 69 dB. Therefore, the increase in traffic noise along these two segments under the Existing Plus Approved Plus Project Scenario would exceed the City of Stockton threshold of a +3 dB increase in traffic noise levels.

This is a *significant impact.*

Mitigation for Traffic Noise Impacts

Potential mitigation measures and the feasibility of each measure are described below:

1. Reducing speeds for truck traffic along Mariposa Road from the project site to S.R. 99, by 10 mph, would result in a noise level reduction of 2 dB Ldn. This would result in an overall increase in traffic noise levels of 2 dB Ldn which would be less than significant. However, speed limits are set by local agencies in accordance with engineering and traffic surveys that consider prevailing speeds, collision history and other safety and operational factors. Noise is not among these factors. Arbitrary-reduced speed limits may interfere with traffic speed enforcement.

2. Construction of sound walls along Mariposa Road would need to be in excess of 10-feet in height to block line of sight to truck stacks, and provide an approximately 10 dB reduction in noise levels. However, openings in the walls for driveway access would substantially compromise the effectiveness of the walls.

Impacts After Mitigation

The mitigation measures are not considered to be feasible. The impact is significant and unavoidable.

Table 8
Project Traffic Noise Levels Analysis

Roadway	Segment	Noise Levels (Ldn/CNEL, dB) at 100-feet from the Roadway Centerline					
		Existing + Approved - No Project	Existing + Approved + Project	Change	Cumulative No Project	Cumulative + Project	Change
SR 99	North of Mariposa Rd	82 dB	82 dB	0 dB	83 dB	83 dB	0 dB
	South of Mariposa Rd	81 dB	81 dB	0 dB	82 dB	82 dB	0 dB
Mariposa Road	SR 99 to Farmington Rd	67 dB	68 dB	+1 dB	69 dB	69 dB	0 dB
	Carpenter Rd to SR 99	65 dB	69 dB	**+4 dB**	68 dB	71 dB	+3 dB
	Project Site to Carpenter Rd	65 dB	69 dB	**+4 dB**	67 dB	70 dB	+3 dB
	East of Project Site	65 dB	66 dB	+1 dB	67 dB	67 dB	0 dB
	East of Austin Rd	64 dB	64 dB	0 dB	65 dB	65 dB	0 dB
Arch - Airport Road	Qantas Rd to SR 99	70 dB	71 dB	+1 dB	72 dB	72 dB	0 dB

Source: j.c. brennan & associates, Inc. 2021.

Bold indicates a significant increase in traffic noise due to the project.

On-Site Loading Dock and Truck Circulation Noise

Consistent with the analysis used in the Draft EIR for the NorCal Logistics Center, the following methodology is used:

> *"To assess loading dock activity noise impacts at the nearest potentially affected noise-sensitive land uses, reference noise levels of 80 dB Lmax and 60 dB Leq at a distance of 50-feet were used. These data include noise generated by truck arrivals and departures from the unloading area, trucks backing into the docks (including backup beepers), air brakes and other related truck unloading noise."*

Loading docks are generally a distance of 100-feet from the nearest residences or residentially zoned property. The resulting noise levels would be 74 dB Lmax and 54 dB Leq. The noise levels would comply with the daytime (7 am to 10 pm) noise level standards of 55 dB Leq and 75 dB Lmax. However, the noise levels would not comply with the nighttime (10 pm to 7 am) noise level standards of 45 dB Leq and 65 dB Lmax.

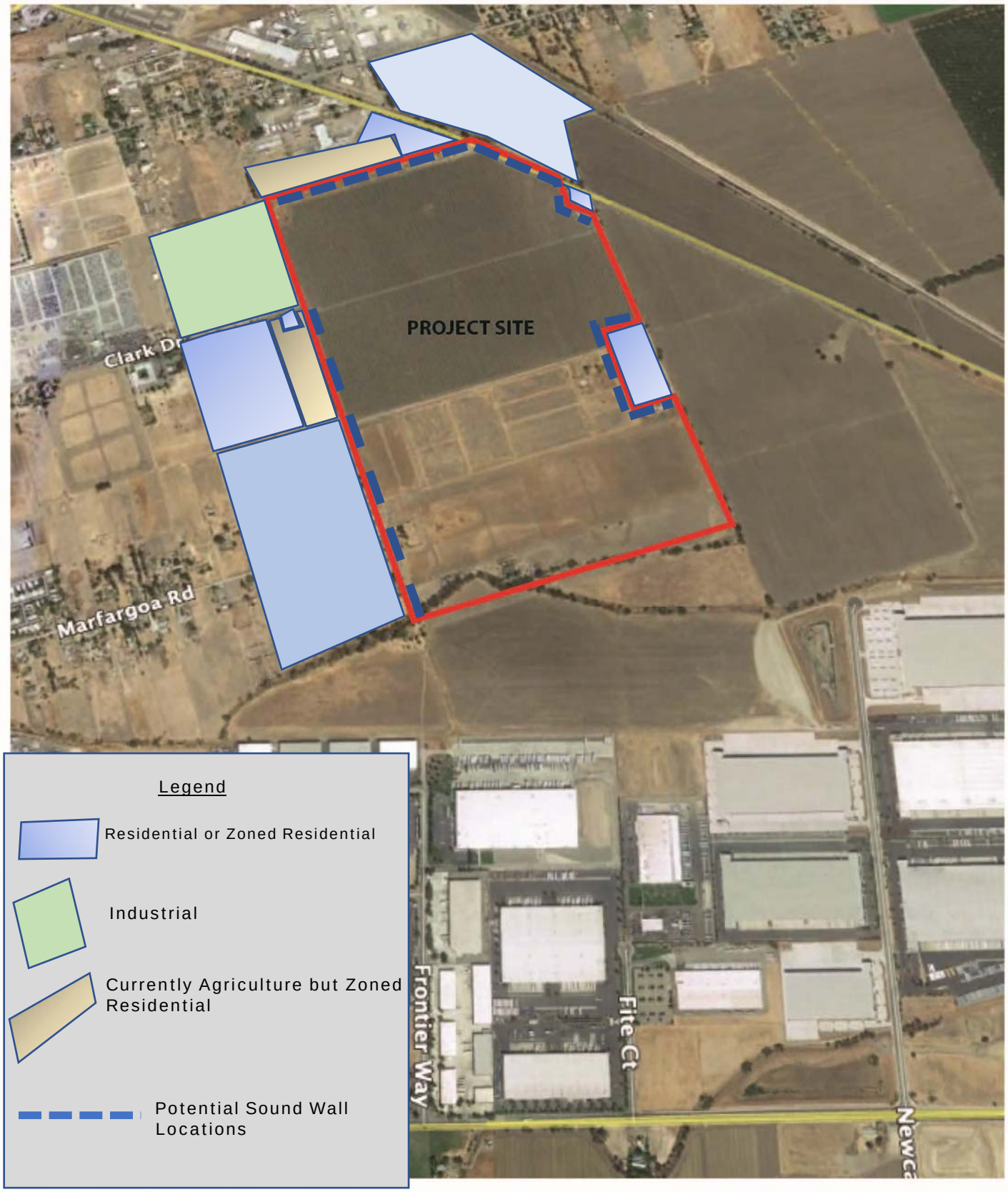
This is a *significant impact.*

Mitigation for On-Site Noise Impacts

1. Sound walls 10-feet in height would be required where existing residential uses or residentially zoned areas are located adjacent to the project site. Figure 3 shows where the adjacent land uses of concern are located. Figure 3 also shows the locations of potential sound walls. Where openings in sound walls occur for access or emergency access, solid gates shall be installed. 10-foot sound walls are expected to provide a 10 dB reduction in noise levels.

Impacts After Mitigation

Less than significant impact



SOURCE: Google Maps

Figure 3
Adjacent Land Uses

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Date:
6/15/2020

Construction Noise

During the construction of the project including roads, water and sewer lines and related infrastructure, noise from construction activities would add to the noise environment in the project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in Table 9, ranging from 76 to 90 dB at a distance of 50 feet. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

Table 9
Construction Equipment Noise

Type of Equipment	Maximum Level, dB at 50 feet
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

Construction activities would be temporary in nature and are exempt from noise regulation during the hours of 7:00 a.m. to 7:00 p.m. as outlined in the Municipal Code as follows:

> ***Activities Deemed Violations of This Division****: The following acts are a violation of this Division and are therefore prohibited.*
>
> *16-340.030 – Activities Deemed Violations of this Division*
>
> ***16-340.030(A) – Construction Noise****. Operations or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling, or repair work between the hours of 10:00 p.m. and 7:00 a.m., so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities.*

Mitigation Measures for Construction Activities

1. *Construction activities shall adhere to the requirements of the City of Stockton General Plan and Municipal Code, with respect to hours of operation.*
2. *All equipment shall be fitted with factory equipped mufflers, and in good working order.*
3. *The City shall limit construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No construction shall occur on Sundays or national holidays without a written permit from the city.*

Construction Vibration

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading and installation of infrastructure.

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Table 10 shows the typical vibration levels produced by construction equipment.

The nearest receptors are expected to be a minimum of 50-feet, or further, from the closest construction activities which would occur. At this distance construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

Table 10
Vibration Levels for Various Construction Equipment

Type of Equipment	Peak Particle Velocity @ 25 feet (inches/second)	Peak Particle Velocity @ 50 feet (inches/second)	Peak Particle Velocity @ 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210	0.074	0.026

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

The Table 10 data indicate that construction vibration levels anticipated for the project are less than the 0.1 in/sec criteria at distances of 50 feet. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors. Implementation of the proposed project would have a less than significant vibration impact.

This is a less than significant impact.

Appendix A
Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
$L_{(n)}$	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L_{50} is the sound level exceeded 50% of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the AMaximum@ level, which is the highest RMS level.
RT_{60}	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is s rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

Appendix B
2021-103 Mariposia Industrial
24hr Continuous Noise Monitoring - Site A
03/17/2021-03/18/2021

Hour	Leq	Lmax	L50	L90
12:00	45	60	43	40
13:00	48	70	45	42
14:00	45	57	44	42
15:00	48	64	45	42
16:00	50	75	47	43
17:00	50	74	47	44
18:00	48	64	46	43
19:00	47	65	46	43
20:00	49	74	46	42
21:00	52	78	45	42
22:00	44	55	43	41
23:00	46	68	42	40
0:00	47	71	41	39
1:00	42	54	40	38
2:00	44	62	42	40
3:00	51	75	45	42
4:00	49	63	48	46
5:00	51	57	51	48
6:00	55	78	53	50
7:00	57	80	52	49
8:00	52	65	51	47
9:00	50	64	48	46
10:00	49	65	47	45
11:00	47	60	46	45

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	57	45	50	55	42	50
Lmax (Maximum)	80	57	68	78	54	65
L50 (Median)	52	43	46	53	40	45
L90 (Background)	49	40	44	50	38	43

Computed Ldn, dB	56
% Daytime Energy	66%
% Nighttime Energy	34%

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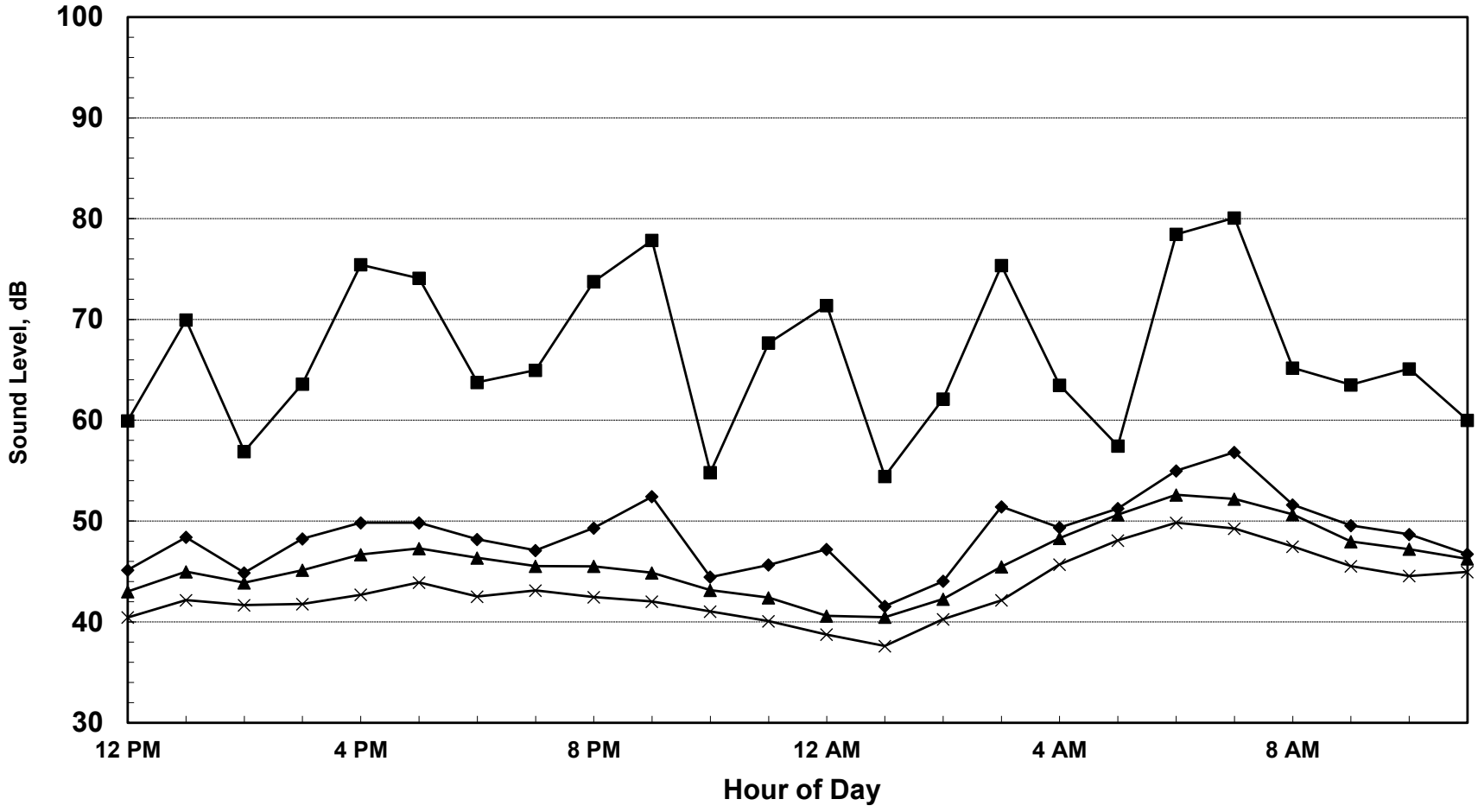
Appendix B

2021-103 Mariposia Industrial

24hr Continuous Noise Monitoring - Site A

03/17/2021-03/18/2021



Ldn = 56 dB

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Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2021-103 Mariposa Industrial
Description: Existing
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	SR 99	North of Mariposa	92,300	70		30	4	9.3	65	100	
2	SR 99	South of Mariposa	80,600	70		30	4	9.3	65	100	
3	Mariposa Road	SR 99 to Farmington	16,295	85		15	2	2	45	100	
4	Mariposa Road	Carpenter to SR99	10,034	85		15	2	2	45	100	
5	Mariposa Road	Project Site to Carpenter	9,042	85		15	2	2	45	100	
6	Mariposa Road	East of Project Site	9,042	85		15	2	2	45	100	
7	Mariposa Road	East of Austin Road	8,149	85		15	2	2	45	100	
8	Arch - Airport Road	Qantas to SR 99	26,889	85		15	2	2	45	100	
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Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2021-103 Mariposa Industrial
Description: Existing
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	SR 99	North of Mariposa	77.2	70.0	77.1	81
2	SR 99	South of Mariposa	76.6	69.4	76.5	80
3	Mariposa Road	SR 99 to Farmington	63.6	55.0	59.5	65
4	Mariposa Road	Carpenter to SR99	61.4	52.9	57.4	63
5	Mariposa Road	Project Site to Carpenter	61.0	52.4	56.9	63
6	Mariposa Road	East of Project Site	61.0	52.4	56.9	63
7	Mariposa Road	East of Austin Road	60.5	52.0	56.5	62
8	Arch - Airport Road	Qantas to SR 99	65.7	57.2	61.7	68

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2021-103 Mariposa Industrial
Description: Existing
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	SR 99	North of Mariposa	236	508	1094	2356	5077
2	SR 99	South of Mariposa	215	464	999	2153	4638
3	Mariposa Road	SR 99 to Farmington	23	49	106	229	494
4	Mariposa Road	Carpenter to SR99	17	36	77	166	358
5	Mariposa Road	Project Site to Carpenter	15	33	72	155	334
6	Mariposa Road	East of Project Site	15	33	72	155	334
7	Mariposa Road	East of Austin Road	14	31	67	144	311
8	Arch - Airport Road	Qantas to SR 99	32	69	149	320	690

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2021-103 Mariposa Industrial
Description: Existing + Approved - No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	SR 99	North of Mariposa	119,541	70		30	4	9.3	65	100	
2	SR 99	South of Mariposa	95,887	70		30	4	9.3	65	100	
3	Mariposa Road	SR 99 to Farmington	25,552	85		15	2	2	45	100	
4	Mariposa Road	Carpenter to SR99	16,570	85		15	2	2	45	100	
5	Mariposa Road	Project Site to Carpenter	15,285	85		15	2	2	45	100	
6	Mariposa Road	East of Project Site	15,285	85		15	2	2	45	100	
7	Mariposa Road	East of Austin Road	11,039	85		15	2	2	45	100	
8	Arch - Airport Road	Qantas to SR 99	50,887	85		15	2	2	45	100	
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11											
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Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2021-103 Mariposa Industrial
Description: Existing + Approved - No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	SR 99	North of Mariposa	78.3	71.1	78.3	82
2	SR 99	South of Mariposa	77.4	70.2	77.3	81
3	Mariposa Road	SR 99 to Farmington	65.5	56.9	61.4	67
4	Mariposa Road	Carpenter to SR99	63.6	55.1	59.6	65
5	Mariposa Road	Project Site to Carpenter	63.3	54.7	59.2	65
6	Mariposa Road	East of Project Site	63.3	54.7	59.2	65
7	Mariposa Road	East of Austin Road	61.9	53.3	57.8	64
8	Arch - Airport Road	Qantas to SR 99	68.5	59.9	64.4	70

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2021-103 Mariposa Industrial
Description: Existing + Approved - No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	SR 99	North of Mariposa	280	603	1299	2800	6032
2	SR 99	South of Mariposa	242	521	1122	2417	5207
3	Mariposa Road	SR 99 to Farmington	31	67	144	310	667
4	Mariposa Road	Carpenter to SR99	23	50	108	232	500
5	Mariposa Road	Project Site to Carpenter	22	47	102	220	473
6	Mariposa Road	East of Project Site	22	47	102	220	473
7	Mariposa Road	East of Austin Road	18	38	82	177	381
8	Arch - Airport Road	Qantas to SR 99	49	106	227	490	1056

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2021-103 Mariposa Industrial
Description: Existing + Approved + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	SR 99	North of Mariposa	125851	70		30	4.2	9.3	65	100	
2	SR 99	South of Mariposa	97705	70		30	4.1	9.3	65	100	
3	Mariposa Road	SR 99 to Farmington	27296	85		15	2.3	2.5	45	100	
4	Mariposa Road	Carpenter to SR99	26540	85		15	3.9	5	45	100	
5	Mariposa Road	Project Site to Carpenter	26777	85		15	4.1	5.4	45	100	
6	Mariposa Road	East of Project Site	16163	85		15	2.3	2.4	45	100	
7	Mariposa Road	East of Austin Road	11397	85		15	2.2	2.3	45	100	
8	Arch - Airport Road	Qantas to SR 99	51845	85		15	2.1	2.1	45	100	
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Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2021-103 Mariposa Industrial
Description: Existing + Approved + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	SR 99	North of Mariposa	78.6	71.6	78.5	82
2	SR 99	South of Mariposa	77.5	70.4	77.4	81
3	Mariposa Road	SR 99 to Farmington	65.8	57.8	62.7	68
4	Mariposa Road	Carpenter to SR99	65.4	60.0	65.6	69
5	Mariposa Road	Project Site to Carpenter	65.5	60.3	66.0	69
6	Mariposa Road	East of Project Site	63.5	55.6	60.2	66
7	Mariposa Road	East of Austin Road	62.0	53.9	58.5	64
8	Arch - Airport Road	Qantas to SR 99	68.6	60.2	64.7	71

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2021-103 Mariposa Industrial
Description: Existing + Approved + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	SR 99	North of Mariposa	290	626	1348	2904	6256
2	SR 99	South of Mariposa	245	528	1137	2450	5279
3	Mariposa Road	SR 99 to Farmington	34	73	157	339	730
4	Mariposa Road	Carpenter to SR99	40	87	188	404	871
5	Mariposa Road	Project Site to Carpenter	42	90	194	417	899
6	Mariposa Road	East of Project Site	24	51	110	237	511
7	Mariposa Road	East of Austin Road	19	40	86	186	401
8	Arch - Airport Road	Qantas to SR 99	50	108	233	501	1080

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2021-103 Mariposa Industrial
Description: Cumulative No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	SR 99	North of Mariposa	168,962	70		30	4	9.3	65	100	
2	SR 99	South of Mariposa	115,758	70		30	4	9.3	65	100	
3	Mariposa Road	SR 99 to Farmington	36,756	85		15	2	2	45	100	
4	Mariposa Road	Carpenter to SR99	32,512	85		15	2	2	45	100	
5	Mariposa Road	Project Site to Carpenter	23,483	85		15	2	2	45	100	
6	Mariposa Road	East of Project Site	23,483	85		15	2	2	45	100	
7	Mariposa Road	East of Austin Road	13,259	85		15	2	2	45	100	
8	Arch - Airport Road	Qantas to SR 99	67,860	85		15	2	2	45	100	
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Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2021-103 Mariposa Industrial
Description: Cumulative No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	SR 99	North of Mariposa	79.8	72.6	79.8	83
2	SR 99	South of Mariposa	78.2	71.0	78.1	82
3	Mariposa Road	SR 99 to Farmington	67.1	58.5	63.0	69
4	Mariposa Road	Carpenter to SR99	66.6	58.0	62.5	68
5	Mariposa Road	Project Site to Carpenter	65.1	56.6	61.1	67
6	Mariposa Road	East of Project Site	65.1	56.6	61.1	67
7	Mariposa Road	East of Austin Road	62.7	54.1	58.6	65
8	Arch - Airport Road	Qantas to SR 99	69.8	61.2	65.7	72

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2021-103 Mariposa Industrial
Description: Cumulative No Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	SR 99	North of Mariposa	353	760	1637	3526	7597
2	SR 99	South of Mariposa	274	590	1272	2740	5904
3	Mariposa Road	SR 99 to Farmington	39	85	183	394	850
4	Mariposa Road	Carpenter to SR99	36	78	169	363	783
5	Mariposa Road	Project Site to Carpenter	29	63	136	293	630
6	Mariposa Road	East of Project Site	29	63	136	293	630
7	Mariposa Road	East of Austin Road	20	43	93	200	431
8	Arch - Airport Road	Qantas to SR 99	59	128	276	594	1279

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Project #: 2021-103 Mariposa Industrial
Description: Cumulative + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	SR 99	North of Mariposa	177140	70		30	4.1	9.3	65	100	
2	SR 99	South of Mariposa	117898	70		30	4.1	9.3	65	100	
3	Mariposa Road	SR 99 to Farmington	37820	85		15	2.1	2.2	45	100	
4	Mariposa Road	Carpenter to SR99	43992	85		15	3.3	4.1	45	100	
5	Mariposa Road	Project Site to Carpenter	35371	85		15	3.7	4.7	45	100	
6	Mariposa Road	East of Project Site	23965	85		15	2.1	2.2	45	100	
7	Mariposa Road	East of Austin Road	13717	85		15	2.2	2.3	45	100	
8	Arch - Airport Road	Qantas to SR 99	69172	85		15	2.1	2.2	45	100	
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FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Predicted Levels

Project #: 2021-103 Mariposa Industrial
Description: Existing + Approved + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	SR 99	North of Mariposa	78.6	71.6	78.5	82
2	SR 99	South of Mariposa	77.5	70.4	77.4	81
3	Mariposa Road	SR 99 to Farmington	65.8	57.8	62.7	68
4	Mariposa Road	Carpenter to SR99	65.4	60.0	65.6	69
5	Mariposa Road	Project Site to Carpenter	65.5	60.3	66.0	69
6	Mariposa Road	East of Project Site	63.5	55.6	60.2	66
7	Mariposa Road	East of Austin Road	62.0	53.9	58.5	64
8	Arch - Airport Road	Qantas to SR 99	68.6	60.2	64.7	71

Appendix C

FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Contour Output

Project #: 2021-103 Mariposa Industrial
Description: Existing + Approved + Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	SR 99	North of Mariposa	290	626	1348	2904	6256
2	SR 99	South of Mariposa	245	528	1137	2450	5279
3	Mariposa Road	SR 99 to Farmington	34	73	157	339	730
4	Mariposa Road	Carpenter to SR99	40	87	188	404	871
5	Mariposa Road	Project Site to Carpenter	42	90	194	417	899
6	Mariposa Road	East of Project Site	24	51	110	237	511
7	Mariposa Road	East of Austin Road	19	40	86	186	401
8	Arch - Airport Road	Qantas to SR 99	50	108	233	501	1080

APPENDIX G
TRAFFIC IMPACT STUDY

TRAFFIC IMPACT STUDY

FOR

THE MARIPOSA INDUSTRIAL PARK PROJECT

Stockton, California

Prepared For:

BaseCamp Environmental

Prepared By:

KD Anderson & Associates
3853 Taylor Road, Suite G
Loomis, California 95650
(916) 660-1555

April 12, 2021

0780 -18

TRAFFIC IMPACT STUDY FOR
THE MARIPOSA INDUSTRIAL PARK PROJECT

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EXECUTIVE SUMMARY

This *Executive Summary* is a brief overview of the analysis presented in this traffic impact study. It is not intended to be a comprehensive description of the analysis. For more details, the reader is referred to the full description presented in the traffic impact study.

This traffic impact study presents an analysis of the traffic-related effects of the Mariposa Industrial Park project. The project is located in unincorporated San Joaquin County, southeast of the City of Stockton, east of State Route (SR) 99, north of Little John Creek, southwest of Mariposa Road. The project site is approximately 203.48 acres in size and is proposed to include 3,616,870 building square feet (sf) of high-cube warehouse industrial land use.

Access to the Mariposa Industrial Park site would be provided via two driveway connections to Mariposa Road.

This traffic impact study includes analysis of:

- 15 intersections,
- 12 roadway segments, and
- 13 freeway ramp junction areas.

These study facilities are analyzed under the following five development scenarios:

- Existing Conditions,
- Near-Term Future Existing Plus Approved Projects (EPAP) No Mariposa Industrial Park Project Conditions,
- Near-Term Future EPAP Plus Mariposa Industrial Park Project Conditions,
- Long-Term Future Cumulative No Mariposa Industrial Park Project Conditions, and
- Long-Term Future Cumulative Plus Mariposa Industrial Park Project Conditions.

Under Existing Conditions, all study intersections operate at conditions which are considered acceptable. One study roadway segment and one freeway weave area operate at conditions which are considered unacceptable. This traffic impact study presents a recommended improvement for the study roadway segment.

Under EPAP No Mariposa Industrial Park Project conditions, three study intersections, two study roadway segments, and three study freeway ramp and weave facilities would experience operating conditions which are considered unacceptable. This traffic impact study presents recommended improvements for two of the study intersections, and one of the study roadway segments.

Under EPAP Plus Mariposa Industrial Park Project conditions, four study intersections, two study roadway segments, and three study freeway ramp and weave facilities would experience operating conditions which are considered unacceptable. The project-related change at two study intersections and one study roadway segment would be considered a significant inconsistency with General Plan policies and recommended improvements are identified to reduce the inconsistency to a less than significant level.

Under Cumulative No Mariposa Industrial Park Project conditions, two study roadway segments would experience operating conditions which are considered unacceptable. This traffic impact study presents recommended improvements for one of these two facilities.

Under Cumulative Plus Mariposa Industrial Park Project conditions, three study roadway segments would experience operating conditions which are considered unacceptable. The project-related change at one study roadway segment would be considered a significant inconsistency with General Plan policies and a recommended improvement is identified to reduce the inconsistency to a less than significant level. The project-related change at two of these three facilities would be less than thresholds considered to be significant. Therefore, the project-related inconsistency at these facilities is considered less than significant.

In addition to presenting an analysis of traffic operating conditions, this traffic impact study also presents analysis of project-related impacts on

- demand for public transit services,
- demand for bicycle and pedestrian facilities, and
- vehicle miles traveled.

INTRODUCTION

STUDY PURPOSE

This traffic impact study presents an analysis of the traffic-related effects of the proposed Mariposa Industrial Park project.

PROJECT DESCRIPTION

The following is a description of the Mariposa Industrial Park project.

Project Location

The Mariposa Industrial Park project site is in the San Joaquin County unincorporated area, adjacent to the southeastern limits of the City of Stockton. **Figure 1** presents an aerial photograph of the vicinity of the project site. The project site encompasses 203.48 acres.

Project Land Uses

The project proposes to develop the project site for light industrial land uses, primarily "high-cube" warehouses. The details of the proposed development are discussed below.

The project proposes the annexation of the project site into the City of Stockton. The City would submit an annexation application to the San Joaquin Local Agency Formation Commission (LAFCO), which would be responsible for a decision on the annexation.

The project site is currently zoned by the County as AG-40 – General Agriculture with a 40-acre minimum parcel size. The project would include a request that the City pre-zone the entire project site Industrial, Limited (IL). This pre-zoning would be consistent with the current Industrial designation of the project site under the City of Stockton General Plan (City of Stockton 2018a) and with the proposed project.

Upon annexation, the project site is proposed to be developed with light industrial land uses, mainly high-cube warehouses. **Figure 2** shows a conceptual site plan. A "high-cube warehouse" is a building that typically has at least 200,000 gross square feet of floor area, has a ceiling height of approximately 24 feet or more, and is used primarily for the storage and/or consolidation of manufactured goods (and, to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. A typical high-cube warehouse has a high level of on-site automation and logistics management, which enable highly efficient processing of goods through the warehouse.

As shown in **Figure 2**, the Mariposa Industrial Park project would include 3,616,870 building square feet of proposed development.

A total of 2,938 parking stalls would be provided throughout the project site. Of that total, 1,831 stalls would be for automobiles, 37 of which would be accessible to drivers with disabilities. The remaining 1,107 stalls would be for trucks and trailers.

Circulation

Access would be from two driveways off Mariposa Road in the northeastern portion of the project site. In this traffic impact study, these two access locations are referred to as the "Southeast Project Driveway" and the "Northwest Project Driveway". The Southeast Project Driveway would provide the main access to the project site, with an access road leading to most of the proposed development. The Northwest Project Driveway would provide access to the two northernmost buildings proposed on the site. Curb, gutter, and sidewalk would be installed along existing undeveloped street frontage in accordance with City standards. In addition, access to the project site would be made available from Marfargoa Road and Clark Road for emergency vehicles only.

In the near-term future, this traffic impact study assumes the Southeast Project Driveway connection with Mariposa Road would include signalized intersection control. In the near-term future, the Northwest Project Driveway would include unsignalized stop-sign control, with the driveway being the controlled approach. In the long-term future, the Stockton General Plan includes widening of Mariposa Road from two lanes (one lane in each direction) to four lanes (two lanes in each direction). In the long-term future, this traffic impact study assumes both the Southeast Project Driveway connection and the Northwest Project Driveway connection would include signalized intersection control.

OVERALL ANALYSIS APPROACH

As noted above, this traffic impact study presents an analysis of the traffic-related effects of the Mariposa Industrial Park project. This analysis is conducted using near-term future 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 five scenarios is presented in this traffic impact study:

- Existing Conditions,
- EPAP No Mariposa Industrial Park Project,
- EPAP Plus Mariposa Industrial Park Project,
- Cumulative No Project, and
- Cumulative Plus Project.

Existing Plus Approved Projects conditions are a near-term background condition which includes existing traffic levels, and traffic associated with approved but unconstructed land use development projects in 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 General Plan.

VICINITY MAP

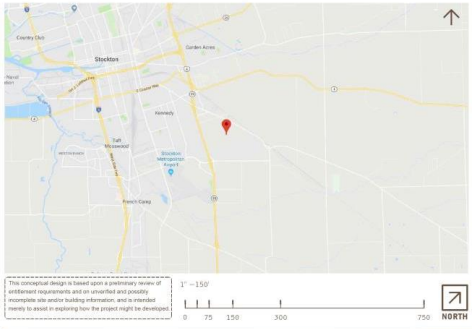
KD Anderson & Associates, Inc.
Transportation Engineers

0780-18 RA 3/11/2021

figure 1

PROJECT DATA:

SITE AREA:		
GROSS:		208.24 AC
		9,070,892 SF
DETENTION:	@ 10%	875,088 SF
NET:		188.15 AC
		8,195,804 SF
BUILDING FOOTPRINT:		
BUILDING 1		670,320 SF
BUILDING 2		637,450 SF
BUILDING 3		1,021,440 SF
BUILDING 4		1,021,440 SF
BUILDING 5		64,260 SF
BUILDING 6		100,980 SF
BUILDING 7		100,980 SF
TOTAL FOOTPRINT:		3,616,870 SF
BUILDING USE:		
WAREHOUSE		3,436,027 SF
OFFICE	@ 5%	180,844 SF
COVERAGE:		
GROSS:		40%
NET:		44%
PARKING REQUIRED:		
WAREHOUSE	1/2000 SF	1,718 STALLS
PARKING PROVIDED:		
AUTO:		1,831 STALLS
		@0.51/1000 SF
REQ. ACCESSIBLE		*37 STALLS*
TRAILER:		1,107 STALLS



scheme: 1

Conceptual Site Plan

Marfargoa Road
Stockton, CA 95215

WARE MALCOMB

SNR19-0015-00
07.10.2020

SHEET
1

SITE PLAN

KD Anderson & Associates, Inc.
Transportation Engineers

0780-18 RA 4/12/2021

figure 2

EXISTING SETTING

This section of this traffic impact study presents a description of existing conditions in the study area. Information presented in this section of the study is based on on-site field observations, traffic count data collected for this study, and other data available from local and state agencies.

This section of the traffic impact study also describes analysis methods applied for this study, and thresholds used to determine the significance of project-related effects.

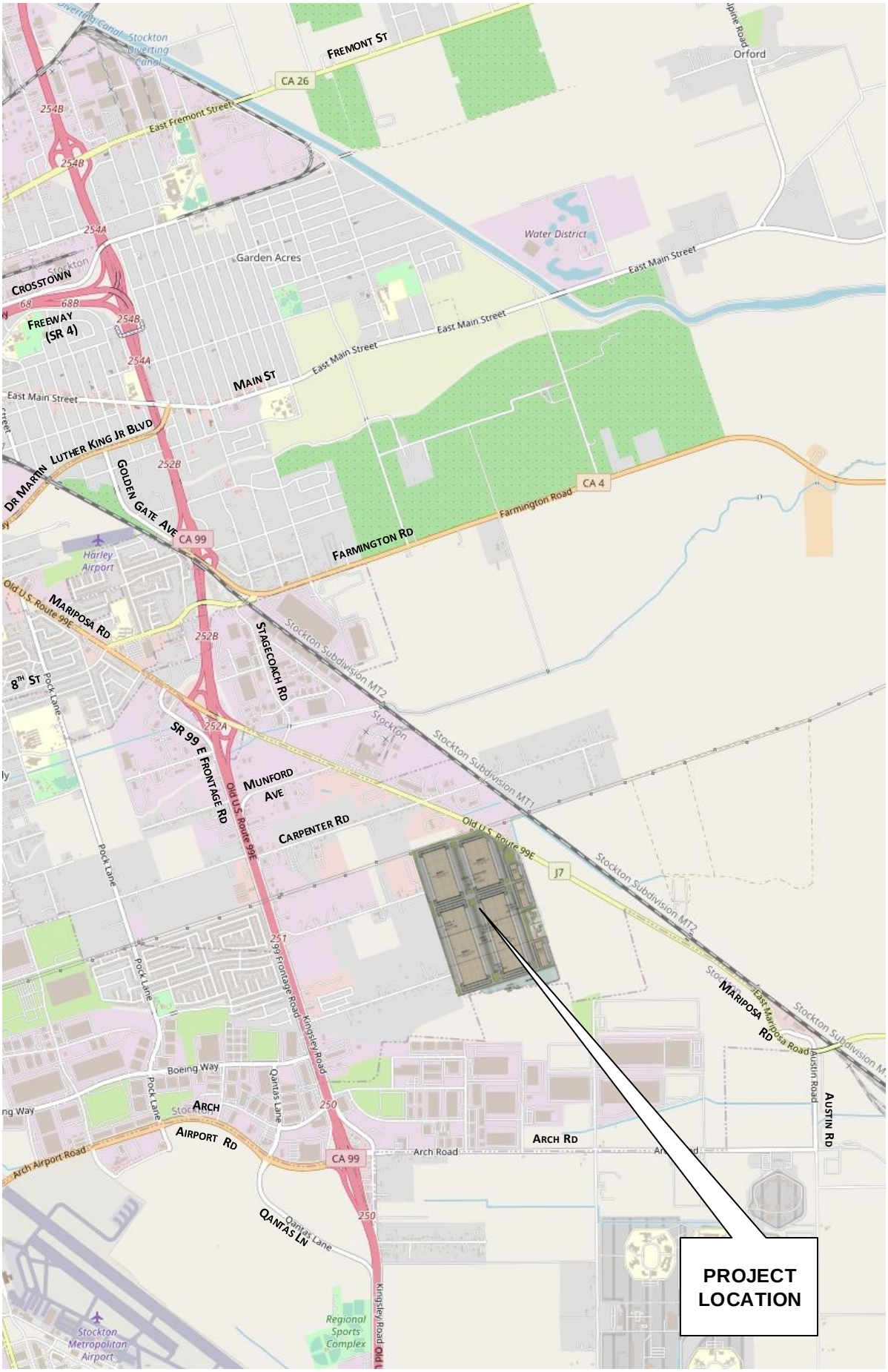
STUDY AREA ROADWAYS

This traffic impact 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 City of Stockton staff (Moore pers. comm.).

The following is a description of roadways that provide access to the proposed project site. These roadways are shown in **Figure 1** and **Figure 3**.

State Route 99 is a freeway that 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 in the vicinity of the project site, with auxiliary lanes present at some locations. Twelve interchanges are provided along the 12-mile length of SR 99 within and adjacent to the Stockton City limits. Average daily traffic (ADT) volumes on SR 99 range between 80,000 and 95,000 in the vicinity of the project site based on data available at California Department of Transportation 2021. The speed limit on SR 99 is 65 miles per hour (mph) in the vicinity of the proposed project site.

Mariposa Road is a west-northwest-to-east-southeast roadway connecting Charter Way in south Stockton with Escalon Bellota Road north of Escalon. In the vicinity of the project site, Mariposa Road is a two-lane roadway. The portion of Mariposa Road southeast of Carpenter Road has a 55 mph posted speed limit. Between Carpenter Road and 8th Street/Farmington Road (northwest of SR 99), the posted speed limit is 50 mph. Mariposa Road crosses a railroad track with a grade-separated railroad crossing located just east of the intersection with Austin Road. Limited pedestrian and no bicycle facilities are provided along the roadway within the study area. Mariposa Road is classified in the City of Stockton General Plan (City of Stockton 2018a) as an arterial roadway. In the future, the General Plan indicates Mariposa Road would be six lanes wide from Dr. Martin Luther King Jr. Boulevard to Carpenter Road and four lanes wide from Carpenter Road to southeast of Austin Road.



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STUDY AREA

figure 3

Crosstown Freeway (SR 4) is an east-west freeway that traverses downtown Stockton. The eastern terminus of the Crosstown Freeway is at SR 99. The western terminus of the Crosstown Freeway is at Navy Drive, approximately 1.4 miles west of Interstate 5 (I-5). The Crosstown Freeway is designated SR 4, which continues west to Interstate 80 in the San Francisco Bay Area, and continues east into the Sierra Nevada foothills. The portion of the Crosstown Freeway immediately west of SR 99 is eight lanes wide. It is six to eight lanes wide through downtown Stockton. West of I-5, it is four lanes wide.

Carpenter Road is a west-southwest-to-east-northeast two-lane roadway that connects with Mariposa Road at an unsignalized intersection approximately one-third of a mile west-northwest of the project site. The east-northeastern terminus of Carpenter Road is approximately 0.9 mile east-northeast of Mariposa Road. To the west-southwest, Carpenter Road terminates at SR 99 East Frontage Road, approximately 0.8 mile west-southwest of Mariposa Road. West of SR 99, a discontinuous portion of Carpenter Road extends west-southwest to Airport Way. Carpenter Road is classified in the City of Stockton General Plan (City of Stockton 2018a) as a collector roadway with a future east-northeast extension connecting to a future northern extension of Austin Road.

Munford Avenue is a west-southwest-to-east-northeast two-lane roadway that connects with Mariposa Road at a signalized intersection approximately 0.8 mile west-northwest of the project site. The east-northeastern terminus of Munford Avenue is at Mariposa Road. To the west-southwest, Munford Avenue terminates at SR 99 East Frontage Road, approximately 0.4 mile west-southwest of Mariposa Road. West of SR 99, a discontinuous portion of Munford Avenue extends approximately 0.4 mile west-southwest of SR 99.

Stagecoach Road is a north-south two-lane roadway with a southern terminus at a signalized intersection with Mariposa Road and a northern terminus at Farmington Road. The southwest leg of the intersection of Mariposa Road & Stagecoach Road is a gated driveway for Oldcastle Infrastructure.

Farmington Road is an east-west roadway with an overcrossing of SR 99. In the immediate vicinity of SR 99, it is two lanes wide. Approximately one-quarter mile east of SR 99, Farmington Road intersects with Golden Gate Avenue. East of this intersection, Farmington Road is two lanes to four lanes wide, with a center two-way left-turn lane (CTWLTL) along portions of the roadway. Farmington Road continues east into the Sierra Nevada foothills as SR 4. Approximately one-half mile west-southwest of SR 99, Farmington Road intersects with Mariposa Road. To the west-southwest of Mariposa Road, the roadway continues as 8th Street. Discontinuous portions of 8th Street extend to the southwest portion of Stockton.

Golden Gate Avenue is a northwest-to-southeast roadway with an interchange on SR 99. The roadway is four lanes wide southeast of SR 99 and two lanes wide northwest of SR 99. The southeastern terminus of Golden Gate Avenue is at Farmington Road, approximately one-quarter mile southeast of SR 99. Approximately one-third of a mile northwest of SR 99, Golden Gate Avenue transitions to a north-northwest – south-southeast alignment. This portion of Golden Gate Avenue has a north-northwest terminus at the Crosstown Freeway. Discontinuous portions of Golden Gate Avenue are present north of the Crosstown Freeway.

Fremont Street is a west-southwest – to – east-northeast roadway with an interchange on SR 99. In the immediate vicinity of SR 99 and extending west-southwest to Wilson Way, Fremont Street is four lanes wide. West of Wilson Way, discontinuous portions of Fremont Street are two lanes wide, traverse downtown Stockton, and terminate west of I-5. East-northeast of SR 99, Fremont Street is two lanes wide and is designated SR 26. SR 26 extends to the northeast into the Sierra Nevada foothills.

Austin Road is a north-south roadway that extends south from Mariposa Road, and passes through Manteca before terminating at Caswell Memorial State Park. Within the project study area, Austin Road is a two-lane roadway with no pedestrian or bicycle facilities. Austin Road is classified in the City of Stockton General Plan (City of Stockton 2018a) as an arterial roadway with a future west-northwest extension to Main Street.

Arch Road / Arch-Airport Road / Sperry Road / French Camp Road is an east-west roadway with several names. It is classified in the City of Stockton General Plan (City of Stockton 2018) as an arterial roadway. The roadway extends from Carolyn Weston Boulevard in the west to the Union Pacific Railroad (UPRR) facility east of Austin Road. In the study area, Arch Road is generally a two-lane roadway with a posted speed limit of 45 mph. Additional lanes are provided at some portions, including the portion in the vicinity of the SR 99 interchange. Arch Road is currently undergoing improvements with some segments widened to provide additional travel capacity. In some cases, the widened portions are not yet striped to accommodate additional traffic. Sidewalks are provided along some portions of Arch Road, including portions on the north side from Logistics Drive to approximately 100 feet east of Fite Court, and on the south side from Logistics Drive to Newcastle Road. There are no bicycle facilities on Arch-Airport Road/Arch Road in the project study area.

SR 99 East Frontage Road runs parallel to and east of SR 99. North of Arch Road, this roadway curves to the east, becoming Munford Avenue, and terminates at Mariposa Road. South of Arch Road, the roadway becomes Kingsley Road, terminating approximately 1.5 miles south of Arch Road. SR 99 East Frontage Road is a two-lane roadway with limited pedestrian facilities and no bicycle facilities in the project study area.

Qantas Lane is a north-south roadway that begins at Boeing Way to the north. South of Arch-Airport Road, Qantas Lane becomes SR 99 West Frontage Road located on the west side of SR 99. North of Arch-Airport Road, Qantas Lane is a two-lane roadway, while four travel lanes are provided south of Arch-Airport Road. Limited pedestrian facilities and no bicycle facilities are provided along Qantas Lane within the project study area.

TRUCK ROUTES

The City of Stockton *Truck Routes* map (City of Stockton 2009) and *STAA Truck Routes* map (City of Stockton 2017) describe truck routes in the Stockton area. Some of the truck routes are designated for use by Surface Transportation Assistance Act (STAA) design vehicle trucks. These are large vehicles that have relatively large turning radii, and require roadway design features that

accommodate the large turning radii. The following are designated truck routes in the vicinity of the project site:

- Mariposa Road from Dr. Martin Luther King Jr. Boulevard to east-southeast of Austin Road is a route for vehicles transporting flammable liquids.

- Arch Road from McKinley Avenue to Austin Road is a City designated truck route.

- Mariposa Road from Dr. Martin Luther King Jr. Boulevard to Munford Avenue is a designated STAA truck route. Portions are designated by the City and portions are designated by the County of San Joaquin.

- Munford Avenue from Mariposa Road to 3730 Munford Avenue is designated by the County as an STAA truck route.

- Golden Gate Avenue from SR 99 to Dr. Martin Luther King Jr. Boulevard is a City designated STAA truck route, and Dr. Martin Luther King Jr. Boulevard from Golden Gate Avenue to I-5 is a County designated STAA truck route.

- Fremont Street from Windsor Avenue (west of SR 99) to Cardinal Avenue (east of SR 99), and Cardinal Avenue from Fremont Street to 207 N. Cardinal Avenue are County designated STAA truck routes.

- Arch Road from I-5 to Austin Road is a designated STAA truck route. Portions are designated by the City and portions are designated by the County.

- Qantas Lane from Arch-Airport Road to Boeing Way, and Boeing Way from Qantas Lane to Airport Way are City designated STAA truck routes.

- Newcastle Road north of Arch Road is a City designated STAA truck route.

Routes anticipated to be used by STAA trucks to access the project site include the following (Ebenal pers. comm.):

- SR 99 north of Fremont Street,
- SR 99 south of Arch Road,
- Crosstown Freeway west of SR 99,
- Golden Gate Avenue west of SR 99,
- Golden Gate Avenue east of SR 99,
- Mariposa Road west of SR 99,
- Boeing Way west of Qantas Lane, and
- Arch-Airport Road west of Qantas Lane.

A separate standalone assessment focusing on the potential effects of Mariposa Industrial Park project-related trucks is being prepared by the civil engineering firm Kier + Wright. The assessment will include effects associated with the potential use of STAA trucks. As appropriate,

the truck assessment will be used as a source document for identifying truck-related impacts in the California Environmental Quality Act (CEQA) environmental impact report (EIR) for the Mariposa Industrial Park project and needed mitigation measures.

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. SJRTD provides fixed-route, flexible fixed-route, and dial-a-ride services in Stockton. Each service is described in more detail below. (San Joaquin Regional Transit District 2021)

- 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 two Dial-a-Ride services. General Public Dial-A-Ride is a curb-to-curb service in areas not currently being served by RTD or other local transportation providers. Passengers are required to use other public transportation options currently available in their area. Stockton Metro Area Dial-A-Ride (SMA-ADA) is a curb-to-curb service operating within the 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 nine routes. The County Hopper provides six routes.

SJRTD service is provided in the area west of SR 99. In vicinity of the Mariposa Road and Arch Road interchanges, service is provided by:

- Fixed routes 385 and 390,
- Hopper routes 91 and 95, and
- Express route 44.

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;
- the Hammer Crossing Shopping Center at Hammer Lane and Sampson Road;, and
- the Lifesong Church, 3034 Michigan Avenue.

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.

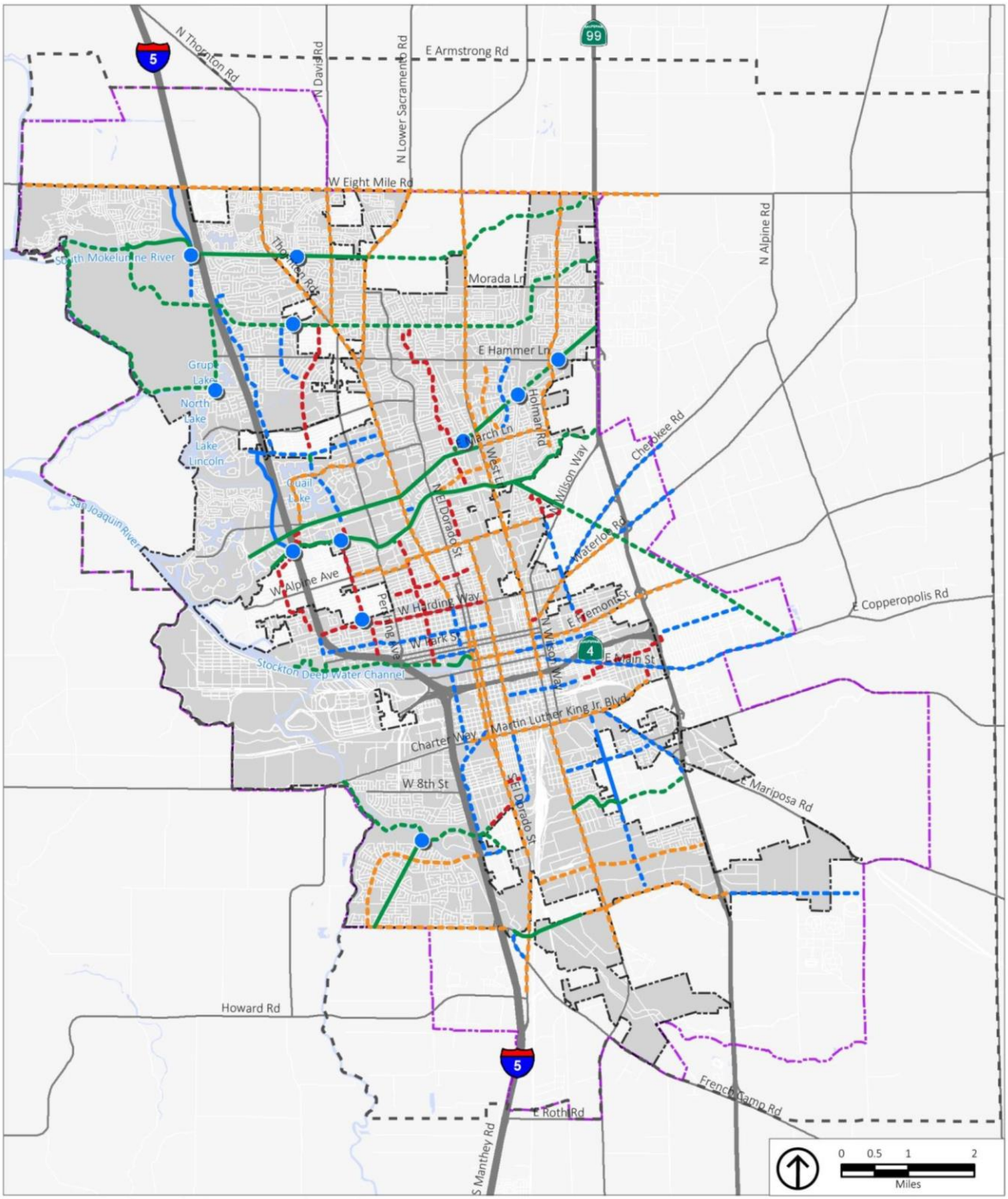
- **Class II Bikeway (Bike Lane).** A striped lane designated for the use of bicycles on a street or highway. Vehicle parking and vehicle/pedestrian cross-flow are permitted at designated locations.

- **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.

In the immediate vicinity of the project site, neither bicycle facilities nor sidewalks are present along either side of Mariposa Road between Munford Avenue and Austin Road.

The City of Stockton General Plan presents a map showing existing and planned bicycle facilities in the Stockton area, shown on **Figure 4**. **Figure 4** shows a planned Class II bike lane on Arch Road between SR 99 and Austin Road, and a planned Class II bike lane on Mariposa Road between Dr. Martin Luther King, Jr. Boulevard and SR 99.



Source: City of Stockton; Fehr & Peers, 2016; PlaceWorks, 2017.

Existing Bicycle Network
- Class I (Bike Path)
- Class II (Bike Lane)

Planned Bicycle Network
- Class I (Bike Path)
- Class II (Bike Lane)
- Class III (Bike Route)
- Class IV (Separated Bikeway)

- New Bridge
- General Plan Planning Area
- City Limit
- Sphere of Influence

ENVISION STOCKTON 2040 GENERAL PLAN

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EXISTING AND PLANNED BICYCLE NETWORK

0780-13 RA 4/12/2021

figure 4

STUDY AREA INTERSECTIONS

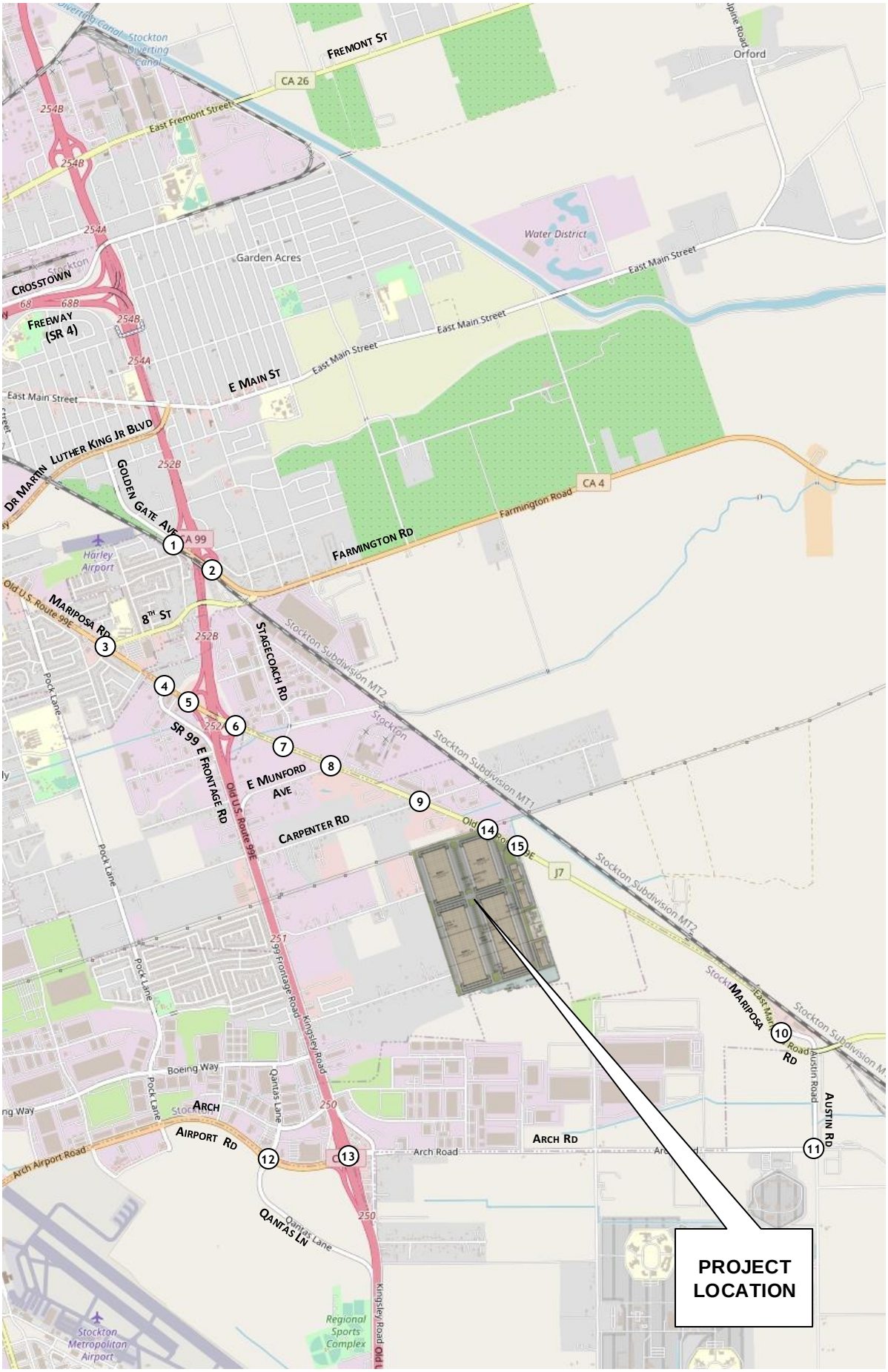
The traffic-related effects of the proposed project were assessed for this traffic impact study by analyzing traffic operations at intersections that would serve project-related travel. The following intersections were selected for analysis in consultation with City of Stockton staff (Moore pers. comm.).

1. Golden Gate Avenue & SR 99 Southbound Ramps
2. Golden Gate Avenue & SR 99 Northbound Ramps
3. Mariposa Road & 8th Street/Farmington Road
4. Mariposa Road & SR 99 West Frontage Road
5. Mariposa Road & SR 99 Southbound Ramps
6. Mariposa Road & SR 99 Northbound Ramps
7. Mariposa Road & Stagecoach Road
8. Mariposa Road & Munford Avenue
9. Mariposa Road & Carpenter Road
10. Mariposa Road & Austin Road
11. Arch Road & Austin Road
12. Arch-Airport Road & Qantas Lane
13. Arch Road & SR 99

The following two intersections would only be present with construction of the Mariposa Industrial Park project. As a result, these intersections were only analyzed under development conditions that include the proposed project:

14. Mariposa Road & Northwest Project Driveway
15. Mariposa Road & Southeast Project Driveway

The locations of study intersections are presented in **Figure 5**. The numbers listed above correspond to the intersection numbers on this figure.



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STUDY INTERSECTIONS

figure 5

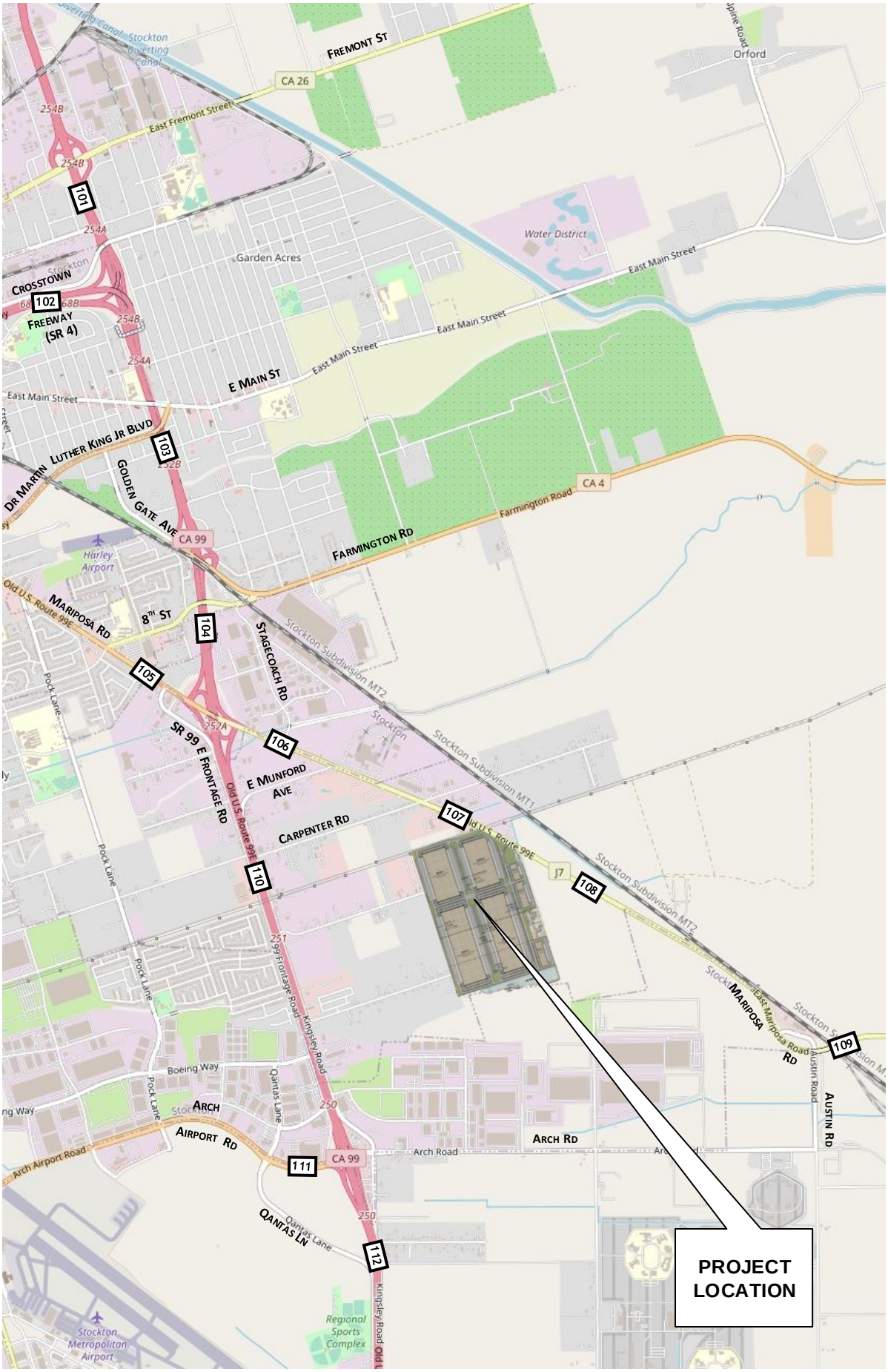
STUDY AREA ROADWAY SEGMENTS

In addition to analyzing intersections, the traffic-related effects of the proposed project on roadway segments were assessed for this traffic impact 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 City of Stockton staff (Moore pers. comm.).

101. SR 99 North of Crosstown Freeway (SR 4)
102. Crosstown Freeway West of SR 99
103. SR 99 Between Crosstown Freeway and Golden Gate Avenue
104. SR 99 Between Golden Gate Avenue and Mariposa Road
105. Mariposa Road Between SR 99 and 8th Street/Farmington Road
106. Mariposa Road, Between Carpenter Road and SR 99
107. Mariposa Road, Between the Project Site and Carpenter Road
108. Mariposa Road, Southeast of the Project Site
109. Mariposa Road, East of Austin Road
110. SR 99 Between Mariposa Road and Arch-Airport Road
111. Arch-Airport Road, Between Qantas Lane and SR 99
112. SR 99 South of Arch-Airport Road

The locations of study roadway segment are presented in **Figure 6**. The numbers listed above correspond to the roadway segment numbers on this figure. The numbers used for roadway segments are sequential, beginning with 101 to distinguish study roadway segments from study intersections listed previously.

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 roadway segment Mariposa Road, east of Austin Road, applies to Mariposa Road from Austin Road to Jack Tone Road. The descriptions of locations listed above, and used in this traffic impact study, are as specific as possible to minimize ambiguity.



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STUDY ROADWAY SEGMENTS

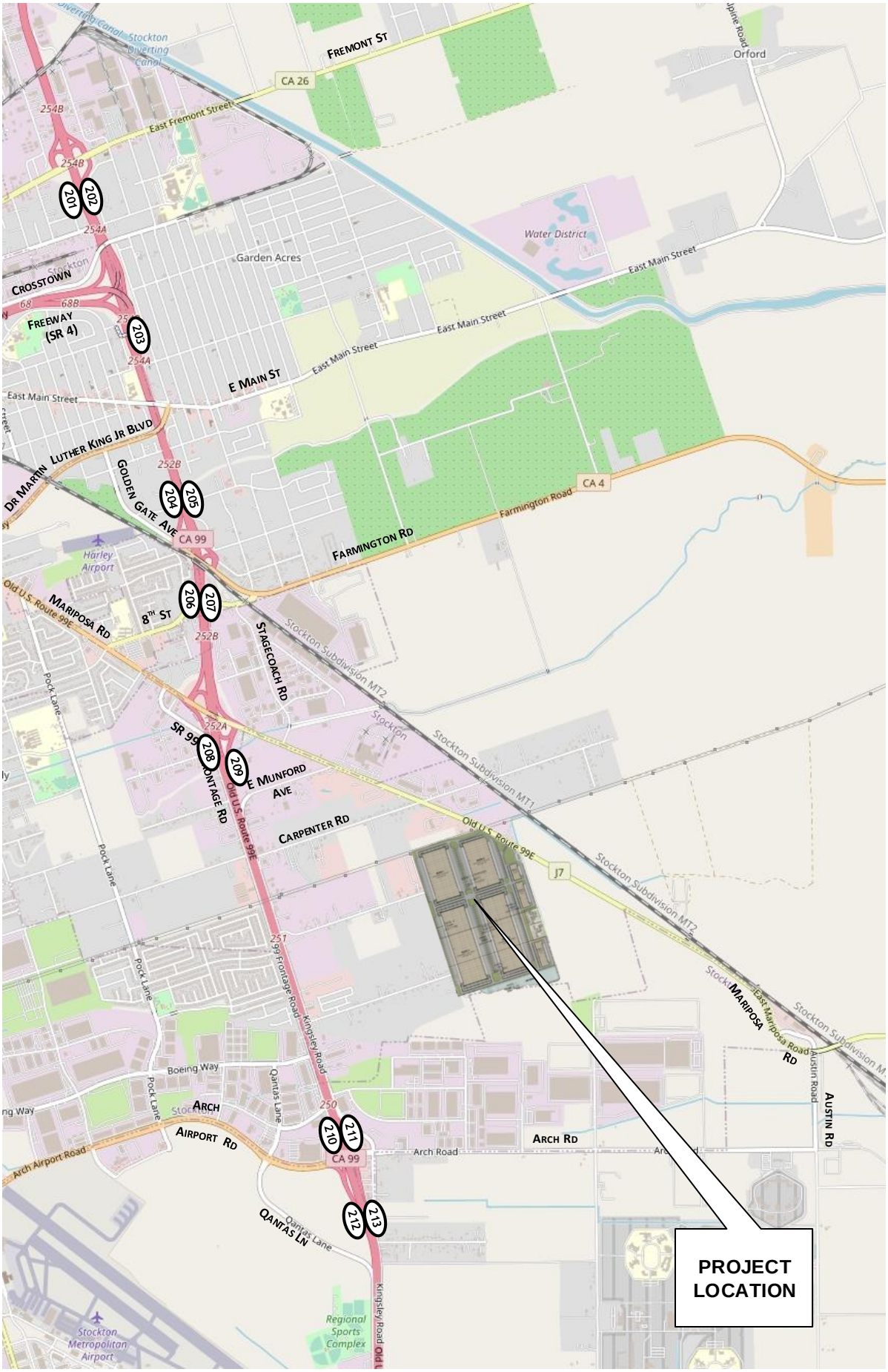
figure 6

STUDY AREA FREEWAY RAMP JUNCTIONS

In addition to analyzing intersections and roadway segments, the traffic-related effects of the proposed project on freeway ramp junctions were assessed for this traffic impact 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 City of Stockton staff (Moore pers comm.):

201. SR 99 Southbound Weave Area Between Fremont Street and Crosstown Freeway
202. SR 99 Northbound Weave Area Between Crosstown Freeway and Fremont Street
203. SR 99 Northbound at Crosstown Freeway Off-Ramp Diverge
204. SR 99 at Golden Gate Avenue Southbound Off-Ramp Diverge
205. SR 99 at Golden Gate Avenue Northbound On-Ramp Merge
206. SR 99 Southbound Weave Area Between Golden Gate Avenue and Mariposa Road
207. SR 99 Northbound Weave Area Between Mariposa Road and Golden Gate Avenue
208. SR 99 at Mariposa Road Southbound On-Ramp (Slip) Merge
209. SR 99 at Mariposa Road Northbound Off-Ramp Diverge
210. SR 99 at Arch-Airport Road Southbound Off-Ramp Diverge
211. SR 99 at Arch-Airport Road Northbound On-Ramp Merge
212. SR 99 at Arch-Airport Road Southbound On-Ramp Merge
213. SR 99 at Arch-Airport Road Northbound Off-Ramp Diverge

The locations of freeway ramp junctions are presented in **Figure 7.** The numbers listed above correspond to the ramp junction numbers on this figure. The numbers used for ramp junctions are sequential, beginning with 201 to distinguish study ramp junctions from study intersections and study roadway segments listed previously.



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STUDY FREEWAY MERGE, DIVERGE, AND WEAVE AREAS

0780-18 RA 4/12/2021

figure 7

METHODOLOGY

The following is a description of the analysis methods used in this traffic impact study.

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 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 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 General Plan policies. As specified by City of Stockton staff (McDowell pers. comm.), 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 2021). 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 this traffic impact study.

Worksheets and output reports for the calculation of LOS and vehicles queues for all scenarios analyzed for this traffic impact study are presented in the technical appendix.

Table 1. Level of Service Definitions - Highway Capacity Manual 2010

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 2010.

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 traffic impact study, 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 document *California Manual on Uniform Traffic Control Devices* (California Department of Transportation 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 technical appendix.

Roadway Segment Level of Service Analysis Procedures

Roadway segment LOS was analyzed for this traffic impact study based on methods used in the *Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR* analysis (City of Stockton 2018b). These methods set maximum daily traffic volume thresholds for each LOS designation. The thresholds are shown in **Table 2**.

As shown in **Table 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).

Table 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
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: Stockton General Plan Draft Environmental Impact Report (City of Stockton 2018b).
Note: The Stockton General Plan does not provide thresholds for local roads.

As described in City of Stockton 2018b:

> "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 2018b, 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. Weave areas are where an on-ramp and downstream off-ramp are connected by an auxiliary lane. Freeway ramp junctions which are considered to be potentially affected by project-related traffic were analyzed for this traffic impact study.

Freeway ramp junction areas were analyzed for this traffic impact study 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 for this traffic impact study.

The *Highway Capacity Manual 2010* methods were used to analyze three types of freeway facilities: on-ramp junctions (merge), off-ramp junctions (diverge), and weave areas. The analysis of all three 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 3** presents the relationship of vehicle density to LOS for ramp junctions and weave areas.

Freeway ramp operating conditions depend 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 and weaving sections 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 traffic study, the freeway and ramp volumes are identified for all facilities where capacity has been exceeded.

Table 3. Level of Service Criteria for Freeway Merge / Diverge and Weaving Areas

Level of Service	Freeway Ramp Merge and Diverge: Vehicle Density	Freeway Ramp Merge and Diverge: Operating Characteristics	Freeway Weave Area Vehicle Density
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.	Less than or equal to 10.
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.	Greater than 10. Less than or equal to 20.
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	Greater than 20. Less than or equal to 28.
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.	Greater than 28. Less than or equal to 35.
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.	Greater than 35.
F	†V/C >1	LOS F defines operating conditions within queues that form on both the ramp and the freeway mainline when capacity is exceeded by demand.	†V/C >1

Note: Vehicle density is expressed as passenger car equivalents per mile per lane.
Source: Transportation Research Board 2010.
† = Volume exceeds capacity. Therefore, the LOS is F. V/C ratio shown in lieu of density.

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 (Moore, pers. comm.), travel forecasts for this traffic impact study are based on the City of Stockton General Plan travel demand forecasting simulation model (City of Stockton 2018b).

Travel models of the following two conditions were used to develop forecasts of future year traffic volumes for this traffic impact study:

- Existing Plus Approved Projects (EPAP), and
- 2040 Conditions with the General Plan.

The City's travel model produces 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 traffic impact study. 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's) 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.

LEVEL OF SERVICE AND SIGNIFICANCE THRESHOLDS

Significance thresholds are used in California Environmental Quality Act (CEQA) environmental documents to identify when the impacts of a project should be considered significant. Significance thresholds are the criteria used to determine the significance of impacts.

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 this traffic impact 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 less than significant or significant.

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* (California Governor's Office of Planning and Research 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 (Steinberg 2013). 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 will not be used in this traffic impact study as a basis for identifying significant impacts. Rather, the methods, assumptions and significance thresholds presented in the City guidelines are 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.

General Plan Policy Consistency Criteria

As noted immediately above, in this traffic impact study the significance of the proposed project's inconsistency with General Plan policies is based on a determination of whether resulting LOS is considered acceptable. A project's inconsistency with 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* notes 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 traffic impact study, the City's significance thresholds described above are also applied to roadway segments and freeway ramp junctions. As shown in **Table 1**, **Table 2** and **Table 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 traffic impact study, 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 traffic impact study, 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.

The *Envision Stockton 2040 General Plan* (City of Stockton 2018a) 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 "Eighth Street, Airport Way to Mariposa Road – LOS E". Consistent with the City General Plan, a LOS E standard is applied in this traffic impact study to the intersection of Mariposa Road & 8th Street/Farmington Road.

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 in this traffic impact study; LOS E and F are considered unacceptable. In this traffic impact study, the Caltrans LOS D standard is applied to mainline freeway LOS, ramp junction LOS, and to LOS at freeway interchange intersections.

In this traffic impact study, 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).

Maximum Feasible Roadway Improvements

This traffic impact study identifies traffic operating conditions that would result from background development of land use not related to the proposed project, and would result from development of the proposed project. In some cases, this development would result in unacceptable LOS. If unacceptable LOS is forecasted, feasible roadway improvements needed to achieve acceptable LOS are identified.

For this traffic impact study, maximum feasible sizes of roadway facilities have been established. For intersections, the maximum feasible size is considered to be seven approach lanes on each leg of an intersection. For example, two left-turn lanes, four through lanes, and a right-turn lane (a total of seven lanes) is considered to be the maximum feasible size on an intersection approach. Existing land use development, physical or right-of-way constraints, and the relative benefits of additional roadway improvements in some cases result in a smaller approach being considered the maximum feasible size.

For SR 99 in the study area for this traffic impact study, the Caltrans *Transportation Concept Report State Route 99* (California Department of Transportation 2017) identifies a "conceptual facility" width of eight lanes (four in each direction) by the year 2040. Therefore, an eight-lane width is considered to be the maximum feasible size for SR 99.

It is technically possible to construct roadway facilities larger than the maximum feasible sizes applied in this traffic impact study. However, for the following reasons, this traffic impact study considers these sizes to be not feasible.

- **Pedestrian Safety** – The amount of time required by pedestrians to walk across an intersection leg with more than seven approach lanes is considered excessive.

The possibility of signal lights changing before pedestrians are able to exit the intersection is considered unacceptably high.

- **Vehicle Safety** – When a vehicle enters an intersection on the yellow light, the amount of time required for this subject vehicle to depart overly-large intersections is considered excessive. The possibility of other vehicles on conflicting movements entering the intersection before the subject vehicle has departed is considered unacceptably high.

- **Intersection Efficiency** – The timing of signal lights may be modified to provide protection for pedestrians and vehicles at overly-large intersections. However, the amount of time needed for pedestrians and vehicles to exit an overly-large intersection becomes excessive. This results in the intersection operating with an unacceptable degree of inefficiency.

- **Engineering Constraints** – Overhead structures and equipment are required to traverse both intersection approaches and freeway lanes. Overhead structures involve primarily overcrossing roadways. Equipment includes signal light support structures, power lines, and signs. With larger facilities, the size and resulting cost of these structures and equipment becomes unacceptable.

VEHICLE MILES TRAVELED SIGNIFICANCE THRESHOLD

The City of Stockton General Plan (City of Stockton 2018a) Policy TR-4.3 addresses the topic of vehicle miles traveled (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* (State of California 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. A specific threshold is not provided for industrial land use, like the Mariposa Industrial Park project and is, therefore, considered not applicable for this traffic impact study.

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 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 traffic impact study to determine the significance of VMT impacts associated with the Mariposa Industrial Park project.

Consistent with 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 amount of travel that would occur without approval of the proposed project. In this traffic impact study, vehicle travel associated with the Mariposa Industrial Park project will be compared to vehicle travel associated with the land uses currently designated in the City of Stockton General Plan.

At the time the analysis presented in this traffic impact study commenced, the City of Stockton had not adopted guidelines for analyzing VMT or determining the significance of a project's impact on VMT. The City was in the process of developing and adopting guidelines, but the process was not completed. The VMT analysis presented in this traffic impact study is not intended to pre-empt the City process of developing and adopting VMT guidelines. Rather, the analysis presented in this traffic impact study is intended to be a good-faith effort at disclosing and identifying the VMT impacts of the Mariposa Industrial Park project based on currently available data and guidance.

EXISTING INTERSECTION TRAFFIC VOLUMES AND LEVELS OF SERVICE

The following is a description of existing traffic operating conditions at the study intersections.

Traffic Volumes

Since the outbreak of the Covid-19 pandemic, traffic volumes have at times been lower than normal. With the pandemic, places of employment, schools, social and recreational gatherings, sports events, restaurants, and many other types of activities have been substantially reduced or prohibited. As a result, the use of new traffic volume count data collected during the pandemic could result in volumes that are unrepresentatively low. To ensure data used in this traffic study are representative, the traffic analysis of the Mariposa Industrial Park project is based on both existing traffic volume data collected before the outbreak of Covid-19, and current new traffic volume count data collected since the outbreak. Data collected before the outbreak of Covid-19 are from previously-prepared traffic analyses and from StreetLight Data (https://www.streetlightdata.com/). Data from new traffic volume count data collected since the outbreak were used to validate data collected before the outbreak of Covid-19. This approach was applied to intersection traffic volumes, described immediately below. This approach was also applied to roadway segment and ramp junction traffic volumes, described later in this traffic impact study.

At the following study intersections, turning movement count data collected for the *Public Review Draft Environmental Impact Report for the Sanchez-Hoggan Annexation* (City of Stockton 2020) were used in this traffic impact study.

4. Mariposa Road & SR 99 West Frontage Road
5. Mariposa Road & SR 99 Southbound Ramps
6. Mariposa Road & SR 99 Northbound Ramps
10. Mariposa Road & Austin Road
11. Arch Road & Austin Road
12. Arch-Airport Road & Qantas Lane
13. Arch Road & SR 99

Traffic count data collected for the intersections listed above are presented in the technical appendix. The peak period intersection turning movement count data were collected on Thursday March 7, 2019. The data were collected during the 7:00 a.m. to 9:00 a.m. period, and the 4:00 p.m. to 6:00 p.m. period. Volumes during the highest one-hour period were used for this traffic impact study.

At the following study intersections, pre-Covid-19 intersection turning movement count data were collected for weekday periods between 7:00 a.m. and 9:00 a.m., and between 4:00 p.m. and 6:00 p.m. from StreetLight Data. These data represent Tuesday through Thursday volumes collected during six non-holiday months between March 2019 and February 2020. Traffic volume count data collected from StreetLight Data are presented in the technical appendix.

1. Golden Gate Avenue & SR 99 Southbound Ramps
2. Golden Gate Avenue & SR 99 Northbound Ramps
3. Mariposa Road & 8th Street/Farmington Road
7. Mariposa Road & Stagecoach Road
8. Mariposa Road & Munford Avenue
9. Mariposa Road & Carpenter Road

To validate the traffic volumes collected from StreetLight Data, new count data were also collected on Tuesday January 12, 2021 at the intersections listed above during the 7:00 a.m. to 9:00 a.m. morning peak period and the 4:00 p.m. to 6:00 p.m. evening peak. The new count data were used to adjust volumes from StreetLight Data at the following intersection legs:

- the southwest leg of the intersection of Mariposa Road & Stagecoach Road,
- the southwest leg of the intersection of Mariposa Road & Carpenter Road, and
- the northeast leg of the intersection of Mariposa Road & Carpenter Road.

Traffic volumes on the intersection legs listed above are relatively low and the intersection turning movement volumes from StreetLight Data were considered to be unrepresentative. The new count data collected on Tuesday January 12, 2021 were used to adjust the turning movement volumes on the intersection legs listed above.

Using the approach described above results in volumes applied in this traffic study which compensate for decreases caused by the Covid-19 pandemic.

Figure 8 and **Figure 9** present the existing lane configurations and existing a.m. peak hour and p.m. peak hour traffic volumes at the existing study intersections.

Intersection turning movement count data collected for this traffic impact study were disaggregated to light-duty vehicles (e.g., automobiles) and heavy vehicles (e.g., heavy-duty trucks). These data were used to estimate heavy vehicle percentage at each study intersection. The percentages are shown in **Table 4**, and were used in the intersection LOS analysis presented in this traffic impact study.

Intersection Levels of Service

Table 5 presents a summary of existing a.m. peak hour and p.m. peak hour LOS at the 13 existing study intersections. The worksheets presenting the calculation of LOS are included in the technical appendix.

All of the 13 existing study intersections operate 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 intersections to achieve acceptable LOS.

EXISTING ROADWAY SEGMENT TRAFFIC VOLUMES AND LEVELS OF SERVICE

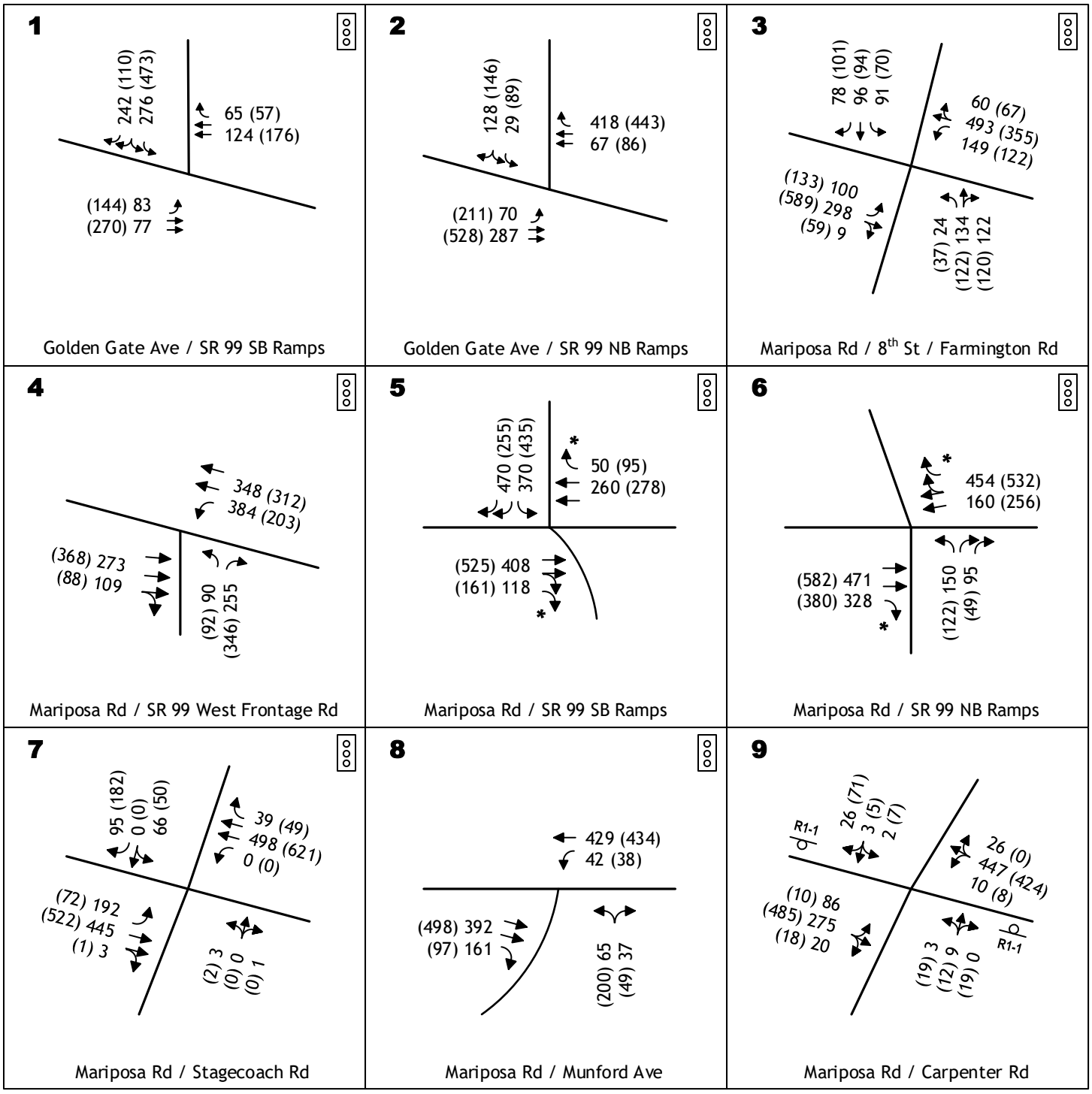
The following is a description of existing traffic operating conditions on study roadway segments.

Roadway Segment Traffic Volumes

As described in more detail previously in this traffic impact study, to ensure data used in this study are representative, the traffic analysis of the Mariposa Industrial Park project is based on both existing traffic volume data collected before the outbreak of Covid-19, and current new traffic volume count data collected since the outbreak.

Roadway segment traffic volume count data were collected for 24-hour periods for the *Public Review Draft Environmental Impact Report for the Sanchez-Hoggan Annexation* (City of Stockton 2020). For the following roadway segments, the data were collected on Wednesday March 13, 2019; and Thursday March 21, 2019. Traffic count data collected for the following roadway segments were used in this traffic impact study, and are presented in the technical appendix:

106. Mariposa Road, Between Carpenter Road and SR 99
107. Mariposa Road, Between the Project Site and Carpenter Road
108. Mariposa Road, Southeast of the Project Site
109. Mariposa Road, East of Austin Road
111. Arch-Airport Road, Between Qantas Lane and SR 99

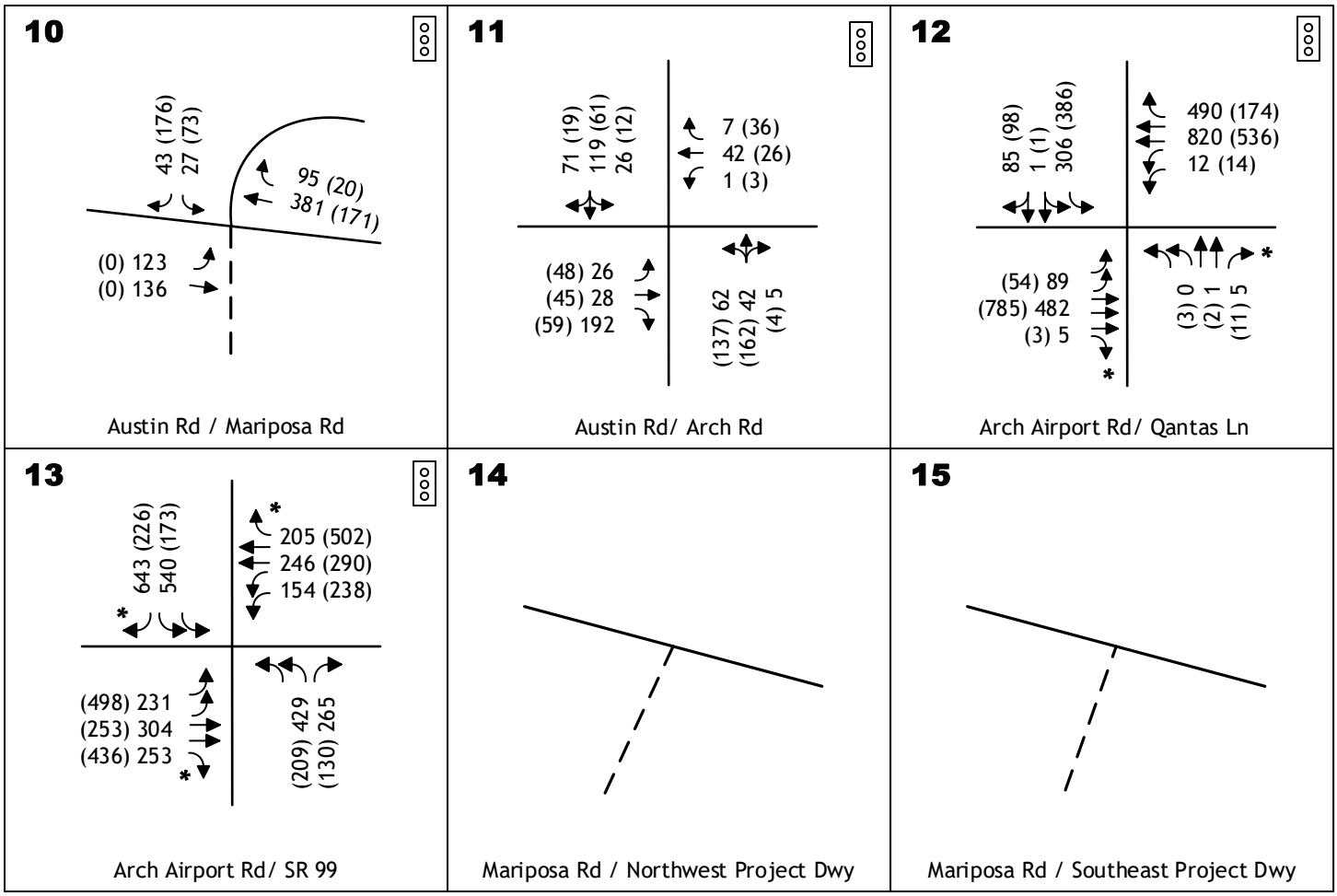


EXISTING INTERSECTION TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

0780-18 RA 4/12/2021

figure 8



Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- R1-1 — Stop Sign
- Signalized Intersection
- * — "Free" Right Turn
- – – – – Future Roadway

NORTH

N.T.S.

EXISTING INTERSECTION TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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Transportation Engineers

0780-18 RA 4/12/2021

figure 9

Table 4. Heavy Truck Percentage

	Intersection	AM Peak Hour	PM Peak Hour
1	Golden Gate Avenue & SR 99 Southbound Ramps	6%	4%
2	Golden Gate Avenue & SR 99 Northbound Ramps	7%	3%
3	Mariposa Road & 8th Street/Farmington Road	9%	3%
4	Mariposa Road & SR 99 West Frontage Road	5%	5%
5	Mariposa Road & SR 99 Southbound Ramps	7%	6%
6	Mariposa Road & SR 99 Northbound Ramps	9%	7%
7	Mariposa Road & Stagecoach Road	21%	10%
8	Mariposa Road & Munford Avenue	20%	9%
9	Mariposa Road & Carpenter Road	20%	8%
10	Mariposa Road & Austin Road	10%	6%
11	Arch Road & Austin Road	20%	20%
12	Arch-Airport Road & Qantas Lane	8%	9%
13	Arch Road & SR 99	9%	9%
14	Mariposa Road & Northwest Project Driveway	20%	8%
15	Mariposa Road & Southeast Project Driveway	20%	8%

Source: Peak hour intersection traffic volume count data.

Table 5. Intersection Level of Service - Existing Conditions

	Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	Golden Gate Avenue & SR 99 Southbound Ramps	Signal		B	13.3	B	15.2
2	Golden Gate Avenue & SR 99 Northbound Ramps	Signal		B	13.6	B	13.9
3	Mariposa Road & 8th Street/Farmington Road	Signal		C	34.0	C	32.4
4	Mariposa Road & SR 99 West Frontage Road	Signal		B	17.8	B	17.1
5	Mariposa Road & SR 99 Southbound Ramps	Signal		A	9.5	B	10.1
6	Mariposa Road & SR 99 Northbound Ramps	Signal		A	9.1	A	9.0
7	Mariposa Road & Stagecoach Road	Signal		B	18.4	B	17.3
8	Mariposa Road & Munford Avenue	Signal		B	11.7	B	17.7
9	Mariposa Road & Carpenter Road	Unsig	No	A	1.8	A	2.4
10	Mariposa Road & Austin Road	Signal		B	15.1	B	16.6
11	Arch Road & Austin Road	Signal		C	28.8	C	27.2
12	Arch-Airport Road & Qantas Lane	Signal		B	16.9	B	17.2
13	Arch Road & SR 99	Signal		B	18.4	B	17.0
14	Mariposa Road & Northwest Project Driveway	- -		- -	- -	- -	- -
15	Mariposa Road & Southeast Project Driveway	- -		- -	- -	- -	- -

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.
Dashes ("- -") indicate intersection not present under this scenario.

At study roadway segment 105, Mariposa Road between SR 99 and 8th Street/Farmington Road, pre-Covid-19 traffic volume count data for weekday 24-hour periods were collected from StreetLight Data. These data represent Tuesday through Thursday volumes collected during six non-holiday months between March 2019 and February 2020. Traffic volume count data collected from StreetLight Data are presented in the technical appendix.

To validate the 24-hour roadway segment traffic volume data collected from StreetLight Data, new count data were also collected on Tuesday January 12, 2021 on Mariposa Road between SR 99 and 8th Street/Farmington Road.

For the following freeway mainline roadway segments, 24-hour traffic volume data were collected from the Caltrans Traffic Census Program Internet Website (California Department of Transportation 2021) and applied in this traffic impact study.

101. SR 99 North of Crosstown Freeway (SR 4)
102. Crosstown Freeway (SR 4) West of SR 99
103. SR 99 Between Crosstown Freeway (SR 4) and Golden Gate Avenue
104. SR 99 Between Golden Gate Avenue and Mariposa Road
110. SR 99 Between Mariposa Road and Arch-Airport Road
112. SR 99 South of Arch-Airport Road

Table 6 presents the existing daily traffic volumes for study roadway segments.

Roadway Segment Levels of Service

Table 6 presents a summary of existing LOS on the 12 study roadway segments. 11 of the study roadway segments operate at acceptable LOS C or better. No improvements are needed on these 11 roadway segments to achieve acceptable LOS.

105. Mariposa Road Between SR 99 and 8th Street/Farmington Road

Under Existing Conditions, this roadway segment operates at LOS E. This LOS is considered unacceptable. The following improvement is recommended:

- Widen the portions of this roadway segment which are one lane in each direction to two lanes in each direction.

Table 6. Roadway Segment Level of Service - Existing Conditions

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
101. SR 99 - North of Crosstown Freeway (SR 4)	8	172,800	95,000	0.55	C
102. Crosstown Freeway - West of SR 99	8	172,800	104,900	0.61	C
103. SR 99 - Between Crosstown Fwy and Golden Gate Avenue	8	172,800	94,000	0.54	C
104. SR 99 - Between Golden Gate Ave and Mariposa Rd	8	172,800	92,300	0.53	C
105. Mariposa Road - Between SR 99 and 8th St./Farmington Rd	2	17,300	16,295	0.94	E
106. Mariposa Road - Between Carpenter Road and SR 99	2	17,300	10,034	0.58	C
107. Mariposa Road - Between the Project Site and Carpenter Road	2	17,300	9,042	0.52	B
108. Mariposa Road - Southeast of the Project Site	2	17,300	9,042	0.52	B
109. Mariposa Road - East of Austin Road	2	17,300	8,149	0.47	A
110. SR 99 - Between Mariposa Road and Arch-Airport Road	6	129,600	80,600	0.62	C
111. Arch-Airport Road - Between Qantas Lane and SR 99	6	59,300	26,889	0.45	A
112. SR 99 - South of Arch-Airport Road	6	129,600	85,000	0.66	C

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

A summary of LOS with recommended improvements is presented in **Table 7**. With this recommended improvement, this roadway segment would operate at LOS A. This LOS is considered acceptable.

Table 7. Roadway Segment Level of Service - Existing Conditions With Recommended Improvements

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
105. Mariposa Road - Between SR 99 and 8th St./Farmington Rd	4	38,200	16,295	0.43	A

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

EXISTING RAMP JUNCTION TRAFFIC VOLUMES AND LEVELS OF SERVICE

The following is a description of existing traffic operating conditions at the study ramp junctions.

Ramp Junction Traffic Volumes

As described in more detail previously in this traffic impact study, to ensure data used in this study are representative, the traffic analysis of the Mariposa Industrial Park project is based on both existing traffic volume data collected before the outbreak of Covid-19, and current new traffic volume count data collected since the outbreak.

Traffic volume count data were collected for the following freeway ramp junctions for the *Public Review Draft Environmental Impact Report for the Sanchez-Hoggan Annexation* (City of Stockton 2020). These data are applied in this traffic impact study.

208. SR 99 at Mariposa Road Southbound On-Ramp (Slip) Merge
209. SR 99 at Mariposa Road Northbound Off-Ramp Diverge
210. SR 99 at Arch-Airport Road Southbound Off-Ramp Diverge
211. SR 99 at Arch-Airport Road Northbound On-Ramp Merge
212. SR 99 at Arch-Airport Road Southbound On-Ramp Merge
213. SR 99 at Arch-Airport Road Northbound Off-Ramp Diverge

At the following study ramp junctions, pre-Covid-19 count data were collected for weekday periods between 7:00 a.m. and 9:00 a.m., and between 4:00 p.m. and 6:00 p.m. from StreetLight Data. These data represent Tuesday through Thursday volumes collected during six non-holiday months between March 2019 and February 2020. Traffic volume count data collected from StreetLight Data are presented in the technical appendix.

201. SR 99 Southbound Weave Area Between Fremont Street and Crosstown Freeway
202. SR 99 Northbound Weave Area Between Crosstown Freeway and Fremont Street
203. SR 99 Northbound at Crosstown Freeway (SR 4) Off-Ramp Diverge
204. SR 99 at Golden Gate Avenue Southbound Off-Ramp Diverge
205. SR 99 at Golden Gate Avenue Northbound On-Ramp Merge
206. SR 99 Southbound Weave Area Between Golden Gate Avenue and Mariposa Road
207. SR 99 Northbound Weave Area Between Mariposa Road and Golden Gate Avenue

To validate the ramp junction traffic volume data collected from StreetLight Data, peak hour traffic volume data for freeway facilities were collected from the Caltrans PeMS database (http://pems.dot.ca.gov/). Data for Tuesdays, Wednesdays and Thursdays between February 4, 2020 and Thursday February 13, 2020 were used to validate the traffic volume data collected from StreetLight Data.

Figure 10 and **Figure 11** present the existing a.m. peak hour and p.m. peak hour traffic volumes at the existing ramp junctions.

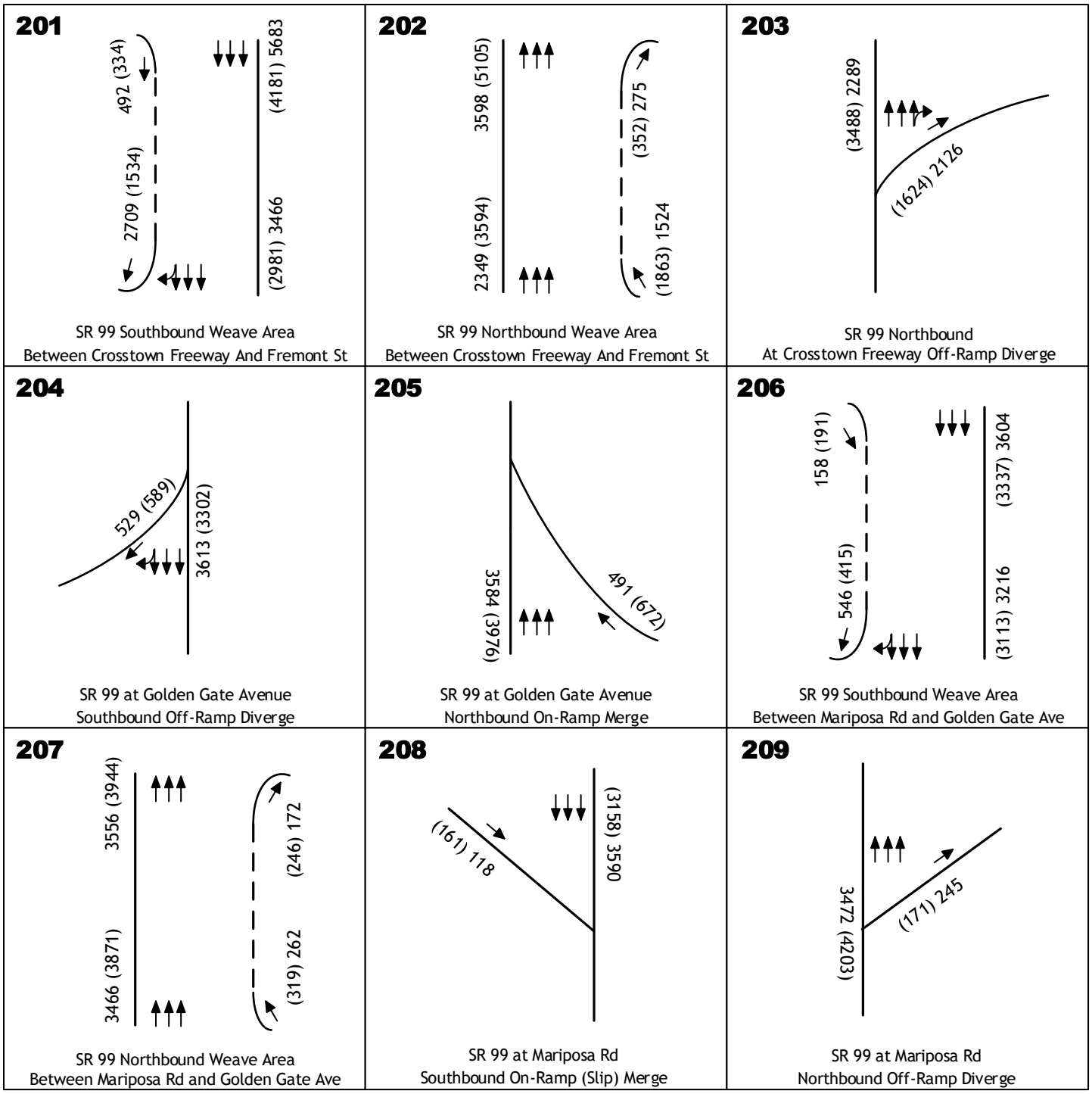
Ramp Junction Levels of Service

Table 8 presents a summary of existing a.m. peak hour and p.m. peak hour LOS at the 13 study ramp junctions. The worksheets presenting the calculation of LOS are included in the technical appendix.

12 of the 13 ramp junctions operate at acceptable LOS C or better during both the a.m. peak hour and p.m. peak hour. No improvements are needed at these 12 ramp junctions to achieve acceptable LOS.

201. SR 99 Southbound Weave Area Between Fremont Street and Crosstown Freeway

Under Existing Conditions, the SR 99 southbound weave area between the Fremont Street interchange and the Crosstown Freeway interchange operates at LOS E during the a.m. peak hour. This LOS is considered unacceptable. Existing land use adjacent to SR 99 and the location of the two interchanges results in improvements to the weave area being considered not feasible. As a result, no improvements are recommended to improve LOS at this location.



EXISTING FREEWAY RAMP MERGE, DIVERGE, AND WEAVE AREA TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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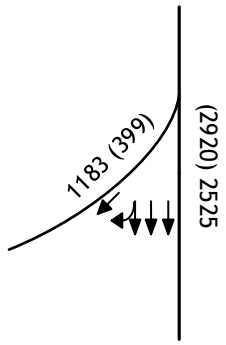
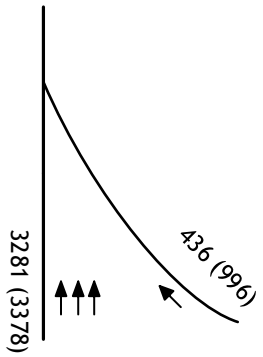
figure 10

210



SR 99 at Arch-Airport Rd
Southbound Off-Ramp Diverge

211



SR 99 at Arch-Airport Rd
Northbound On-Ramp Merge

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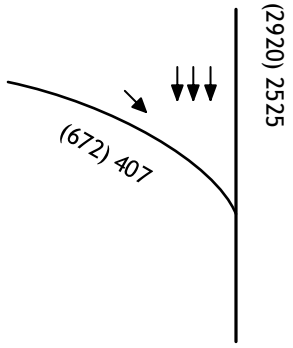
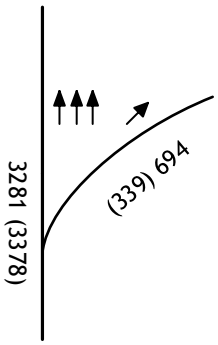


SR 99 Northbound
At Crosstown Freeway Off-Ramp Diverge

213



SR 99 at Arch-Airport Rd
Northbound Off-Ramp Diverge

Legend

XX AM Peak Hour Volume
(XX) PM Peak Hour Volume
Weave Area Auxillary Lane
Number of Arrows Indicate Number of Lanes

NORTH
N.T.S.

EXISTING FREEWAY RAMP MERGE, DIVERGE, AND WEAVE AREA TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 11

Table 8. State Route 99 Ramp Merge, Diverge, and Weave Level of Service - Existing Conditions

Ramp Junction	AM Peak Hour				PM Peak Hour			
	Freeway Volume	Ramp Volume	Density	LOS	Freeway Volume	Ramp Volume	Density	LOS
201 SB Weave Between	5,688	492	> Capacity	F	4,181	334	21.4	C
Fremont St & Crosstown Fwy	3,466	2,709			2,981	1,534		
202 NB Weave Between	3,598	275	18.1	B	5,105	352	26.3	C
Crosstown Fwy & Fremont St	2,349	1,524			3,594	1,863		
203 NB at Crosstown Fwy Off-Ramp	2,289	2,126	< 10	A	3,488	1,624	< 10	A
204 Golden Gate Ave SB Off-Ramp	3,613	529	< 10	A	3,302	589	< 10	A
205 Golden Gate Ave NB On-Ramp	3,584	491	19.3	B	3,976	672	22.9	C
206 SB Weave Between	3,604	158	17.5	B	3,337	191	16.4	B
Golden Gate Ave & Mariposa Rd	3,216	546			3,113	415		
207 NB Weave Between	3,556	172	17.3	B	3,944	246	19.7	B
Mariposa Rd & Golden Gate Ave	3,466	262			3,871	319		
208 Mariposa Rd SB On-Ramp (Slip)	3,590	118	16.9	B	3,158	161	14.9	B
209 Mariposa Rd NB Off-Ramp	3,472	245	22.2	C	4,203	171	25.8	C
210 Arch-Airport Rd SB Off-Ramp	2,525	1,183	< 10	A	2,920	399	< 10	A
211 Arch-Airport Rd NB On-Ramp	3,281	436	17.3	B	3,378	996	22.3	C
212 Arch-Airport Rd SB On-Ramp	2,525	407	14.0	B	2,920	672	18.3	B
213 Arch-Airport Rd NB Off-Ramp	3,281	694	22.1	C	3,378	339	21.8	C

Notes: "LOS" = Level of Service. "NB" = Northbound. "SB" = Southbound.
Density is expressed in passenger cars per mile per lane. "> Capacity" = volume-to-capacity ratio greater than 1.0.
For weave areas, north freeway and ramp volumes are listed first and south volumes are listed second.

EXISTING PLUS APPROVED PROJECTS
NO MARIPOSA INDUSTRIAL PARK PROJECT CONDITIONS

The EPAP No Mariposa Industrial Park Project condition is a near-term future background condition. This condition is also referred to in this traffic impact study as EPAP No Project conditions. Development of land uses and roadway improvements associated with previously-approved but as yet unconstructed projects are assumed in this condition. This scenario does not include development of the proposed Mariposa Industrial Park project. The EPAP No Project condition, therefore, serves as the baseline condition used to assess the significance of near-term project-related traffic effects.

TRAFFIC VOLUME FORECASTS

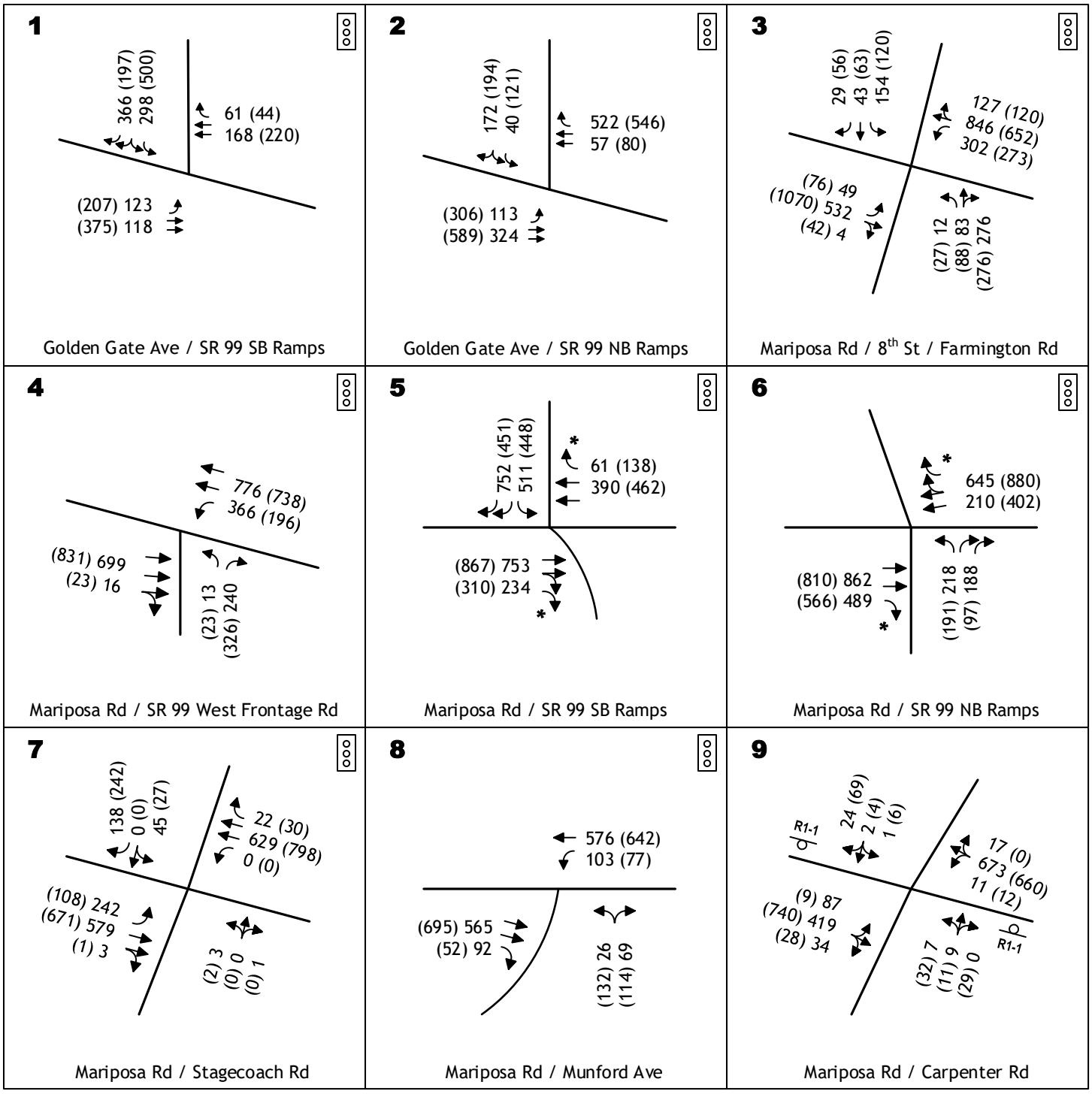
In consultation with City of Stockton staff (Moore pers. comm.), the City of Stockton Travel Demand Model (City of Stockton 2004) was used to develop forecasts of background increases in traffic volumes under near-term EPAP conditions. The increases in traffic volumes reflect development of near-term previously-approved projects in Stockton. The model was modified in the vicinity of the project site to add detail to the model and more accurately represent how land uses are provided access to the roadway network. Minor changes were also made to land uses in the model to accurately represent land uses.

Application of these methods results in the a.m. peak hour and p.m. peak hour intersection traffic volumes presented in **Figure 12** and **Figure 13,** the daily traffic volumes presented in **Table 9,** and the a.m. peak hour and p.m. peak hour ramp junction traffic volumes presented in **Figure 14** and **Figure 15**.

ROADWAY IMPROVEMENTS

The EPAP No Project condition assumes roadway improvements associated with previously-approved land use development projects, and approved roadway improvement projects. These near-term roadway improvements were identified in the *NorCal Logistics Center – Draft Environmental Impact Report (Project File No. P12-110)* (City of Stockton 2014), and the *Draft Environmental Impact Report - Mariposa Lakes Specific Plan - State Clearinghouse #2006022035* (City of Stockton 2007) and the *Public Review Draft Environmental Impact Report for the Sanchez-Hoggan Annexation* (City of Stockton 2020). The improvements include, for example, construction of a fourth leg at the intersection of Mariposa Road & Austin Road, which is associated with the Sanchez-Hoggan development project.

The resulting lane geometrics assumed for EPAP No Project conditions are shown in **Figure 12** and **Figure 13** and in **Table 9**.



EPAP NO PROJECT
INTERSECTION TRAFFIC VOLUMES
AND LANE CONFIGURATIONS

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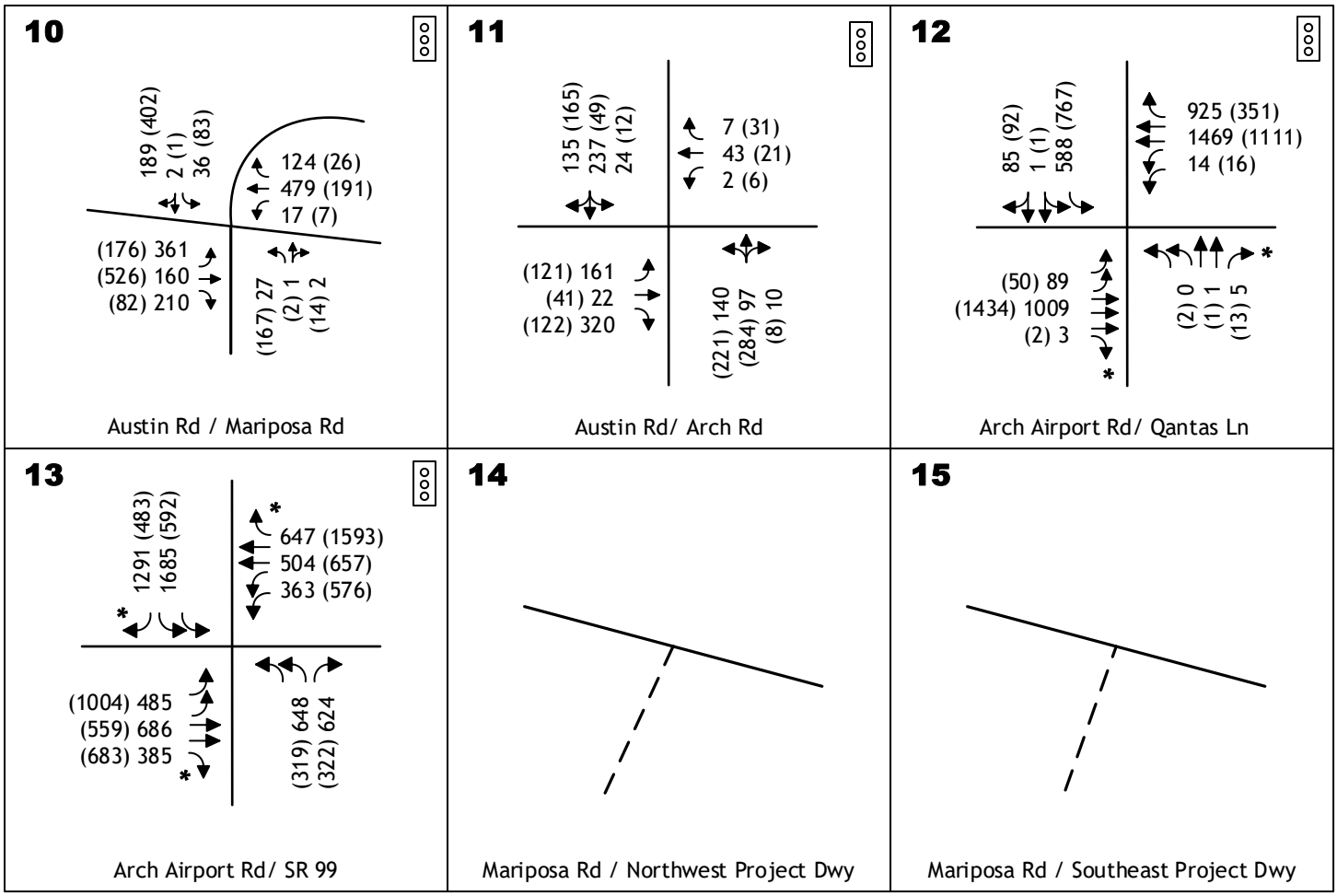

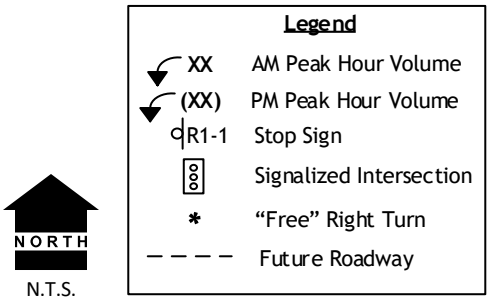

EPAP NO PROJECT
INTERSECTION TRAFFIC VOLUMES
AND LANE CONFIGURATIONS

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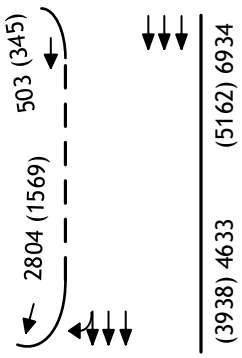
figure 13

Table 9. Roadway Segment Level of Service -
Existing Plus Approved Projects (EPAP) No Project Conditions

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
101. SR 99 - North of Crosstown Freeway (SR 4)	8	172,800	110,947	0.64	C
102. Crosstown Freeway - West of SR 99	8	172,800	117,127	0.68	C
103. SR 99 - Between Crosstown Fwy and Golden Gate Avenue	8	172,800	120,768	0.70	C
104. SR 99 - Between Golden Gate Ave and Mariposa Rd	8	172,800	119,541	0.69	C
105. Mariposa Road - Between SR 99 and 8th St./Farmington Rd	2	17,300	25,552	1.48	F
106. Mariposa Road - Between Carpenter Road and SR 99	4	38,200	16,570	0.43	A
107. Mariposa Road - Between the Project Site and Carpenter Road	4	38,200	15,285	0.40	A
108. Mariposa Road - Southeast of the Project Site	4	38,200	15,285	0.40	A
109. Mariposa Road - East of Austin Road	4	38,200	11,039	0.29	A
110. SR 99 - Between Mariposa Road and Arch-Airport Road	6	129,600	95,887	0.74	D
111. Arch-Airport Road - Between Qantas Lane and SR 99	6	59,300	50,887	0.86	E
112. SR 99 - South of Arch-Airport Road	6	129,600	85,077	0.66	C

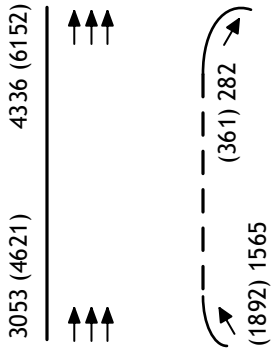
Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

201



SR 99 Southbound Weave Area
Between Crosstown Freeway And Fremont St

202



SR 99 Northbound Weave Area
Between Crosstown Freeway And Fremont St

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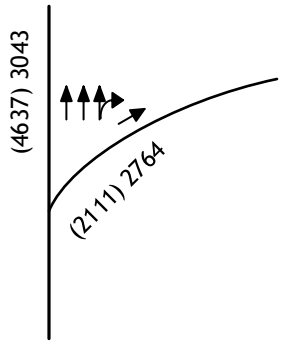
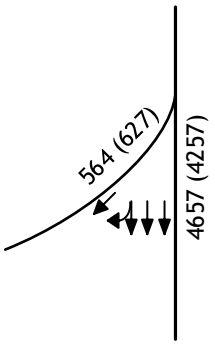


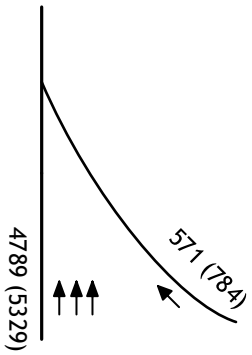
SR 99 Northbound
At Crosstown Freeway Off-Ramp Diverge

204



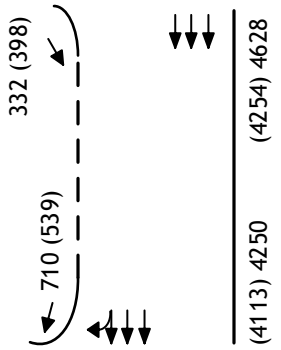
SR 99 at Golden Gate Avenue
Southbound Off-Ramp Diverge

205



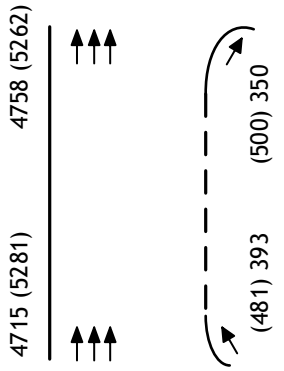
SR 99 at Golden Gate Avenue
Northbound On-Ramp Merge

206



SR 99 Southbound Weave Area
Between Mariposa Rd and Golden Gate Ave

207



SR 99 Northbound Weave Area
Between Mariposa Rd and Golden Gate Ave

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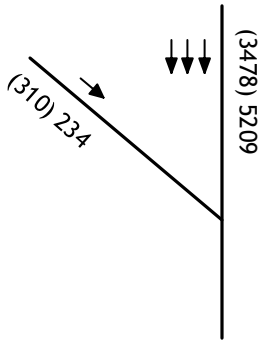
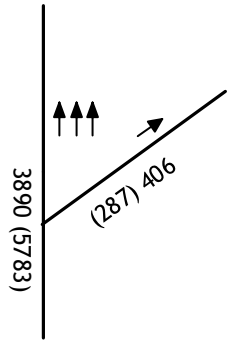


SR 99 at Mariposa Rd
Southbound On-Ramp (Slip) Merge

209



SR 99 at Mariposa Rd
Northbound Off-Ramp Diverge

Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- Weave Area Auxillary Lane
- Number of Arrows Indicate Number of Lanes

NORTH

N.T.S.

EPAP NO PROJECT FREEWAY RAMP MERGE, DIVERGE, AND WEAVE AREA TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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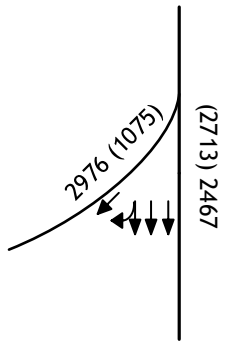
figure 14

210



SR 99 at Arch-Airport Rd
Southbound Off-Ramp Diverge

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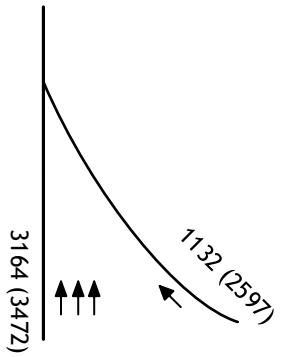

SR 99 at Arch-Airport Rd
Northbound On-Ramp Merge

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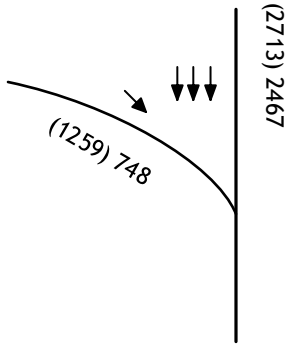

SR 99 Northbound
At Crosstown Freeway Off-Ramp Diverge

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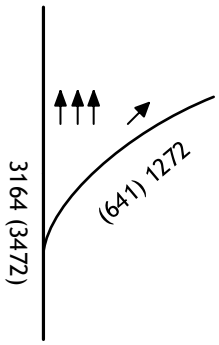

SR 99 at Arch-Airport Rd
Northbound Off-Ramp Diverge

Legend

XX AM Peak Hour Volume
(XX) PM Peak Hour Volume
Weave Area Auxillary Lane
Number of Arrows Indicate Number of Lanes

NORTH
N.T.S.

EPAP NO PROJECT FREEWAY RAMP MERGE, DIVERGE, AND WEAVE AREA TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 15

INTERSECTION LEVELS OF SERVICE

Table 10 presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under EPAP No Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Traffic volumes under EPAP No Project conditions would be generally higher than under Existing Conditions and, as a result, vehicle delay at study intersections under EPAP No Project conditions would be higher than under Existing Conditions.

Under EPAP No Project conditions, LOS at 10 of the 13 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 10 intersections to achieve acceptable LOS. The following describes the three study intersections that would operate at unacceptable LOS under EPAP No Project conditions.

3. Mariposa Road & 8th Street/Farmington Road

Under EPAP No Project conditions, the intersection of Mariposa Road & 8th Street/Farmington Road would operate at LOS F with 94.9 seconds of delay during the a.m. peak hour, and LOS F with 130.0 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable. The following improvement is recommended:

- Split the northeastbound combined through/right-turn lane into an exclusive northeastbound through lane and a "free" northeastbound-to-southeastbound right-turn lane.

The above improvement would be consistent with the recommended improvement (described below) for Roadway Segment 105, Mariposa Road Between SR 99 and 8th Street/Farmington Road, to widen the portions of this roadway segment which are one lane in each direction to two lanes in each direction. The added southeastbound departure lane on Mariposa Road would serve vehicles departing the "free" northeastbound-to-southeastbound right-turn lane at this intersection.

As shown in **Table 11**, implementation of the above recommended improvement would improve traffic operations to LOS D with 38.2 seconds of delay in the a.m. peak hour and LOS E with 64.3 seconds of delay in the p.m. peak hour. As described in the *General Plan Policy Consistency Criteria* section of this traffic impact study, LOS D and E at this intersection are considered acceptable.

Table 10. Intersection Level of Service -
Existing Plus Approved Projects (EPAP) No Project Conditions

	Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	Golden Gate Avenue & SR 99 Southbound Ramps	Signal		B	14.1	B	15.9
2	Golden Gate Avenue & SR 99 Northbound Ramps	Signal		B	15.6	C	23.2
3	Mariposa Road & 8th Street/Farmington Road	Signal		F	94.9	F	130.0
4	Mariposa Road & SR 99 West Frontage Road	Signal		B	13.7	B	14.2
5	Mariposa Road & SR 99 Southbound Ramps	Signal		B	12.7	B	12.1
6	Mariposa Road & SR 99 Northbound Ramps	Signal		B	10.1	A	9.9
7	Mariposa Road & Stagecoach Road	Signal		B	19.8	B	19.3
8	Mariposa Road & Munford Avenue	Signal		B	12.7	B	17.8
9	Mariposa Road & Carpenter Road	Unsig	Yes	A	1.8	A	6.3
10	Mariposa Road & Austin Road	Signal		C	32.7	D	38.7
11	Arch Road & Austin Road	Signal		D	43.1	D	38.4
12	Arch-Airport Road & Qantas Lane	Signal		E	60.0	C	27.8
13	Arch Road & SR 99	Signal		F	195.4	E	69.5
14	Mariposa Road & Northwest Project Driveway	- -		- -	- -	- -	- -
15	Mariposa Road & Southeast Project Driveway	- -		- -	- -	- -	- -

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.
Dashes ("- -") indicate intersection not present under this scenario.

Table 11. Intersection Level of Service -
Existing Plus Approved Projects (EPAP) No Project Conditions
With Recommended Improvements

	Study Intersections	Inters. Control	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
3	Mariposa Road & 8th Street/Farmington Road	Signal	D	38.2	E	64.3
12	Arch-Airport Road & Qantas Lane	Signal	C	31.6	C	26.8

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections.

12. Arch-Airport Road & Qantas Lane

Under EPAP No Project conditions, the intersection of Arch-Airport Road & Qantas Lane would operate at LOS E with 60.0 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 E is considered unacceptable. The following improvement is recommended:

- Change the signal timing to include overlap phasing on the northwestbound-to-northeastbound right-turn movement.

As shown in **Table 11**, implementation of the above recommended improvement would improve traffic operations to LOS C with 31.6 seconds of delay in the a.m. peak hour and LOS C with 26.8 seconds of delay in the p.m. peak hour. LOS C is considered acceptable.

13. Arch Road & SR 99

Under EPAP No Project conditions, the intersection of Arch Road & SR 99 would operate at LOS F with 195.4 seconds of delay during the a.m. peak hour, and LOS E with 69.5 seconds of delay during the p.m. peak hour. LOS E and F are considered unacceptable.

The unacceptable LOS at this intersection under EPAP No Project conditions would be due to increases in traffic volume along Arch Road, and on the SR 99 interchange ramps. Improvement of LOS at this intersection to acceptable LOS would require re-structuring of the interchange facility.

Reconstruction of the Arch–Airport Road interchange on SR 99, including additional eastbound and westbound through lanes would be required to achieve acceptable LOS. The EPAP No Project scenario is considered a near-term condition, and reconstruction of the interchange in the near-term future is not considered feasible. Therefore, improvements at this intersection are not recommended.

ROADWAY SEGMENT LEVELS OF SERVICE

Table 9 presents a summary of LOS on the 12 study roadway segments under EPAP No Project conditions. 10 of the 12 roadway segments would operate at acceptable LOS D or better. No improvements are needed on these 10 roadway segments to achieve acceptable LOS. The following describes the two study roadway segments that would operate at unacceptable LOS under EPAP No Project conditions.

105. Mariposa Road Between SR 99 and 8th Street/Farmington Road

Under EPAP No Project conditions, this roadway segment would operate at LOS F. This LOS is considered unacceptable. The following improvement is recommended:

- Widen the portions of this roadway segment which are one lane in each direction to two lanes in each direction.

A summary of LOS with recommended improvements is presented in **Table 12**. With this recommended improvement, this roadway segment would operate at LOS C. This LOS is considered acceptable.

This improvement is also recommended under Existing Conditions.

111. Arch-Airport Road Between Qantas Lane and SR 99

Under EPAP No Project conditions, this roadway segment would operate at LOS E. This LOS is considered unacceptable. Widening of this roadway segment to add through lanes to improve LOS would require reconstruction of the Arch-Airport Road interchange on SR 99. The EPAP No Project scenario is considered a near-term condition, and reconstruction of the interchange in the near-term future is not considered feasible. Therefore, improvement to this roadway segment is not recommended.

Table 12. Roadway Segment Level of Service -
Existing Plus Approved Projects (EPAP) No Project Conditions
With Recommended Improvements

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
105. Mariposa Road - Between SR 99 and 8th St./Farmington Rd	4	38,200	25,552	0.67	C

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

RAMP JUNCTION LEVELS OF SERVICE

Figure 14 and **Figure 15** presents a.m. peak hour and p.m. peak hour traffic volumes at the study ramp junctions under EPAP No Project conditions. **Table 13** presents the a.m. peak hour and p.m. peak hour LOS at each study ramp junction under EPAP No Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Traffic volumes under EPAP No Project conditions would be generally higher than under Existing Conditions and, as a result, vehicle density at study ramp junctions under EPAP No Project conditions would be higher than under Existing Conditions.

Under EPAP No Project conditions, LOS at 10 of the 13 study ramp junctions 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 10 ramp junctions to achieve acceptable LOS.

The following three ramp junction areas would operate at unacceptable LOS under EPAP No Project conditions:

- 201. SR 99 Southbound Weave Area Between Fremont Street and Crosstown Freeway would operate at LOS F during the a.m. peak hour,
- 205. SR 99 at Golden Gate Avenue Northbound On-Ramp Merge would operate at LOS F during the p.m. peak hour, and
- 211. SR 99 at Arch-Airport Road Northbound On-Ramp Merge would operate at LOS E in the p.m. peak hour.

Table 13. State Route 99 Ramp Merge, Diverge, and Weave Level of Service - Existing Plus Approved Projects (EPAP) No Project Conditions

	Ramp Junction	AM Peak Hour Freeway Volume	AM Peak Hour Ramp Volume	AM Peak Hour Density	AM Peak Hour LOS	PM Peak Hour Freeway Volume	PM Peak Hour Ramp Volume	PM Peak Hour Density	PM Peak Hour LOS
201	SB Weave Between	6,934	503	> Capacity	F	5,162	345	26.6	C
	Fremont St & Crosstown Fwy	4,633	2,804			3,938	1,569		
202	NB Weave Between	4,336	282	21.9	C	6,152	361	32.1	D
	Crosstown Fwy & Fremont St	3,053	1,565			4,621	1,892		
203	NB at Crosstown Fwy Off-Ramp	3,043	2,764	< 10	A	4,637	2,111	< 10	A
204	Golden Gate Ave SB Off-Ramp	4,657	564	< 10	A	4,257	627	< 10	A
205	Golden Gate Ave NB On-Ramp	4,789	571	26.5	C	5,329	784	31.6	F
206	SB Weave Between	4,628	332	23.7	C	4,254	398	22.1	C
	Golden Gate Ave & Mariposa Rd	4,250	710			4,113	539		
207	NB Weave Between	4,758	350	24.5	C	5,262	500	28.0	D
	Mariposa Rd & Golden Gate Ave	4,715	393			5,281	481		
208	Mariposa Rd SB On-Ramp (Slip)	5,209	234	26.5	C	3,478	310	17.8	B
209	Mariposa Rd NB Off-Ramp	3,890	406	24.7	C	5,783	287	33.2	D
210	Arch-Airport Rd SB Off-Ramp	2,467	2,976	< 10	A	2,713	1,075	< 10	A
211	Arch-Airport Rd NB On-Ramp	3,164	1,132	22.3	C	3,472	2,597	35.9	E
212	Arch-Airport Rd SB On-Ramp	2,467	748	16.5	B	2,713	1,259	22.0	C
213	Arch-Airport Rd NB Off-Ramp	3,164	1,272	22.9	C	3,472	641	23.0	C

Notes: "LOS" = Level of Service. "NB" = Northbound. "SB" = Southbound.
Density is expressed in passenger cars per mile per lane. "> Capacity" = volume-to-capacity ratio greater than 1.0.
For weave areas, north freeway and ramp volumes are listed first and south volumes are listed second.

201. SR 99 Southbound Weave Area Between Fremont Street and Crosstown Freeway

LOS F at the SR 99 Southbound Weave Area Between Fremont Street and Crosstown Freeway is considered unacceptable. Reconstruction of the Fremont Street and Crosstown Freeway interchanges on SR 99, including the addition of lanes on mainline SR 99, would be required to achieve acceptable LOS at this weave area. The EPAP No Project scenario is considered a near-term condition, and reconstruction of this weave area in the near-term future is not considered feasible. In addition, existing land use adjacent to SR 99 and the location of the two interchanges results in improvements to the weave area being considered not feasible. Therefore, improvements to this weave area are not recommended.

205. SR 99 at Golden Gate Avenue Northbound On-Ramp Merge

LOS F at the Golden Gate Avenue Northbound On-Ramp Merge is considered unacceptable. Reconstruction of the Golden Gate Avenue interchange on SR 99, including the addition of lanes on mainline SR 99, would be required to achieve acceptable LOS at this ramp junction. The EPAP No Project scenario is considered a near-term condition, and reconstruction of the interchange in the near-term future is not considered feasible. Therefore, improvements to this ramp junction area are not recommended.

211. SR 99 at Arch-Airport Road Northbound On-Ramp Merge

LOS E at the Arch-Airport Road Northbound On-Ramp Merge is considered unacceptable. Reconstruction of the Arch–Airport Road interchange on SR 99, including the addition of lanes on mainline SR 99, would be required to achieve acceptable LOS at this ramp junction. The EPAP No Project scenario is considered a near-term condition, and reconstruction of the interchange in the near-term future is not considered feasible. Therefore, improvements to this ramp junction area are not recommended.

EXISTING PLUS APPROVED PROJECTS
PLUS MARIPOSA INDUSTRIAL PARK PROJECT IMPACTS

The EPAP Plus Mariposa Industrial Park Project scenario is a near-term future condition with the proposed project. This condition is also referred to in this traffic impact study as EPAP Plus Project conditions.

The development of the Mariposa Industrial Park project would result in vehicle traffic to and from the project site. The amount of additional traffic on a particular section of the street network depends on three factors:

- Trip Generation, the number of new trips generated by the project,
- Trip Distribution, the direction of travel for the new traffic, and
- Trip Assignment, the specific routes used by the new traffic.

Each of these three factors is described below.

TRIP GENERATION

Development of the Mariposa Industrial Park project would generate new vehicle trips and potentially affect traffic operations on study facilities. The number of vehicle trips expected to be generated by the proposed project has been estimated using typical trip generation rates that have been developed based on the nature and size of project land uses. Trip generation rates developed for the City of Stockton (McDowell pers. comm.) were applied for this traffic impact study. These rates have been applied by the City for other projects in the southeast Stockton area (City of Stockton 2014, and Tellez pers. comm.) with land uses similar to the Mariposa Industrial Park project.

The trip generation rates used in this traffic impact study are presented in **Table 14**. The trip generation rates are applied to the amount of project-related land uses. The resulting trip generation estimates are presented in **Table 15**. As shown in **Table 15**, the Mariposa Industrial Park project would generate an estimated 12,370 vehicle trips per day, with 651 trips during the a.m. peak hour and 796 trips during the p.m. peak hour.

TRIP DISTRIBUTION

Project-related trips were geographically distributed over the study area roadway network. The geographical distribution of trips is based on the relative attractiveness or utility of possible destinations. Trip distribution percentages applied in this traffic impact study are presented in **Table 16**. The data presented in **Table 16** are graphically shown in **Figure 16** and **Figure 17**.

Table 14. Trip Generation Rates

Land Use	Units	Trips per Unit						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Light Industrial	Thousand Square Feet	3.42	0.11	0.07	0.18	0.08	0.14	0.22

Source: McDowell pers. comm. and City of Stockton 2014.

Table 15. Trip Generation Estimate

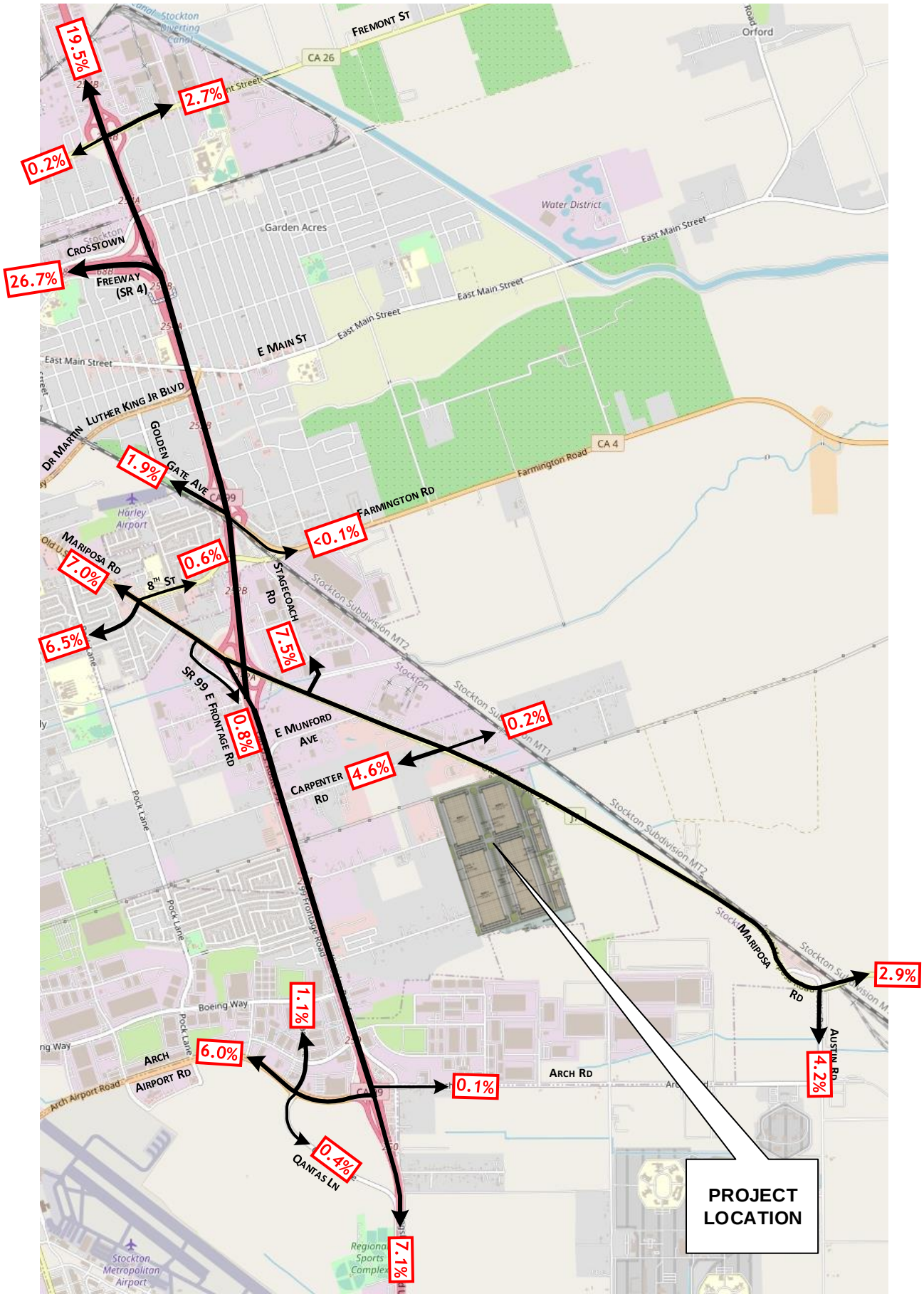
Land Use	Quantity	Trips Generated						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Light Industrial	3,616.87 Thousand Square Feet	12,370	398	253	651	289	506	796

Source: McDowell pers. comm. and City of Stockton 2014.
Total may not equal the sum of components due to rounding.

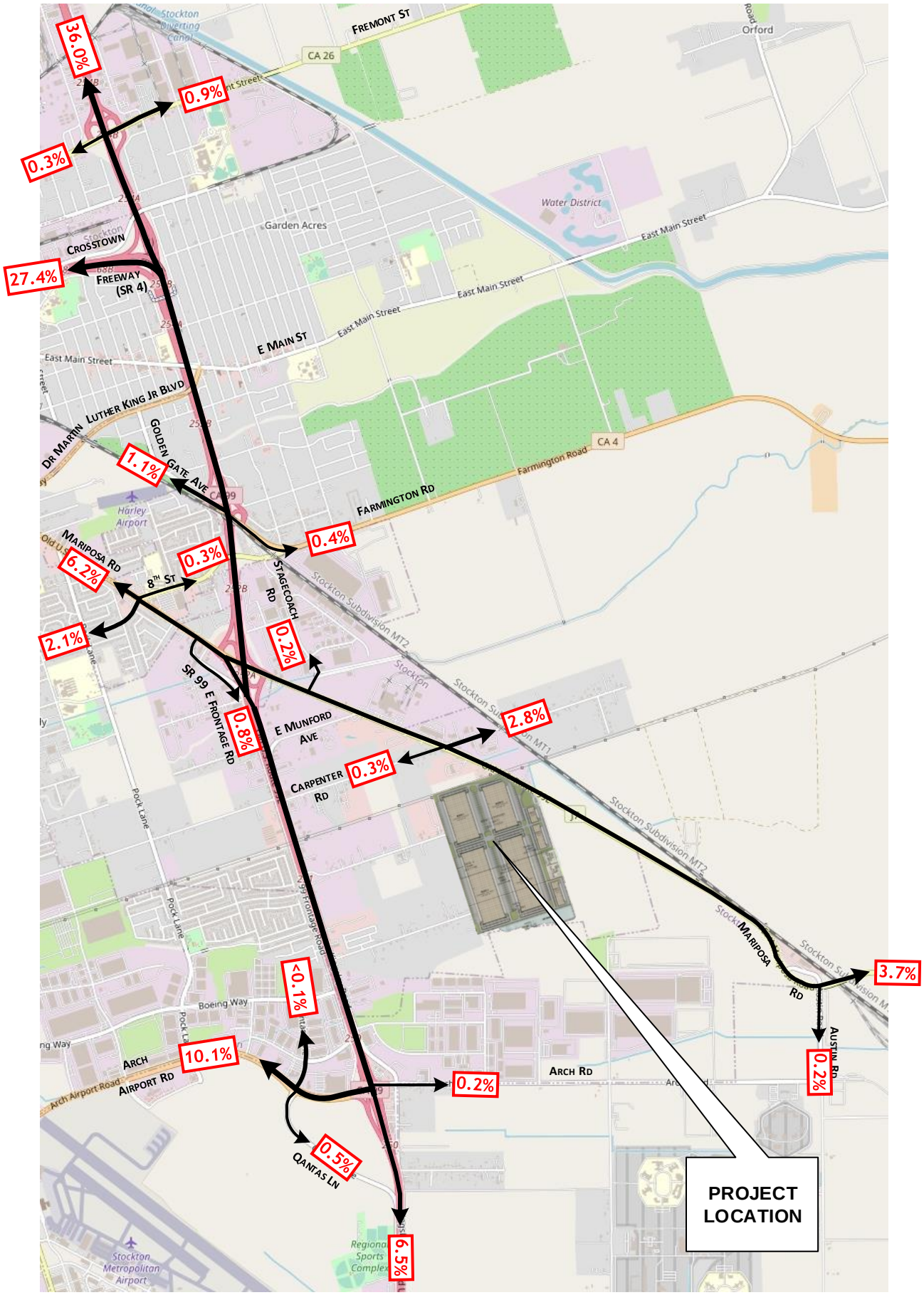
Table 16. Mariposa Industrial Park Project Trip Distribution Percentages

Direction of Travel	Existing Plus Approved Projects Background	Cumulative Background
SR 99 North of Fremont Street	19.5	36.0
Fremont Street West of SR 99	0.2	0.3
Fremont Street East of SR 99	2.7	0.9
Crosstown Freeway West of SR 99	26.7	27.4
Golden Gate Avenue West of SR 99	1.9	1.1
Golden Gate Avenue East of SR 99	- -	0.4
8th Street West of Mariposa Road	6.5	2.1
Mariposa Rd Northwest of 8th St/Farmington Rd	7.0	6.2
Farmington Road East of Mariposa Road	0.6	0.3
SR 99 West Frontage Road South of Mariposa Road	0.8	0.8
Stagecoach Road North of Mariposa Road	7.5	0.2
Carpenter Road West of Mariposa Road	4.6	0.3
Carpenter Road East of Mariposa Road	0.2	2.8
Mariposa Road Southeast of Austin Road	2.9	3.7
Austin Road South of Mariposa Road	4.2	0.2
Arch Road West of Qantas Lane	6.0	10.1
Qantas Lane North of Arch Road	1.1	- -
Qantas Lane South of Arch Road	0.4	0.5
Arch Road East of SR 99	0.1	0.2
SR 99 South of Arch Road	7.1	6.5
TOTAL	100.0	100.0

Source: City of Stockton General Plan Travel Demand Model Select Link Analysis.
Note: Dashes ("- -") indicate value is less than one-tenth percent.



EXISTING PLUS APPROVED PROJECTS
BACKGROUND TRIP DISTRIBUTION PERCENTAGES



CUMULATIVE BACKGROUND
TRIP DISTRIBUTION PERCENTAGES

The City of Stockton travel demand model (City of Stockton 2004 and City of Stockton 2018b) was used to estimate trip distribution percentages. The travel demand model is considered to be a valid source for the trip distribution percentages because it directly addresses:

- the location of destinations of project-related trips,
- the magnitude of land uses that would attract project-related trips, and
- the quality of access to the destinations via the roadway network.

This traffic impact study includes analysis of scenarios based on two different background development conditions:

- Existing Plus Approved Projects (EPAP), and
- 2040 Cumulative Conditions.

The travel demand model for each of these two scenarios was used to estimate trip distribution percentages. Background (non-project) land uses are different in each of the two travel demand models. The different land uses result in different geographic distributions of travel. As a result, the trip distribution percentages are different for each of the two background development conditions. **Table 16**, **Figure 16,** and **Figure 17** present the trip distribution percentages for each of the two background development scenarios.

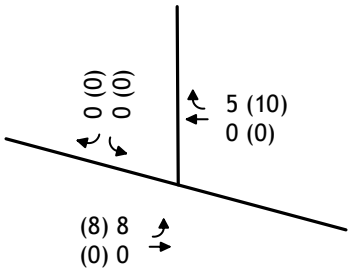
A "select link" analysis was conducted using each of the two travel demand models to determine the geographic distribution of project-related travel. The select link analysis identifies vehicle trips associated with the proposed project site, and identifies the direction of travel to and from the project site.

Raw, pre-adjustment, traffic model results used in the development of trip distribution percentages are presented in the technical appendix.

TRIP ASSIGNMENT

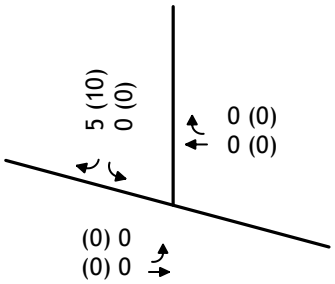
Traffic that would be generated by the proposed project was geographically distributed over the study area roadway network using the trip distribution percentages shown in **Table 16**, **Figure 16,** and **Figure 17**. **Figure 18** and **Figure 19** displays the project-related-only traffic volumes for each study intersection in the a.m. peak hour and p.m. peak hour. **Figure 20** and **Figure 21** displays the resulting EPAP Plus Project traffic volumes anticipated for each study intersection in the peak hours. The a.m. peak hour and p.m. peak hour freeway ramp junction traffic volumes are presented in **Figure 22** and **Figure 23**.

1



Golden Gate Ave / SR 99 SB Ramps

2



Golden Gate Ave / SR 99 NB Ramps

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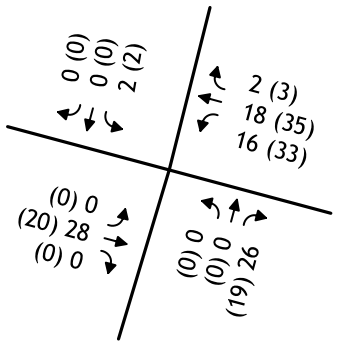

Mariposa Rd / 8th St / Farmington Rd

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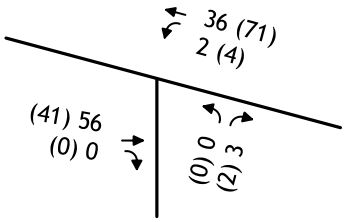

Mariposa Rd / SR 99 West Frontage Rd

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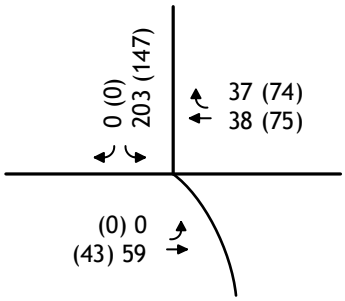

Mariposa Rd / SR 99 SB Ramps

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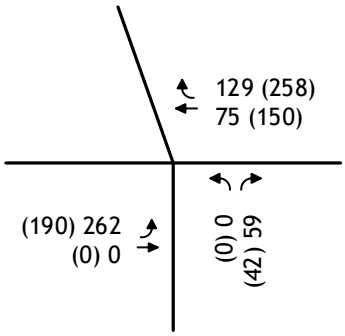

Mariposa Rd / SR 99 NB Ramps

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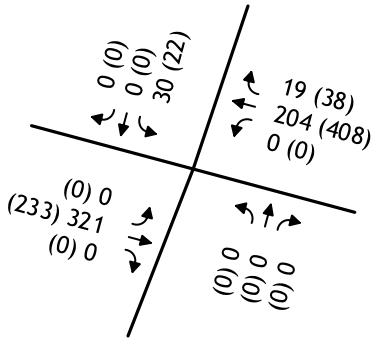
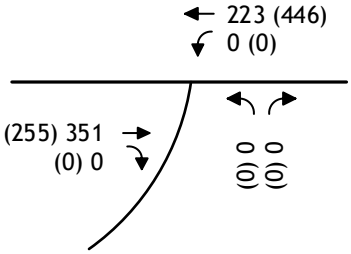


Mariposa Rd / Stagecoach Rd

8



Mariposa Rd / Munford Ave

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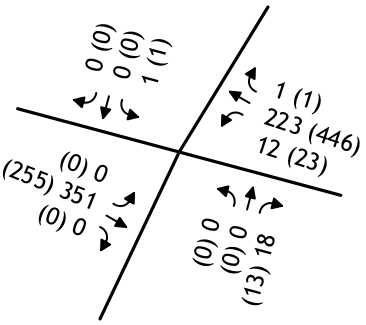

Mariposa Rd / Carpenter Rd

Legend

XX AM Peak Hour Volume

(XX) PM Peak Hour Volume

NORTH

N.T.S.

PROJECTED-RELATED INTERSECTION TRAFFIC VOLUMES

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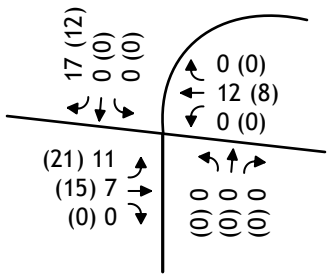
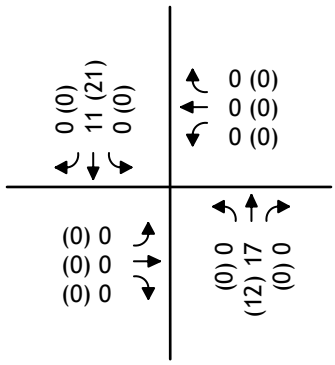
figure 18

10



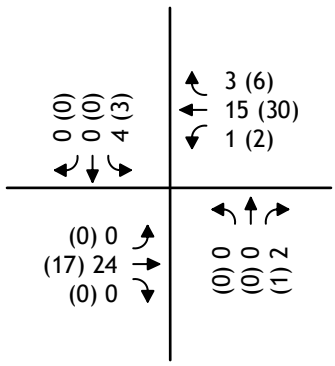
Austin Rd / Mariposa Rd

11



Austin Rd/ Arch Rd

12



Arch Airport Rd/ Qantas Ln

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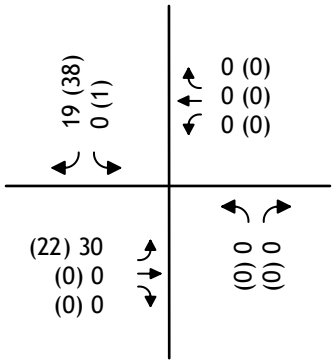

Arch Airport Rd/ SR 99

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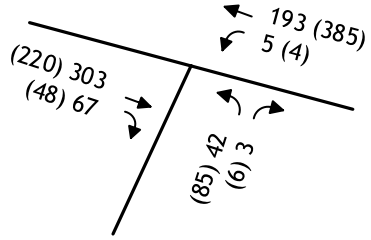
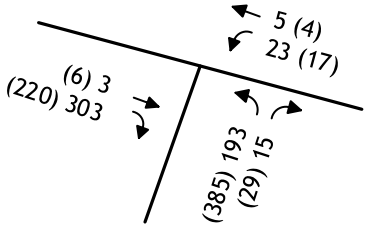


Mariposa Rd / Northwest Project Dwy

15



Mariposa Rd / Southeast Project Dwy

N.T.S.

Legend

XX AM Peak Hour Volume

(XX) PM Peak Hour Volume

PROJECTED-RELATED INTERSECTION TRAFFIC VOLUMES

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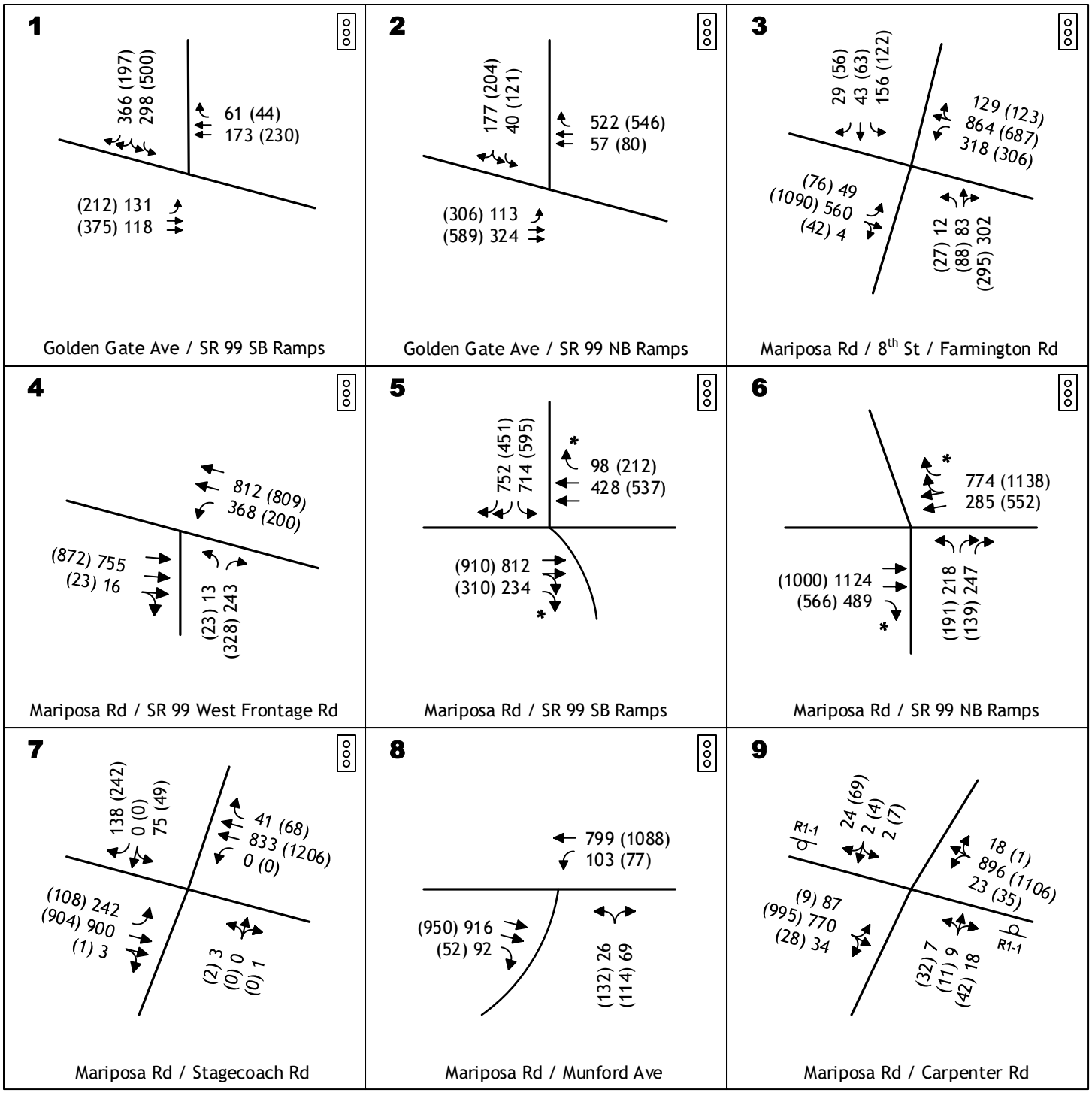
figure 19



Legend

XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume
R1-1	Stop Sign
	Signalized Intersection
CWLTL	Center Two-Way Left Turn Lane
*	"Free" Right Turn

NORTH

N.T.S.

EPAP PLUS PROJECT
INTERSECTION TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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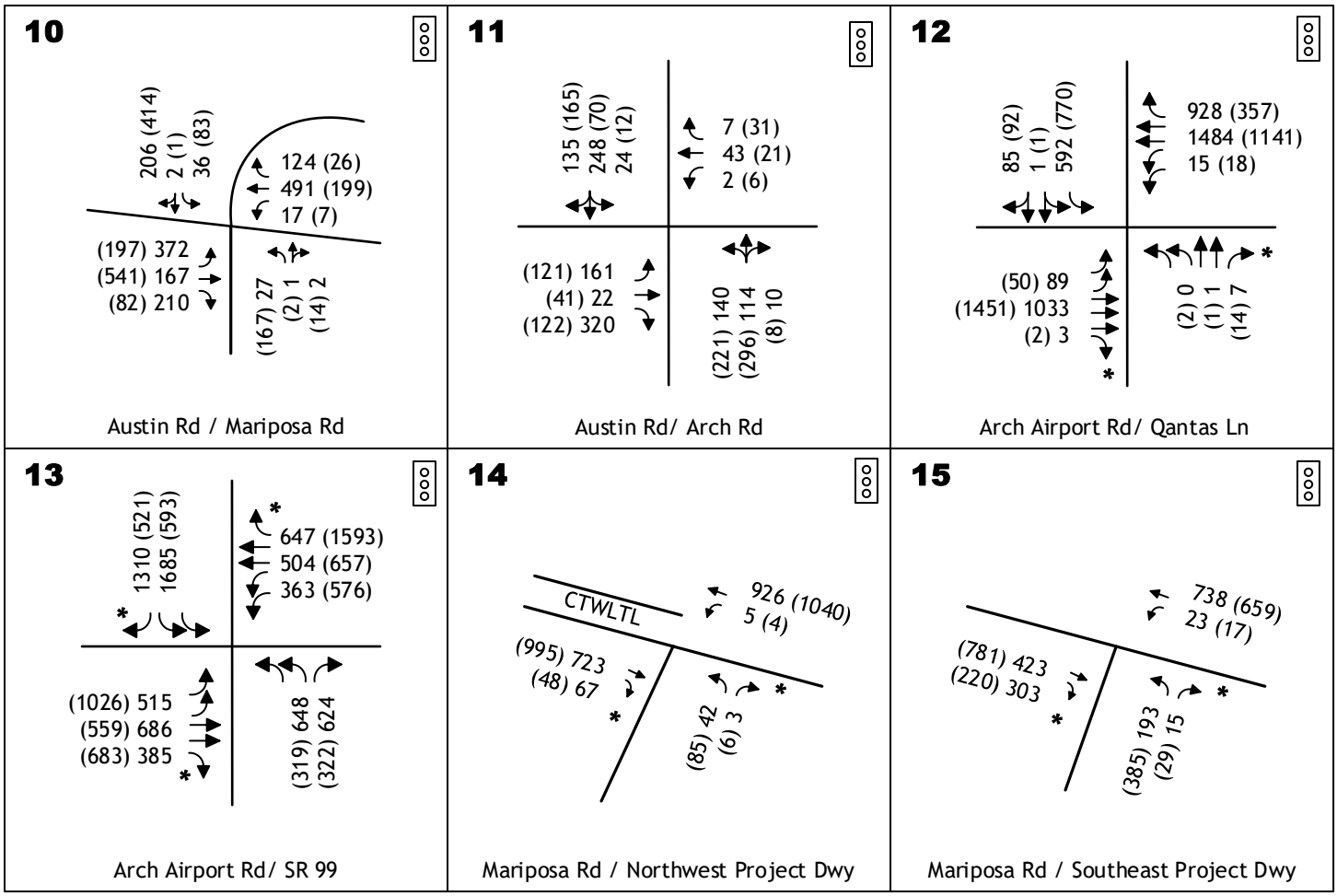

Legend

XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume
R1-1	Stop Sign
	Signalized Intersection
CWLTL	Center Two-Way Left Turn Lane
*	"Free" Right Turn

NORTH

N.T.S.

EPAP PLUS PROJECT
INTERSECTION TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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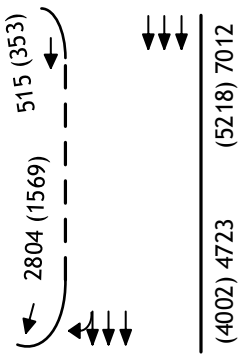
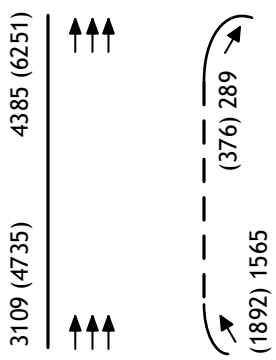
figure 21

201



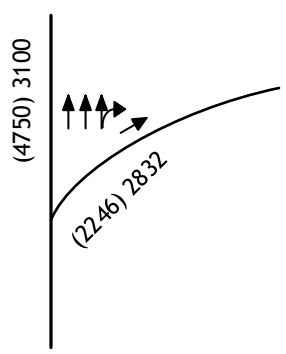
SR 99 Southbound Weave Area
Between Crosstown Freeway And Fremont St

202



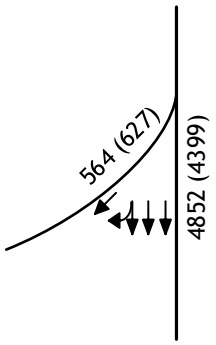
SR 99 Northbound Weave Area
Between Crosstown Freeway And Fremont St

203



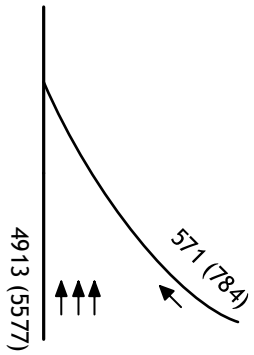
SR 99 Northbound
At Crosstown Freeway Off-Ramp Diverge

204



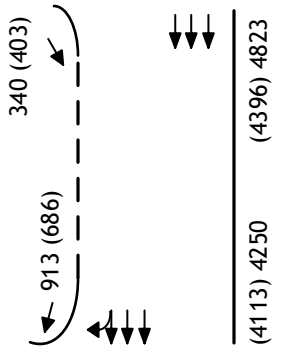
SR 99 at Golden Gate Avenue
Southbound Off-Ramp Diverge

205



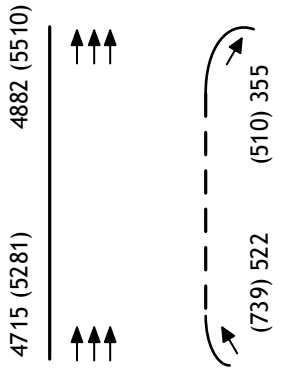
SR 99 at Golden Gate Avenue
Northbound On-Ramp Merge

206



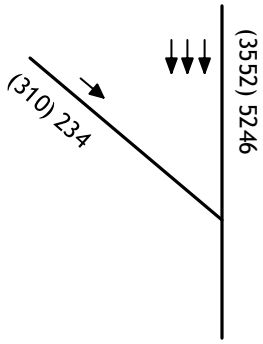
SR 99 Southbound Weave Area
Between Mariposa Rd and Golden Gate Ave

207



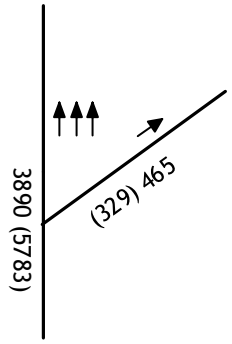
SR 99 Northbound Weave Area
Between Mariposa Rd and Golden Gate Ave

208



SR 99 at Mariposa Rd
Southbound On-Ramp (Slip) Merge

209



SR 99 at Mariposa Rd
Northbound Off-Ramp Diverge

Legend

XX AM Peak Hour Volume

(XX) PM Peak Hour Volume

Weave Area Auxillary Lane

Number of Arrows Indicate Number of Lanes

NORTH

N.T.S.

EPAP PLUS PROJECT FREEWAY RAMP MERGE, DIVERGE, AND WEAVE AREA TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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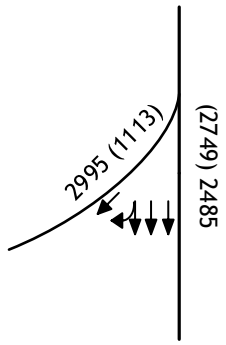
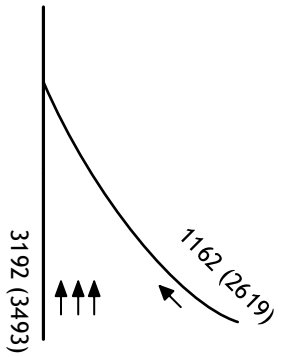
figure 22

210



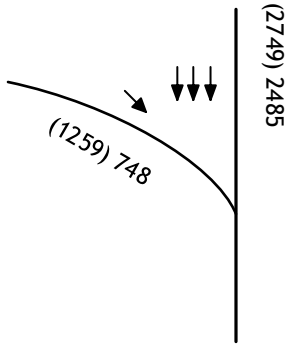
SR 99 at Arch-Airport Rd
Southbound Off-Ramp Diverge

211



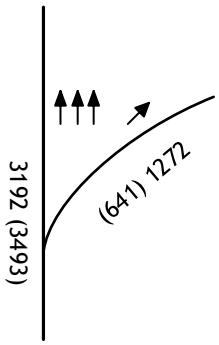
SR 99 at Arch-Airport Rd
Northbound On-Ramp Merge

212



SR 99 Northbound
At Crosstown Freeway Off-Ramp Diverge

213



SR 99 at Arch-Airport Rd
Northbound Off-Ramp Diverge

Legend

XX AM Peak Hour Volume
(XX) PM Peak Hour Volume
Weave Area Auxillary Lane
Number of Arrows Indicate Number of Lanes

NORTH
N.T.S.

EPAP PLUS PROJECT FREEWAY RAMP MERGE, DIVERGE, AND WEAVE AREA TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

0780-18 RA 4/12/2021

figure 23

ROADWAY IMPROVEMENTS

Implementation of the Mariposa Industrial Park project would result in roadway improvements needed to provide access to the project site. Improvements to project site access points are shown in the proposed project site plan presented in **Figure 2**. These improvements have been previously described in more detail in the *Project Description* section of this traffic impact study.

Figure 20 and **Figure 21** displays the resulting EPAP Plus Project intersection lane geometrics for each study intersection. The resulting number of travel lanes assumed for study roadway segments and daily traffic volumes are shown in **Table 17.**

INTERSECTION LEVELS OF SERVICE

Table 18 presents the a.m. peak hour and p.m. peak hour LOS at each study intersection under EPAP Plus Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Under EPAP Plus Project conditions, LOS at 11 of the 15 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 would be needed at these 11 intersections to achieve acceptable LOS. The following describes the four study intersections that would operate at unacceptable LOS under EPAP Plus Project conditions.

3. Mariposa Road & 8th Street/Farmington Road

Under EPAP Plus Project conditions, this intersection would operate at LOS F with 109.3 seconds of delay during the a.m. peak hour, and LOS F with 145.8 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable. Compared to EPAP No Project 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 *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered significant. The following improvement is recommended to improve operating conditions to acceptable LOS and reduce the project-related inconsistency with General Plan policies to a less than significant level:

- Split the northeastbound combined through/right-turn lane into an exclusive northeastbound through lane and a "free" northeastbound-to-southeastbound right-turn lane.

The above improvement would be consistent with the recommended improvement (described below) for Roadway Segment 105, Mariposa Road Between SR 99 and 8th Street/Farmington Road, to widen the portions of this roadway segment which are one lane in each direction to two lanes in each direction. The added southeastbound departure lane on Mariposa Road would serve vehicles departing the "free" northeastbound-to-southeastbound right-turn lane at this intersection.

Table 17. Roadway Segment Level of Service - Existing Plus Approved Projects (EPAP) Plus Project Conditions

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
101. SR 99 - North of Crosstown Freeway (SR 4)	8	172,800	113,717	0.66	C
102. Crosstown Freeway - West of SR 99	8	172,800	120,429	0.70	C
103. SR 99 - Between Crosstown Fwy and Golden Gate Avenue	8	172,800	126,842	0.73	C
104. SR 99 - Between Golden Gate Ave and Mariposa Rd	8	172,800	125,851	0.73	C
105. Mariposa Road - Between SR 99 and 8th St./Farmington Rd	2	17,300	27,296	1.58	F
106. Mariposa Road - Between Carpenter Road and SR 99	4	38,200	26,540	0.69	D
107. Mariposa Road - Between the Project Site and Carpenter Road	4	38,200	26,777	0.70	D
108. Mariposa Road - Southeast of the Project Site	4	38,200	16,163	0.42	A
109. Mariposa Road - East of Austin Road	4	38,200	11,397	0.30	A
110. SR 99 - Between Mariposa Road and Arch-Airport Road	6	129,600	97,705	0.75	D
111. Arch-Airport Road - Between Qantas Lane and SR 99	6	59,300	51,815	0.87	E
112. SR 99 - South of Arch-Airport Road	6	129,600	85,955	0.66	C

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

Table 18. Intersection Level of Service -
Existing Plus Approved Projects (EPAP) Plus Project Conditions

	Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	Golden Gate Avenue & SR 99 Southbound Ramps	Signal		B	14.2	B	16.0
2	Golden Gate Avenue & SR 99 Northbound Ramps	Signal		B	15.8	C	23.9
3	Mariposa Road & 8th Street/Farmington Road	Signal		F	109.3	F	145.8
4	Mariposa Road & SR 99 West Frontage Road	Signal		B	14.2	B	14.5
5	Mariposa Road & SR 99 Southbound Ramps	Signal		B	18.4	B	15.4
6	Mariposa Road & SR 99 Northbound Ramps	Signal		B	10.6	B	10.4
7	Mariposa Road & Stagecoach Road	Signal		B	18.5	B	18.2
8	Mariposa Road & Munford Avenue	Signal		B	11.5	C	23.9
9	Mariposa Road & Carpenter Road	Unsig	Yes	A	3.7	F	63.9
10	Mariposa Road & Austin Road	Signal		C	35.0	D	40.2
11	Arch Road & Austin Road	Signal		D	45.2	D	40.2
12	Arch-Airport Road & Qantas Lane	Signal		E	61.7	C	28.4
13	Arch Road & SR 99	Signal		F	194.4	E	73.6
14	Mariposa Road & Northwest Project Driveway	Unsig	No	A	0.5	A	1.2
15	Mariposa Road & Southeast Project Driveway	Signal		B	13.8	C	23.1

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.

As shown in **Table 19**, implementation of the above recommended improvement would improve traffic operations to LOS D with 40.4 seconds of delay in the a.m. peak hour and LOS E with 73.2 seconds of delay in the p.m. peak hour. As described in the *General Plan Policy Consistency Criteria* section of this traffic impact study, LOS D and E at this intersection are considered acceptable.

This recommended improvement is the same as the improvement recommended at this intersection for EPAP No Project conditions.

9. Mariposa Road & Carpenter Road

Under EPAP Plus Project conditions, this intersection would operate at LOS A with 3.7 seconds of delay during the a.m. peak hour, and LOS F with 63.9 seconds of delay during the p.m. peak hour. LOS F is considered unacceptable. Compared to EPAP No Project 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 *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered significant. The following improvement is recommended to improve operating conditions to acceptable LOS and reduce the project-related inconsistency with General Plan policies to a less than significant level:

- Widen the northeastbound Carpenter Road approach. The approach is currently a single-lane approach. The approach should be widened to include an exclusive northeastbound-to northwestbound left-turn lane, and a combined through/right-turn lane.

As shown in **Table 19**, implementation of the above recommended improvement would improve traffic operations to LOS A with 2.9 seconds of delay in the a.m. peak hour and LOS D with 32.7 seconds of delay in the p.m. peak hour. LOS A and D are considered acceptable.

12. Arch-Airport Road & Qantas Lane

Under EPAP Plus Project conditions, this intersection would operate at LOS E with 61.7 seconds of delay during the a.m. peak hour, and LOS C with 28.4 seconds of delay during the p.m. peak hour. LOS E is considered unacceptable. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related change in delay would not be greater than a five second increase. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered less than significant and no improvements are recommended.

Table 19. Intersection Level of Service -
Existing Plus Approved Projects (EPAP) Plus Project Conditions
With Recommended Improvements

Study Intersections	Inters. Control	Signal Warrant Met?	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
3 Mariposa Road & 8th Street/Farmington Road	Signal		D	40.4	E	73.2
9 Mariposa Road & Carpenter Road	Unsig	No	A	2.9	D	32.7

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control. "Unsig" = Unsignalized stop-sign control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections, including unsignalized intersections.

13. Arch Road & SR 99

Under EPAP Plus Project conditions, this intersection would operate at LOS F with 194.4 seconds of delay during the a.m. peak hour, and LOS E with 73.6 seconds of delay during the p.m. peak hour. LOS E and F are considered unacceptable. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related change in delay would not be greater than a five second increase. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered less than significant and no improvements are recommended.

ROADWAY SEGMENT LEVELS OF SERVICE

Table 17 presents a summary of LOS on the 12 study roadway segments under EPAP Plus Project conditions. 10 of the roadway segments would operate at acceptable LOS D or better. No improvements would be needed on these 10 roadway segments to achieve acceptable LOS. The following two roadway segments would operate at unacceptable LOS.

105. Mariposa Road Between SR 99 and 8th Street/Farmington Road

Under EPAP Plus Project conditions, this roadway segment would operate at LOS F. LOS F is considered unacceptable. Compared to EPAP No Project Conditions, the project-related increase in volume would be greater than five percent. Therefore, based on criteria presented in the

General Plan Policy Consistency Criteria section of this traffic impact study, the project-related inconsistency with General Plan policies is considered significant. The following improvement is recommended to improve operating conditions to acceptable LOS and reduce the project-related inconsistency with General Plan policies to a less than significant level:

- Widen the portions of this roadway segment which are one lane in each direction to two lanes in each direction.

As shown in **Table 20**, implementation of the above recommended improvement would improve traffic operations to LOS D. LOS D is considered acceptable.

This improvement is also recommended under Existing Conditions and the EPAP No Project scenario.

Table 20. Roadway Segment Level of Service -
Existing Plus Approved Projects (EPAP) Plus Project Conditions
With Recommended Improvements

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
105. Mariposa Road - Between SR 99 and 8th St./Farmington Rd	4	38,200	27,296	0.71	D

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

111. Arch-Airport Road, Between Qantas Lane and SR 99

Under EPAP Plus Project conditions, this roadway segment would operate at LOS E. LOS E is considered unacceptable. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related change in traffic volume would not be greater than a five percent increase. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered less than significant and no improvements are recommended.

RAMP JUNCTION LEVELS OF SERVICE

Figure 22 and **Figure 23** present the a.m. peak hour and p.m. peak hour traffic volumes at the ramp junctions under EPAP Plus Project conditions. **Table 21** presents the a.m. peak hour and p.m. peak hour LOS at each study ramp junction under EPAP Plus Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Under EPAP Plus Project conditions, LOS at 10 of the 13 study ramp junctions would be at acceptable LOS D or better during both the a.m. peak hour and the p.m. peak hour. No improvements would be needed on these 10 ramp junctions to achieve acceptable LOS. The following are the three ramp junctions that would experience unacceptable LOS.

201. SR 99 Southbound Weave Area Between Fremont Street and Crosstown Freeway

Under EPAP Plus Project conditions, this ramp junction would operate at LOS F during the a.m. peak hour, and LOS C during the p.m. peak hour. LOS F is considered unacceptable. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related change in freeway and ramp volumes would not be greater than a five percent increase. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered less than significant and no improvements are recommended.

205. SR 99 at Golden Gate Avenue Northbound On-Ramp Merge

Under EPAP Plus Project conditions, this ramp junction would operate at LOS C during the a.m. peak hour, and LOS F during the p.m. peak hour. LOS F is considered unacceptable. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related change in freeway and ramp volumes would not be greater than a five percent increase. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered less than significant and no improvements are recommended.

211. SR 99 at Arch-Airport Road Northbound On-Ramp Merge

Under EPAP Plus Project conditions, this ramp junction would operate at LOS C during the a.m. peak hour, and LOS E during the p.m. peak hour. LOS E is considered unacceptable. However, LOS would also be unacceptable under EPAP No Project conditions, and the project-related change in freeway and ramp volumes would not be greater than a five percent increase. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered less than significant and no improvements are recommended.

Table 21. State Route 99 Ramp Merge, Diverge, and Weave Level of Service - Existing Plus Approved Projects (EPAP) Plus Project Conditions

	Ramp Junction	AM Peak Hour Freeway Volume	AM Peak Hour Ramp Volume	AM Peak Hour Density	AM Peak Hour LOS	PM Peak Hour Freeway Volume	PM Peak Hour Ramp Volume	PM Peak Hour Density	PM Peak Hour LOS
201	SB Weave Between	7,012	515	> Capacity	F	5,218	353	26.9	C
	Fremont St & Crosstown Fwy	4,723	2,804			4,002	1,569		
202	NB Weave Between	4,385	289	22.2	C	6,251	376	32.7	D
	Crosstown Fwy & Fremont St	3,109	1,565			4,735	1,892		
203	NB at Crosstown Fwy Off-Ramp	3,100	2,832	< 10	A	4,750	2,246	< 10	A
204	Golden Gate Ave SB Off-Ramp	4,852	564	< 10	A	4,399	627	< 10	A
205	Golden Gate Ave NB On-Ramp	4,913	571	27.1	C	5,577	784	33.0	F
206	SB Weave Between	4,823	340	24.8	C	4,396	403	22.9	C
	Golden Gate Ave & Mariposa Rd	4,250	913			4,113	686		
207	NB Weave Between	4,882	355	25.2	C	5,510	510	29.4	D
	Mariposa Rd & Golden Gate Ave	4,715	522			5,281	739		
208	Mariposa Rd SB On-Ramp (Slip)	5,246	234	26.7	C	3,552	310	18.2	B
209	Mariposa Rd NB Off-Ramp	3,890	465	24.8	C	5,783	329	33.3	D
210	Arch-Airport Rd SB Off-Ramp	2,485	2,995	< 10	A	2,749	1,113	< 10	A
211	Arch-Airport Rd NB On-Ramp	3,192	1,162	22.2	C	3,493	2,619	38.0	E
212	Arch-Airport Rd SB On-Ramp	2,485	748	16.6	B	2,749	1,259	22.2	C
213	Arch-Airport Rd NB Off-Ramp	3,192	1,272	23.0	C	3,493	641	23.1	C

Notes: "LOS" = Level of Service. "NB" = Northbound. "SB" = Southbound.
Density is expressed in passenger cars per mile per lane. "> Capacity" = volume-to-capacity ratio greater than 1.0.
For weave areas, north freeway and ramp volumes are listed first and south volumes are listed second.

INCREASE IN DEMAND FOR TRANSIT

Implementation of the proposed Mariposa Industrial Park project would result in an increase in demand for public transit service. Currently, there is limited direct public transit service to the vicinity of the project site, and the development of urban uses would result in an increase in demand. The frequency and proximity of future transit service is not known at this time and, as a result, demand for transit cannot be quantified. However, it is expected that SJRTD can accommodate the additional passengers the project would generate. This is considered a less-than-significant impact. No mitigation measures are required

INCREASE IN DEMAND FOR BICYCLE AND PEDESTRIAN FACILITIES

Implementation of the Mariposa Industrial Park project would result in an increase in demand for bicycle and pedestrian facilities. As noted in the *Project Description* section of this traffic impact study, the proposed project includes sidewalks along the project site frontage of Mariposa Road. Because sidewalks are not present along the Mariposa Road frontage of nearby properties, the sidewalks along the Mariposa Industrial Park project site frontage would be discontinuous in the near-term. In the longer-term, sidewalks along the project site frontage would incrementally improve the safety and convenience of bicycle and pedestrian travel along Mariposa Road. The City General Plan includes widening of Mariposa Road to four lanes in the future, and the Mariposa Industrial Park project site frontage improvements would contribute to a more continuous system of bicycle and pedestrian improvements along Mariposa Road. Therefore, the increase in demand for facilities is considered a less-than-significant impact. No mitigation measures would be required.

CUMULATIVE NO PROJECT CONDITIONS

The Cumulative No Project condition represents a long-term future background condition. Development of approved and planned land uses and roadway improvements are assumed in this condition. The Cumulative No Project condition, therefore, serves as the baseline condition used to assess the significance of long-term project-related traffic effects.

The Cumulative No Project condition does not include development of the Mariposa Industrial Park project as proposed. Consistent with the approach described in the *City of Stockton Transportation Impact Analysis Guidelines* (City of Stockton 2003), this scenario serves as baseline condition for determining project-related impacts, and the traffic analysis of this condition assumes land uses on the project site consistent with the City of Stockton General Plan (City of Stockton 2018a).

TRAFFIC VOLUME FORECASTS

As previously described in the *Travel Forecasting* section of this traffic impact study, the City of Stockton Travel Demand Model (City of Stockton 2018b) was used to develop forecasts of background increases in traffic volumes under Cumulative No Project conditions. The increases in traffic volumes reflect development of land uses consistent with approved land use designations. The model was modified in the vicinity of the project site to add detail to the model and more accurately represent how land uses are provided access to the roadway network. Minor changes were also made to land uses in the model to reflect existing and planned development.

Application of the methods described in the *Travel Forecasting* section results in the daily traffic volumes presented in **Table 22**.

ROADWAY IMPROVEMENTS

The analysis of Cumulative No Project conditions assumes roadway improvements consistent with the long-term future context. These include improvements from the City of Stockton General Plan (City of Stockton 2018b), and the *Draft Environmental Impact Report - Mariposa Lakes Specific Plan - State Clearinghouse #2006022035* (City of Stockton 2007). The improvements include:

- widening of Mariposa Road northwest of Carpenter Road to six lanes,
- widening of Mariposa Road southeast of Carpenter Road to four lanes, and
- widening of SR 99 from north of the Crosstown Freeway to south of Arch Road to eight lanes.

The resulting number of travel lanes assumed for study roadway segments are shown in **Table 22**.

Table 22. Roadway Segment Level of Service - Cumulative No Project Conditions

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
101. SR 99 - North of Crosstown Freeway (SR 4)	8	172,800	144,268	0.83	D
102. Crosstown Freeway - West of SR 99	8	172,800	131,917	0.76	D
103. SR 99 - Between Crosstown Fwy and Golden Gate Avenue	8	172,800	139,739	0.81	D
104. SR 99 - Between Golden Gate Ave and Mariposa Rd	8	172,800	168,962	0.98	E
105. Mariposa Road - Between SR 99 and 8th St./Farmington Rd	6	59,300	36,756	0.62	C
106. Mariposa Road - Between Carpenter Road and SR 99	6	59,300	32,512	0.55	C
107. Mariposa Road - Between the Project Site and Carpenter Road	4	38,200	23,483	0.61	C
108. Mariposa Road - Southeast of the Project Site	4	38,200	23,483	0.61	C
109. Mariposa Road - East of Austin Road	4	38,200	13,259	0.35	A
110. SR 99 - Between Mariposa Road and Arch-Airport Road	8	172,800	115,758	0.67	C
111. Arch-Airport Road - Between Qantas Lane and SR 99	6	59,300	67,860	1.14	F
112. SR 99 - South of Arch-Airport Road	8	172,800	106,202	0.61	C

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

ROADWAY SEGMENT LEVELS OF SERVICE

Table 22 presents a summary of LOS on the 12 study roadway segments under Cumulative No Project conditions. Ten of the roadway segments would operate at acceptable LOS D or better. No improvements are needed on these 10 roadway segments to achieve acceptable LOS. The following two roadway segments would operate at unacceptable LOS.

104. SR 99 Between Golden Gate Avenue and Mariposa Road

Under Cumulative No Project condition, this roadway segment would operate at LOS E. LOS E is considered unacceptable. This roadway segment is already assumed to be eight lanes wide under Cumulative conditions. In the *Transportation Concept Report State Route 99* (California Department of Transportation 2017), Caltrans describes the eight-lane width as the conceptual facility width, and this is considered to be the maximum feasible size in this traffic impact study. Therefore, improvements are not recommended.

111. Arch-Airport Road, Between Qantas Lane and SR 99

Under Cumulative No Project conditions, this roadway segment would operate at LOS F. LOS F is considered unacceptable. The following improvement is recommended to improve LOS on this roadway segment:

- Widen this roadway segment from six lanes to eight lanes.

Implementing this recommended improvement would result in this roadway segment operating at LOS E. This LOS is considered unacceptable. However, eight lanes is considered to be the maximum feasible width for this roadway segment. A summary of LOS with recommended improvements is presented in **Table 23**.

Table 23. Roadway Segment Level of Service -
Cumulative No Project Conditions With Recommended Improvements

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
111. Arch-Airport Road - Between Qantas Lane and SR 99	8	78,400	67,860	0.87	E

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

CUMULATIVE PLUS PROJECT IMPACTS

The analysis of Cumulative Plus Project conditions describes long-term traffic operations in the year 2040 assuming development of the proposed project. 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.

The development of the Mariposa Industrial Park project would result in vehicle traffic to and from the project site. Methods used to estimate project-related travel have been previously described in the *Existing Plus Approved Projects Plus Mariposa Industrial Park Project Impacts* section of this traffic impact study. **Table 24** displays the resulting Cumulative Plus Project roadway segment daily traffic volumes.

Development of forecasts of future year background traffic volumes has been previously described in the *Cumulative No Project Conditions* section of this traffic impact study.

Project-related roadway improvements and future year background roadway improvements assumed in this analysis have been previously described in the *Existing Plus Approved Projects Plus Mariposa Industrial Park Project Impacts* and the *Cumulative No Project Conditions* sections of this traffic impact study.

ROADWAY SEGMENT LEVELS OF SERVICE

Table 24 presents a summary of LOS on the 12 study roadway segments under Cumulative Plus Project conditions. Nine of the 12 roadway segments would operate at acceptable LOS D or better. No improvements are needed on these nine roadway segments to achieve acceptable LOS. The following three roadway segments would operate at unacceptable LOS.

104. SR 99 Between Golden Gate Avenue and Mariposa Road

Under Cumulative Plus Project conditions, this roadway segment would operate at LOS F. LOS F is considered unacceptable. However, LOS would also be unacceptable under Cumulative No Project conditions, and the project-related change in traffic volume would not be greater than a five percent increase. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered less than significant and no improvements are recommended.

Table 24. Roadway Segment Level of Service - Cumulative Plus Project Conditions

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
101. SR 99 - North of Crosstown Freeway (SR 4)	8	172,800	148,870	0.86	D
102. Crosstown Freeway - West of SR 99	8	172,800	135,307	0.78	D
103. SR 99 - Between Crosstown Fwy and Golden Gate Avenue	8	172,800	147,731	0.85	D
104. SR 99 - Between Golden Gate Ave and Mariposa Rd	8	172,800	177,140	1.03	F
105. Mariposa Road - Between SR 99 and 8th St./Farmington Rd	6	59,300	37,820	0.64	C
106. Mariposa Road - Between Carpenter Road and SR 99	6	59,300	43,992	0.74	D
107. Mariposa Road - Between the Project Site and Carpenter Road	4	38,200	35,371	0.93	E
108. Mariposa Road - Southeast of the Project Site	4	38,200	23,965	0.63	C
109. Mariposa Road - East of Austin Road	4	38,200	13,717	0.36	A
110. SR 99 - Between Mariposa Road and Arch-Airport Road	8	172,800	117,898	0.68	C
111. Arch-Airport Road - Between Qantas Lane and SR 99	6	59,300	69,172	1.17	F
112. SR 99 - South of Arch-Airport Road	8	172,800	107,006	0.62	C

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

107. Mariposa Road, Between the Project Site and Carpenter Road

Under long-term future Cumulative Plus Project conditions, this roadway segment would operate at LOS E. LOS E is considered unacceptable. Compared to Cumulative No Project Conditions, the project-related increase in volume would be greater than five percent. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered significant. The following improvement is recommended to improve operating conditions to acceptable LOS and reduce the project-related inconsistency with General Plan policies to a less than significant level:

- Under long-term future cumulative conditions, widen this roadway segment from four lanes to six lanes.

As shown in **Table 25**, implementation of the above recommended improvement would improve traffic operations to LOS C. LOS C is considered acceptable.

Table 25. Roadway Segment Level of Service - Cumulative Plus Project Conditions With Recommended Improvements

Roadway Segment	Number of Lanes	Daily Capacity	Daily Volume	V/C Ratio	Level of Service
107. Mariposa Road - Between the Project Site and Carpenter Road	6	59,300	35,371	0.60	C

Notes: "SR" = State Route. "V/C Ratio" = volume-to-capacity ratio.

111. Arch-Airport Road, Between Qantas Lane and SR 99

Under Cumulative Plus Project conditions, this roadway segment would operate at LOS F. LOS F is considered unacceptable. However, LOS would also be unacceptable under Cumulative No Project conditions, and the project-related change in traffic volume would not be greater than a five percent increase. Therefore, based on criteria presented in the *General Plan Policy Consistency Criteria* section of this traffic impact study, the project-related inconsistency with General Plan policies is considered less than significant and no improvements are recommended.

PROJECT SITE ACCESS

To assess the adequacy of project site access under long-term future conditions, LOS at the two project site driveway intersections were analyzed under Cumulative Plus Project conditions. These two intersections are:

14. Mariposa Road & Northwest Project Driveway
15. Mariposa Road & Southeast Project Driveway

Cumulative Plus Project a.m. peak hour and p.m. peak hour traffic volumes and intersection lane geometrics at these two intersections are shown in **Figure 24**.

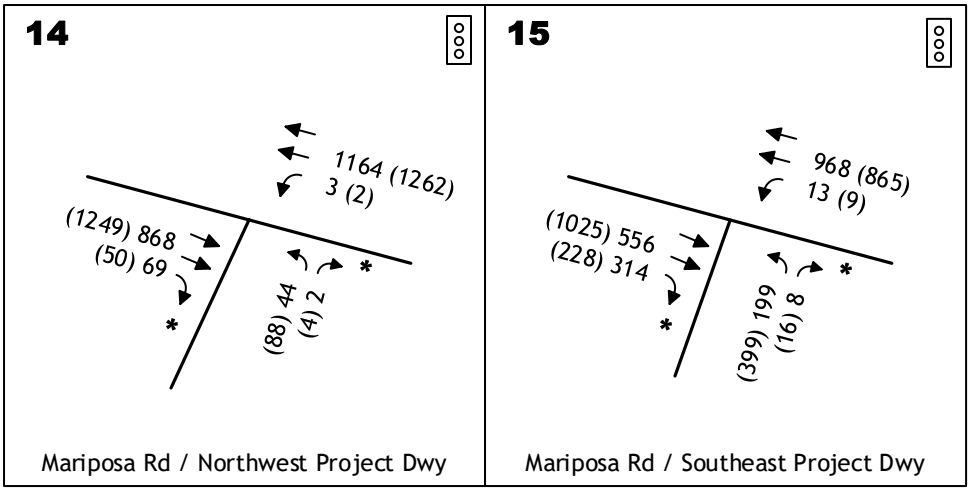
Table 26 presents the a.m. peak hour and p.m. peak hour LOS at the two study intersections under Cumulative Plus Project conditions. The worksheets presenting the calculation of LOS are included in the technical appendix.

Table 26. Intersection Level of Service - Cumulative Plus Project Conditions

Study Intersections	Inters. Control	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
14 Mariposa Road & Northwest Project Driveway	Signal	A	3.2	A	5.1
15 Mariposa Road & Southeast Project Driveway	Signal	B	12.8	C	20.1

Notes: LOS = Level of Service. "Inters. Control" = Type of intersection control.
"Signal" = Signalized light control.
Delay is measured in seconds per vehicle.
Per City of Stockton guidelines, intersection average delay is reported for all intersections.

Under Cumulative Plus Project conditions, LOS at both of the two project site access intersections would be at acceptable LOS C or better during both the a.m. peak hour and the p.m. peak hour. As a result, traffic operations at the project site access locations are considered to be adequate. No improvements would be needed at these two intersections to achieve acceptable LOS.



Legend

XX AM Peak Hour Volume

(XX) PM Peak Hour Volume

Signalized Intersection

* "Free" Right Turn

NORTH

N.T.S.

CUMULATIVE PLUS PROJECT INTERSECTION TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

0780-18 RA 4/12/2021

figure 24

VEHICLE MILES TRAVELED

As noted earlier in the *Significance Thresholds* section of this traffic impact study, the effects of the proposed project on VMT is determined by comparing travel associated with the Mariposa Industrial Park project as proposed to travel associated with development of the project site with the current General Plan land use designations.

As noted earlier in the *Project Description* section of this traffic impact study, the Mariposa Industrial Park project proposes industrial land uses on the project site. As also noted in the *Project Description* section, the project site currently has an Industrial land use designation in the City of Stockton General Plan. Therefore, in this traffic impact study, vehicle travel associated with the Mariposa Industrial Park project would be the same as the Industrial land uses currently designated in the City of Stockton General Plan. That is, implementation of the Mariposa Industrial Park project would result in no net change from travel associated with the current General Plan-designated land uses.

VMT is calculated by multiplying the number of vehicle trips by the length of vehicle trips. As a result, a certain percent change in the number of vehicle trips would cause an equivalent change in VMT. Therefore, for the Mariposa Industrial Park project, a comparison of vehicle trips is considered equivalent to a comparison of VMT. Because the Mariposa Industrial Park project would result in no net change from travel associated with the current General Plan–designated land use, the project would result in no net change in VMT.

As described in the *Vehicle Miles Traveled Significance Threshold* section of this traffic impact study,

> "Consistent with 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."

Because the Mariposa Industrial Park project would not result in a 15 percent reduction in VMT, the project is considered to have a significant impact on VMT. Implementation of the following mitigation measures would reduce the impact of the project on VMT. The numbering of the following mitigation measures is from the document *Quantifying Greenhouse Gas Mitigation Measures - A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association 2010), which contains more detailed information on these measures:

Mitigation Measure TRT-1. Implement Commute Trip Reduction Program - Voluntary

The Mariposa Industrial Park project will implement a Commute Trip Reduction (CTR) Program – Voluntary with employers to discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. This is a multi-strategy program that encompasses a combination of individual measures.

The CTR program will provide employees with assistance in using alternative modes of travel, and provide both "carrots" and "sticks" to encourage employees. The CTR program should include all of the following:

- Carpooling encouragement
- Ride-matching assistance
- Preferential carpool parking
- Flexible work schedules for carpools
- Half time transportation coordinator
- Vanpool assistance
- Bicycle end-trip facilities (parking, showers and lockers)

Other strategies may also include:

- new employee orientation of trip reduction and alternative mode options,
- event promotions and publications,
- flexible work schedule for all employees,
- transit subsidies,
- parking cash-out or priced parking,
- shuttles,
- emergency ride home, and
- improved on-site amenities.

Mitigation Measure TRT-5. Provide End of Trip Bicycle Facilities

The Mariposa Industrial Park project will provide "end-of-trip" facilities for bicycle riders including showers, secure bicycle lockers, and changing spaces. End-of-trip facilities encourage the use of bicycling as a viable form of travel to destinations, especially to work. End-of trip facilities provide the added convenience and security needed to encourage bicycle commuting.

Mitigation Measure TRT-11. Provide Employer-Sponsored Vanpool/Shuttle

The Mariposa Industrial Park project will implement an employer-sponsored vanpool or shuttle. A vanpool will usually service employees' commute to work while a shuttle will service nearby transit stations and surrounding commercial centers. Employer-sponsored vanpool programs entail an employer purchasing or leasing vans for employee use, and often subsidizing the cost of at least program administration, if not more. The driver usually 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.

Implementation of the measures listed above would reduce project-related VMT and reduce the significance of the impact on VMT. However, quantification of the reduction is not possible at this time. At the time this traffic impact study was prepared, potential occupants of the Mariposa

Industrial Park project were not identified. While the type of land use is expected to be industrial, specific tenants were not known. As a result, the following factors which would affect the ability to implement VMT reduction measures are not known:

- hours of operation, including times of the day when work shift would change;
- the portion of work positions which would be full-time versus part-time;
- feasibility of implementing flexible work schedules; and
- degree to which working remotely is feasible.

Because the potential occupants of the project are not known, it is not possible to establish an enforceable commitment to reduce VMT by more than 15 percent. As a result, this impact is considered significant and unavoidable.

REFERENCES

DOCUMENTS CITED

California Air Pollution Control Officers Association. 2010. Quantifying Greenhouse Gas Mitigation Measures - A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures. Sacramento, CA.

California Department of Transportation. 2014. California Manual on Uniform Traffic Control Devices 2014 Edition. Sacramento CA.

California Department of Transportation. 2017. Transportation Concept Report – State Route 99 - District 10. Stockton, CA.

California Department of Transportation. 2021. Caltrans Traffic Census Program Internet Website. http://www.dot.ca.gov/trafficops/census/.

California, State of. 2018. Governor's Office of Planning and Research. Technical Advisory on Evaluating Transportation Impacts in CEQA. Sacramento, CA.

Fehr & Peers. 2014. Traffic Impact Analysis – NorCal Logistics Center. Walnut Creek, CA.

Institute of Transportation Engineers. 2017. Trip Generation Manual, 10th Edition. Washington, D.C.

San Joaquin Regional Transit District. 2021. San Joaquin Regional Transit District Internet Webpage. http://www.sanjoaquinrtd.com/. Stockton, CA.

Stockton, City of. 2003. City of Stockton Transportation Impact Analysis Guidelines. Stockton, CA.

Stockton, City of. 2004. Travel Demand Model Development Report October 2004. Stockton, CA.

Stockton, City of. 2007. Draft Environmental Impact Report - Mariposa Lakes Specific Plan - State Clearinghouse #2006022035. Stockton, CA.

Stockton, City of. 2014. NorCal Logistics Center – Draft Environmental Impact Report (Project File No. P12-110). Stockton, CA.

Stockton, City of. 2018a. Envision Stockton 2040 General Plan. Stockton, CA.

Stockton, City of. 2018b. Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements Draft EIR. Stockton, CA.

Stockton, City of. 2009. Truck Routes Map. Stockton, CA.

Stockton, City of. 2017. STAA Truck Routes Map. Stockton, CA.

Stockton, City of. 2020. Public Review Draft Environmental Impact Report For The Sanchez-Hoggan Annexation. Stockton, CA.

Trafficware. 2019. Trafficware Internet Website. http://www.trafficware.com/

Transportation Research Board. 1982. National Cooperative Highway Research Program (NCHRP) Report 255, Highway Traffic Data for Urbanized Area Project Planning and Design. Washington, D.C.

Transportation Research Board. 2000. Highway Capacity Manual 2000. Washington, D.C.

Transportation Research Board. 2010. Highway Capacity Manual 2010. Washington, D.C.

Transportation Research Board. 2016. Highway Capacity Manual 6th Edition. Washington, D.C.

PERSONAL COMMUNICATIONS

Dumas, Tom. Chief, Office of Metropolitan Planning, Caltrans District 10. October 23, 2007 letter to David Stagnaro, City of Stockton Community Development Department.

McDowell, Mike. Acting Deputy Director. City of Stockton, Community Development Department, Planning and Engineering Services. February 15, 2012 E-mail message to Wayne Shijo, KD Anderson & Associates; Subject: Highway Capacity Manual Methods. November 15, 2012 E-mail message to Wayne Shijo, KD Anderson & Associates; Subject: Industrial Trip Generation Rates. May 8, 2019 E-mail message to Heba El-Guindy, City of Stockton; and Wayne Shijo, KD Anderson & Associates; Subject: EPAP Traffic Forecasts. September 19, 2019 telephone conversation with Wayne Shijo, KD Anderson & Associates. June 20, 2020 E-mail message to Charlie Simpson, BaseCamp Environmental; Subject: Industrial Trip Generation.

Moore, Nicole D. Senior Planner. City of Stockton Community Development Department. December 15, 2020 E-mail message to Ken Anderson and Wayne Shijo, KD Anderson & Associates; Subject: Mariposa Industrial Park Traffic Study Scope of Work.

Tellez, Kathrin. Fehr & Peers. June 30, 2016 E-mail message to Mike McDowell, City of Stockton. Subject: Tidewater Crossing All-Industrial Project Traffic Impact Assessment Analysis Assumptions.

TECHNICAL APPENDICES

IN SEPARATE ELECTRONIC FILES

APPENDIX H
WATER SUPPLY ASSESSMENT

FINAL REPORT | JANUARY 2021

Mariposa Industrial Park Project
Water Supply Assessment

PREPARED FOR

City of Stockton

CITY OF STOCKTON

PREPARED BY

WEST YOST
Water. Engineered.

Mariposa Industrial Park Project
Water Supply Assessment

Prepared for

City of Stockton

Project No. 129-60-20-46

Project Manager: Amy W. Kwong, PE — January 8, 2021 (Date)

QA/QC Review: Elizabeth T. Drayer, PE — January 8, 2021 (Date)

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FINAL REPORT | JANUARY 2021

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LIST OF ACRONYMS AND ABBREVIATIONS

AF	Acre-Feet
AFY	Acre-Feet Per Year
Cal Water	California Water Service
City	City of Stockton
COSMUD	City of Stockton Municipal Utilities Department
County	San Joaquin County
Delta	Sacramento-San Joaquin Delta
DJWWTP	Dr. Joe Waidhofer Water Treatment Plant
DWR	Department of Water Resources
DWSP	Delta Water Supply Project
DWTP	Delta Water Treatment Plant
EIR	Environmental Impact Report
ETo	Evapotranspiration
°F	Fahrenheit
GBA	Groundwater Basin Authority
GSP	Groundwater Sustainability Plan
mgd	Million Gallons Per Day
SB	Senate Bill
SEWD	Stockton East Water District
sf	Square Feet
SGMA	Sustainable Groundwater Management Act
SJCOG	San Joaquin Council of Governments
SOI	Sphere of Influence
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
Water Code	California Water Code
WID	Woodbridge Irrigation District
WSA	Water Supply Assessment
WTP	Water Treatment Plant

EXECUTIVE SUMMARY

Purpose of Water Supply Assessment

The purpose of this Water Supply Assessment (WSA) is to perform the evaluation required by California Water Code sections 10910 through 10915, as established by Senate Bill (SB) 610, in connection with the proposed Mariposa Industrial Park Project (Proposed Project) located in the unincorporated area of San Joaquin County (County). The Proposed Project is anticipated to receive potable water supply from the City of Stockton Municipal Utilities Department (COSMUD) upon annexation into the City of Stockton (City) Limits.

This WSA evaluates the adequacy of the COSMUD total projected water supplies, including existing water supplies and future planned water supplies, to meet the existing and projected future water demands, including those future water demands associated with the Proposed Project, under all hydrologic conditions (Normal Years, Single Dry Years, and Multiple Dry Years).

Proposed Project Overview

The Proposed Project is bounded by Mariposa Road immediately to the northeast, State Route 99 to the west, and North Littlejohns Creek to the south. The Proposed Project site contains approximately 206 gross acres and is proposed to be developed with approximately 3,600,000 square feet (sf) of warehouse/light industrial space on approximately 186 acres of land. Approximately 20 acres at the south of the site contains North Littlejohns Creek and will remain undeveloped except for a proposed new stormwater detention basin.

The Proposed Project meets the definition of a "Project" per California Water Code sections 10910 through 10915, as established by SB 610 in 2001, thus requiring the preparation of this WSA.

Potable and Recycled Water Demands and Supply Availability

Projected potable demands for buildout of the Proposed Project total approximately 283 acre-feet per year (AFY). No recycled water demand is expected from the Proposed Project.

It is anticipated that potable water demands for the Proposed Project if approved by the City, would be served by the COSMUD. The inclusion of existing and planned future water supplies is specifically allowed by the California Water Code:

> *California Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

Pursuant to California Water Code section 10910(4) and based on the technical analyses described in this WSA, this WSA demonstrates that the COSMUD existing and additional planned future water supplies are sufficient to meet the COSMUD existing water demands, including those future water demands associated with the Proposed Project.

Determination of Water Supply Sufficiency

As described in Section 7, water demand within the COSMUD water service area is not expected to exceed the COSMUD water supplies at buildout under any hydrologic condition. To remain conservative in planning, the City's 2015 Urban Water Management Plan (UWMP) assumes no reduction in water demand during dry years. However, conservation and demand reduction methods detailed in the adopted Water Shortage Contingency Plan are able to reduce demands up to 50 percent in water supply shortage conditions and emergencies.

1.0 INTRODUCTION

1.1 Legal Requirement for Water Supply Assessment

California Senate Bill (SB) 610 amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 sought to promote more collaborative planning between local water suppliers and cities and counties. It requires detailed information regarding water supply availability to be provided to the city and county decision-makers prior to approval of specified large development projects. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet existing demands, anticipated demands from approved projects and tentative maps, and the demands of proposed projects.

SB 610 amended California Water Code (Water Code) sections 10910 through 10915 (inclusive) to require land use lead agencies to:

- Identify any public water purveyor that may supply water for a proposed development project
- Request a Water Supply Assessment (WSA) from the identified water purveyor

The purpose of the WSA is to demonstrate the sufficiency of the purveyor's water supplies to satisfy the water demands of the proposed project, while still meeting the water purveyor's existing and planned future uses. Water Code sections 10910 through 10915 delineate the specific information that must be included in the WSA.

1.2 Need for and Purpose of Water Supply Assessment

The purpose of this WSA is to perform the evaluation required by Water Code sections 10910 through 10915 in connection with the Proposed Project. It is not to reserve water, or to function as a "will serve" letter or any other form of commitment to supply water (see Water Code section 10914). The provision of water service will continue to be undertaken in a manner consistent with applicable policies and procedures, consistent with existing law.

1.3 Water Supply Assessment Preparation, Format and Organization

The format of this WSA is intended to follow Water Code sections 10910 through 10915 to clearly delineate compliance with the specific requirements for a WSA. The WSA includes the following sections:

- Section 1: Introduction
- Section 2: Description of Proposed Project
- Section 3: Required Determinations
- Section 4: City of Stockton Municipal Utilities Department Water Service Area
- Section 5: City of Stockton Municipal Utilities Department Water Demands
- Section 6: City of Stockton Municipal Utilities Department Water Supplies
- Section 7: Determination of Water Supply Sufficiency Based on the Requirements of SB 610
- Section 8: Water Supply Assessment Approval Process
- Section 9: References

Relevant citations of Water Code sections 10910 through 10915 are included throughout this WSA in *italics* to demonstrate compliance with the specific requirements of SB 610.

2.0 DESCRIPTION OF PROPOSED PROJECT

The Proposed Project location, description, and projected water demands are discussed below.

2.1 Proposed Project Location

The Proposed Project is located in unincorporated San Joaquin County (County), California outside the City of Stockton (City) Limits and within the City's Sphere of Influence (SOI) as shown on Figure 2-1. A close up view of the site to be developed is shown on Figure 2-2. If approved, the Proposed Project area would be annexed into the City. Upon annexation, the Proposed Project would be served by the COSMUD.

The Envision Stockton 2040 General Plan land use designation for the Proposed Project is "Industrial"[1]. The Proposed Project is currently surrounded by the industrial land uses to the north, industrial and rural residential land to the west and south, and agricultural land to the east.

2.2 Proposed Land Uses and Acreages

The Proposed Project site contains approximately 206 gross acres of land split between nine existing parcels. The Proposed Project would include the construction and subsequent operation of warehouse/light industrial buildings on the northern seven parcels totaling 3,616,870 square feet (sf).[2] As North Littlejohns Creek runs through the two southern parcels, they are not planned for development, except for a proposed new stormwater detention basin. The Proposed Project site would also include the required circulation, parking, stormwater detention, and utility improvements.

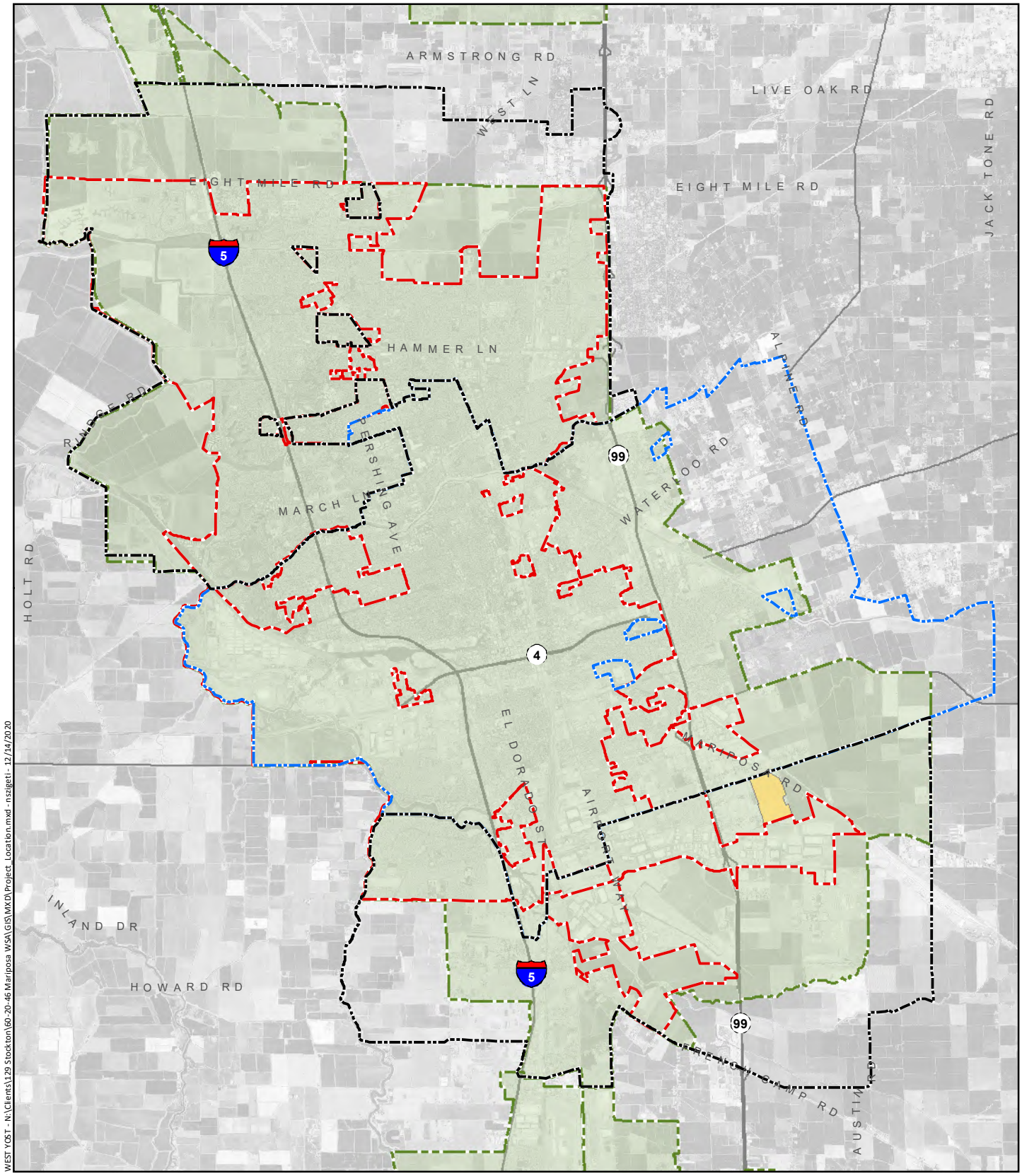
Updated water use factors based on recent water consumption trends within the COSMUD service area were used to determine the projected water demand for the Proposed Project, which is equal to 283 acre-feet/year (AFY) as shown in Table 2-1. It is expected that all of the water demands from the Proposed Project will be served by the COSMUD South Stockton water system.

2.3 Projected Water Supply

Water demands for the Proposed Project will be served using the COSMUD existing and future portfolio of water supplies discussed in Section 6. The inclusion of existing and planned future water supplies is specifically allowed by the Water Code:

> *Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

[1] City of Stockton. December 2018. *Envision Stockton 2040 General Plan.*
[2] BaseCamp Environmental, Inc. November 2020. *Initial Study for the Mariposa Industrial Park, Stockton, CA.*



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Symbology

- Approximate Project Area
- Sphere of Influence
- City Limits
- COSMUD Water Service Area
- Cal Water Service Area

N

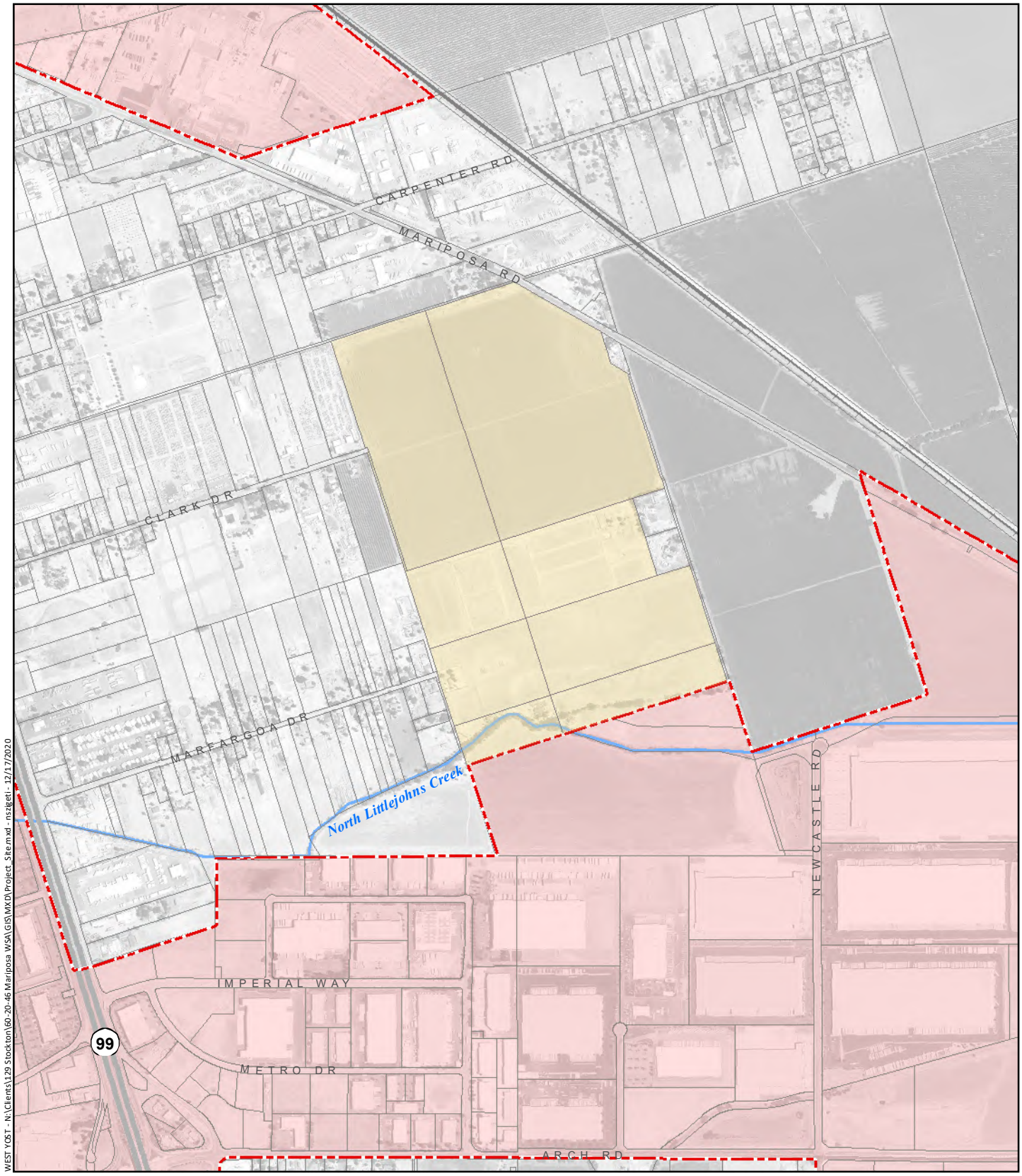
0 1 2

Scale in Miles

Figure 2-1

Project Location

City of Stockton
Mariposa Industrial Park
Water Supply Assessment



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Symbology

- Project Parcels
- Parcels
- City Limits

N

0 600 1,200

Scale in Feet

Figure 2-2

Project Site

City of Stockton
Mariposa Industrial Park
Water Supply Assessment

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Table 2-1. Projected Water Demand for the Proposed Project

Land Use Type	Gross Area, acres[a, b]	Water Use Factor, AFY/acre[c]	Non-Revenue Water[c]	Projected Water Demand, AFY
Industrial	186	1.40	8%	283

(a) Kier & Wright Civil Engineers and Surveyors, Inc. October 2020. *Vesting Tentative Parcel Map*.
(b) Two parcels that contain North Littlejohns Creek and a proposed new stormwater detention basin are not included.
(c) Based on recent water consumption trends in the COSMUD service area.

3.0 REQUIRED DETERMINATIONS

3.1 Does SB 610 apply to the Proposed Project?

Water Code section 10910 (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

Water Code section 10912 (a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

Based on the following facts, SB 610 does apply to the Proposed Project.

- The City has determined that the Proposed Project is subject to the California Environmental Quality Act and that an Environmental Impact Report (EIR) is required
- The Proposed Project, with significantly more than 40 acres of industrial land use and significantly more than 650,000 square feet of floor area, meets the definition of a "project" as specified in Water Code section 10912(a) paragraph (5) as defined for an industrial development

The Proposed Project has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Therefore, according to Water Code section 10910(a), a WSA is required for the Proposed Project.

3.2 Does SB 221 apply to the Proposed Project?

In 2001, SB 221 amended State law to require that approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. Per California Government Code section 66473.7(a)(1), a subdivision means a proposed residential development of more than 500 dwelling units. As the Proposed Project does not include residential development, it is not subject to the requirements of SB 221.

3.3 Who is the Identified Public Water System?

Water Code section 10910(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined by Section 10912, that may supply water for the project.

Water Code section 10912 (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections…

The Proposed Project is located within the City's SOI planning area but outside of the City Limits. Once annexed into the City, the Proposed Project will be served by the COSMUD. Therefore, the COSMUD is the identified public water system for the Proposed Project.

3.4 Does the City have an adopted Urban Water Management Plan (UWMP) and does the UWMP include the projected water demand for the Proposed Project?

Water Code section 10910(c)(1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

The most recent COSMUD UWMP (2015 UWMP) was adopted by City Council in July 2016 and is incorporated by reference into this WSA.[3] The 2015 UWMP included water demand projections for current water demands within the COSMUD water service area (baseline demand) and anticipated water demands associated with future development projects and planning areas within the COSMUD water service area through 2040.

The ability of the COSMUD to meet the projected water demands for the Proposed Project is described in Section 7 of this WSA.

[3] Brown and Caldwell. July 2016. *City of Stockton 2015 Urban Water Management Plan*.

4.0 CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT WATER SERVICE AREA

4.1 Water Service Area

The City is located in north-central California, approximately 70 miles east of the San Francisco Bay Area and 50 miles south of Sacramento. California State Highway 99 and Interstate 5 run north and south through the City on the east and west boundaries, respectively, and California State Highway 4 (the Crosstown Freeway) connects the two. The San Joaquin River flows from the south and terminates at the Delta area of Central Stockton.

The COSMUD provides water service to North and South Stockton while the central portion of the City is served by California Water Service (Cal Water) (refer to Figure 2-1). North Stockton is primarily residential, and South Stockton is largely comprised of residential (on the west side), industrial and agricultural land uses. The COSMUD water service area extends beyond the City Limits into unincorporated San Joaquin County, in conjunction with the City's General Plan. The COSMUD provides water service as new developments are approved within its water service area and/or annexed into the City.

4.2 Population

The population estimates for 2020 through 2040 presented in the 2015 UWMP are projected based on an average growth rate of 1.3 percent per year. Growth rates were developed by the San Joaquin Council of Governments (SJCOG) 2015 forecast. Table 4-1 shows the COSMUD historical and projected population in five-year increments from 1995 to 2040.

Table 4-1. Historical and Projected Population for the COSMUD Water Service Area

Time Frame	Year	Population
Historical	1995	117,303
	2000	135,716
	2005	177,127
	2010	178,387
	2015	170,417
Projected	2020	181,862
	2025	194,076
	2030	207,110
	2035	221,019
	2040	235,862

Source: City of Stockton 2015 UWMP, Table 2-2 and Table 2-3, July 2016.

4.3 Climate

The COSMUD water service area is located in the Central Valley of California and generally experiences hot, dry summers with daytime temperatures well over 100 degrees Fahrenheit (°F). Winter temperatures can drop to 30°F but are generally mild. A majority of the annual average 13.8 inches of rainfall generally falls from November through March. The average reference evapotranspiration (ETo) is 52.3 inches. Table 4-2 summarizes the average temperature and rainfall data for the COSMUD water service area.

Table 4-2. Monthly Average Climate Data

Condition	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Average ETo, inches	1.11	1.92	3.53	5.05	6.78	7.71	7.96	7.03	5.15	3.37	1.67	1.01	52.3
Average Maximum Temperature, °F	53.7	60.6	65.9	72.8	81.0	88.5	94.2	92.7	88.3	78.3	64.4	54.0	--
Average Minimum Temperature, °F	37.6	40.4	42.6	46.1	51.6	56.9	60.4	59.7	57.0	50.2	42.2	37.5	--
Average Rainfall, inches	2.80	2.24	2.03	1.14	0.41	0.10	0.03	0.04	0.25	0.73	1.71	2.30	13.8

Source: City of Stockton 2015 UWMP, Table 2-1, July 2016.

5.0 CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT WATER DEMANDS

Water Code section 10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

The descriptions provided below for the COSMUD water demands have been taken, for the most part, from the 2015 UWMP, which was adopted in July 2016.

5.1 Historical and Existing Water Demand

The COSMUD water demand decreased significantly from 2012 to 2015 due to drought conditions and associated conservation measures. However, water demands have rebounded somewhat in recent years with the end of drought conditions. Table 5-1 shows the COSMUD historical water demand from 2012 to 2019.

Table 5-1. Historical Potable Water Demand (includes Non-Revenue Water), AFY

Condition	2012	2013	2014	2015	2016	2017	2018	2019
Total Water Demand	37,100	36,692	31,603	26,312	27,845	29,241	30,103	30,684

Source: COSMUD Water Production Data (City Monthly Month_Year.xlsx).

5.2 Future Water Demand

The COSMUD water demand is expected to increase as approved projects build out and new developments are approved and constructed in accordance with the City's General Plan. Water demand projections through 2040 (buildout) in the 2015 UWMP are based on the number of connections increasing at the same 1.3 percent growth rate as the population projection and assume unit water demands (per connection) will rebound to approximately 90 percent of 2012 (pre-drought) demands. Projected water demands for the COSMUD water service area are summarized in Table 5-2.

The Proposed Project is not explicitly mentioned in the 2015 UWMP water demand projections since a population-based water demand projection methodology was used. However, the City Community Development Department has included the Proposed Project in its list of planned development projects. In addition, the projected potable water demand from the Proposed Project is small and represents less than 1 percent of the City's 2019 potable water production. Therefore, it can be assumed that the water demands from the Proposed Project would have been implicitly included in the demand projections from the 2015 UWMP.

As shown in Table 5-2, water demands at 2040 are expected to increase by approximately 45 percent from 2019 water use. Based on the significant projected increase in demands from development that remains to be developed, this further indicates that that the 2015 UWMP water demand projections would have included the water demands from the Proposed Project.

Table 5-2. Summary of Future Water Demand (includes Non-Revenue Water), AFY					
Demand Projection Source	2020	2025	2030	2035	2040
2015 UWMP	34,654	36,856	39,217	41,749	44,465
Source: City of Stockton 2015 UWMP, Table 2-1, July 2016.					

5.3 Dry Year Water Demand

For planning purposes and to be conservative, the COSMUD assumes no reduction in water demand during dry years. The adopted Water Shortage Contingency Plan, outlined in Section 7 of the 2015 UWMP, includes a five-stage plan describing specific actions to reduce water demand by up to 50 percent in the event of a water supply shortage or an emergency.

6.0 CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT WATER SUPPLIES

Water Code section 10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).

Water Code section 10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

Water Code section 10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

Water Code section 10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

It is anticipated that the Proposed Project, if approved by the City, would be served from the COSMUD existing and future portfolio of water supplies. The inclusion of existing and planned future water supplies is specifically allowed by the Water Code:

Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).

The water supply for the Proposed Project will have the same water supply reliability and water quality as the water supply available to the other COSMUD existing and future water customers. Proponents of the Proposed Project will provide their proportionate share of required funding to the COSMUD for the acquisition and delivery of treated potable water supplies to the Proposed Project area.

The water supplies needed to serve the Proposed Project (together with existing water demands and planned future uses) are predominantly described in the City's 2015 UWMP. When relevant, the descriptions provided below have been updated with information provided by COSMUD staff.

6.1 Existing Potable Water Supplies

The COSMUD currently receives water supply from the following sources:

- Treated surface water purchased from the Stockton East Water District (SEWD) conveyed from the New Melones (Stanislaus River) and New Hogan (Calaveras River) Reservoirs;
- Surface water from the San Joaquin River that is diverted at the Intake Pump Station on Empire Tract located in Sacramento-San Joaquin Delta (Delta) and treated at the City's Delta Water Treatment Plant (DWTP);
- Surface water from the Mokelumne River diverted and conveyed by Woodbridge Irrigation District (WID), and treated at the City's DWTP; and
- Groundwater pumped from City owned and operated wells from the underlying Eastern San Joaquin Groundwater Subbasin.

Due to differing disinfection processes that present water quality issues related to low chlorine residual and disinfection byproducts, the COSMUD provides water from the DWTP only in its North Stockton water system. Water from SEWD can be conveyed to both North and South Stockton water systems but is currently used in only the South Stockton water system and the City's Walnut Plant service area. Water supply from local groundwater wells are also used to supply both the North and South Stockton water systems. The Proposed Project will be served by the South Stockton water system.

The City does not plan to implement any stormwater recovery systems or divert stormwater runoff as a water source. The COSMUD does not plan to pursue additional water resource exchanges or transfers. The COSMUD has no sources of ocean water, brackish water, or groundwater that provide a viable opportunity for development of desalinated water as a long-term supply.

Each of the COSMUD existing water supplies is described in more detail below. Table 6-1 shows the COSMUD historical use of these existing water supplies.

Table 6-1. Existing (2015) Water Supplies, AFY

Supply Source	Additional Detail on Water Supply	Actual Volume	Total Right or Safe Yield
Purchased Water (treated surface water)	SEWD (does not include water wheeled to County water systems)	4,159	6,380
Purchased Water (untreated surface water)	WID (DWTP intake facility)	4,628	6,500
Surface Water (untreated)	San Joaquin River (DWTP intake facility)	9,428	33,600
Groundwater	Eastern San Joaquin Subbasin	6,628	50,000
	Total	**24,843**	**96,480**

Source: City of Stockton 2015 UWMP, Table 5-6, July 2016.

6.1.1 Purchased Water

The City purchases treated potable water from SEWD and untreated surface water from WID as described below.

6.1.1.1 Stockton East Water District

SEWD is a wholesale water supplier that provides treated potable water to the urban water retailers within the Stockton Metropolitan Area, including COSMUD, Cal Water, and two small maintenance districts in the County (Urban Contractors). SEWD receives and treats surface water from New Melones Reservoir and New Hogan Reservoir through agreements with the United States Bureau of Reclamation (USBR). SEWD has filed several water right applications to divert excess wet weather flow from Calaveras River, Littlejohns Creek, and other tributaries. The applications are currently undergoing the permitting process with the State Water Resources Control Board (State Water Board).

To alleviate severe groundwater overdraft in the region, SEWD constructed the Dr. Joe Waidhofer Water Treatment Plant (DJWWTP) with a capacity of 30 million gallons per day (mgd) in the mid-1970s. Since then the DJWWTP has been expanded to a current capacity of 62 mgd.

6.1.1.2 Woodbridge Irrigation District

WID provides agricultural water supply north of the City boundaries. When the DWTP is curtailed from diverting water from the San Joaquin River, the COSMUD obtains untreated surface water from WID to supplement its water supply. WID's water supply is from the Mokelumne River.

In 2008, COSMUD executed a 40-year purchase agreement with WID for 6,500 AFY for municipal and industrial water use. This water augments supply to the DWTP when supply from the San Joaquin River is not available due to environmental restrictions. The water is conveyed to the DWTP through WID's Wilkerson Canal system and Pixley lateral pipeline for treatment and conveyance to the COSMUD water service area.

The COSMUD 2008 contract with WID includes a provision for increase in water supply as WID-served agricultural lands in the northern part of the City are annexed to the City for municipal and industrial use. Under this contract, an additional 6,500 AFY of WID supply will become available to the City at a rate of 3.0 AFY per acre annexed. WID supply may potentially increase from 6,500 AFY to 13,000 AFY by 2025.[4]

It is assumed that the WID supply is cut back by approximately 30 percent in single dry years and the third year of a dry year period.

6.1.2 Surface Water

Water supply from the San Joaquin River is a recent addition to the COSMUD water supply portfolio since the completion of the DWTP in 2012 and currently provides a significant portion of existing water supplies. The City has a water right to Delta water because portions of the COSMUD water service area fall within the legally defined Delta and area of origin. Water supply from the San Joaquin River and substantially all of the groundwater that the COSMUD pumps are delivered primarily to the North Stockton water system.

[4] Based on 2015 UWMP.

6.1.2.1 Water Right Permit

The City's 1996 water right application with the State Water Board requested an ultimate diversion of 125,900 AFY to address the projected long-term demands through 2050. The State Water Board bifurcated the water right application into two separate applications, Applications 30531A and 30531B.

Application 30531A proposed diversions of up to 33,600 AFY from the Delta and the Place of Use is confined to the City's 1990 General Plan boundary. Through this application, the City was granted a water right permit under Water Code Section 1485. The City's water right permit from the State Water Board was issued on March 8, 2006, under Water Right Permit 21176. Application 30531B, which proposed diversions of up to 92,300 AFY, is currently unpermitted.

Under Water Code Section 1485, Water Right Permit 21176 allows the City to divert from the San Joaquin River as much water as the City's wastewater treatment plant discharges into the San Joaquin River under an indirect potable reuse strategy. The quantity permitted under Water Right Permit 21176 is not restricted as long as the same amount of wastewater is discharged into the San Joaquin River. However, the City's supply from the San Joaquin River is curtailed annually from February to June due to U.S. Department of Fish and Wildlife Service, California Department of Fish and Wildlife, and National Marine Fisheries Service restrictions. When water diversion is curtailed, the COSMUD obtains supplemental water supply from WID as described above.

6.1.2.2 Delta Water Treatment Plant

Subsequent to the State Water Board water right permit issuance for Application 30531A, the COSMUD proceeded with Phase 1 of its Delta Water Supply Project (DWSP) with an initial treatment plant capacity of 30 mgd. The DWTP and associated water supply facilities were completed and commenced operation in 2012. Since completion of the DWTP, the City has exercised its water right to divert water through its intake facility on the San Joaquin River.

6.1.2.3 Future Diversion Increase

The City's application for additional water right, Application 30531B, for up to 92,300 AFY, is currently unpermitted. The City plans to continue the application process for this application in order to meet the ultimate water demand in the COSMUD water service area. Pursuant to the grant of this additional water right by the State Water Board, the DWTP is planned for expansion, as needed, up to 160 mgd. It is assumed that the DWSP supply will be expanded to 50,000 AFY by 2035.

6.1.3 Groundwater

Water Code section 10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

Water Code section 10910(f)(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

Water Code section 10910(f)(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

Water Code section 10910(f)(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

Water Code section 10910(f)(4) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

6.1.3.1 Groundwater Overview

The COSMUD has groundwater wells located in the North Stockton and South Stockton water systems. These wells are used conjunctively to meet peak summer demands or during dry years when available surface water supplies may be limited. The City has partnered with other users through the Eastern San Joaquin Groundwater Basin Authority (GBA) to manage the groundwater basin.

The City has determined that the sustainable groundwater yield is approximately 50,000 AFY. To establish the projected groundwater supply that is reasonably available, the COSMUD assumes that the reasonably available groundwater supply for the current water service area is 23,100 AFY.[5]

[5] Based on 2015 UWMP.

6.1.3.2 Groundwater Basin Management

The groundwater basin underlying the City is the San Joaquin Valley Basin, Eastern San Joaquin Subbasin (5-22.01, Subbasin). The Subbasin is defined by the areal extent of unconsolidated to semi consolidated sedimentary deposits that are bounded by the Mokelumne River on the north and northwest; San Joaquin River on the west; Stanislaus River on the south; and consolidated bedrock on the east.

In 2014, the California legislature enacted the Sustainable Groundwater Management Act (SGMA) in response to continued overdraft of California's groundwater resources. The Subbasin is one of 21 basins and subbasins identified by the California Department of Water Resources (DWR) as being in a state of critical overdraft. SGMA requires preparation of a groundwater sustainability plan to address measures necessary to attain sustainable conditions in the Subbasin. Sustainability is generally defined as long-term reliability of the groundwater supply and the absence of undesirable results.

The City, along with fifteen other groundwater users and groundwater sustainability agencies, formed a GBA in 2017 in response to SGMA. In 2019, the GBA completed the Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan (GSP) to help achieve groundwater sustainability in the Subbasin by 2040. In general, the GSP shows that groundwater elevations have declined since the 1950s. Water quality issues were detected on the west side of the Subbasin, some of which are from wells underlying the City. The GSP outlined the need to reduce overdraft conditions and identified 23 projects for potential development, along with management actions, that either replace groundwater use or supplement groundwater supplies to meet current and future water demands. The list of 23 potential projects included in the GSP represent a variety of project types including direct and in-lieu recharge, intra-basin water transfers, demand conservation, water recycling, and stormwater reuse to be undertaken by the member agencies. The GSP determined an estimated pumping offset and/or recharge need of 78,000 AFY Subbasin-wide to achieve sustainability. This amount may be reevaluated after additional data are collected and analyzed.[6]

From 2020 to 2040, members of the GBA, including the City, will be monitoring and reporting their progress on implementing projects and studies and the impacts of their outreach. Evaluation will be conducted every five years.

6.1.3.3 Groundwater Use

The COSMUD uses groundwater conjunctively with its surface water supply sources, with groundwater generally used to meet increased water demands primarily in the summer months or during dry years when available surface water supplies may be limited. Wells are also depended on for emergency supply in the event of surface water supply interruptions.

[6] Eastern San Joaquin Groundwater Basin Authority. November 2019. *Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan*.

Historically, the local groundwater basin provided 100 percent of the COSMUD water supply. However, with SEWD surface water deliveries beginning in the 1980s and the completion and dedication of the DWTP and associated water supply infrastructure, the reliance on groundwater has significantly reduced. The annual volume of groundwater pumped by the COSMUD is shown in Table 6-2. Groundwater supply provided an average of 4,000 AFY, approximately 14 percent of the total COSMUD water supply between 2015 and 2019.

Table 6-2. Historical Groundwater Volume Pumped by the COSMUD, AFY

Supply Source	2012	2013	2014	2015	2016	2017	2018	2019
Groundwater	3,394	4,085	7,228	6,619	3,748	2,965	3,236	3,778

Source: COSMUD Water Production Data (City Monthly Month_Year.xlsx).

6.1.3.4 Groundwater as a Future Water Supply

In the future, the COSMUD plans to use less groundwater in wet and average years. It plans to continue groundwater use to meet peak demand and in dry years to make up for reductions in surface water deliveries.

6.2 Additional Planned Future Potable Water Supplies

In addition to the existing potable water supplies described above, the COSMUD has additional planned future potable water supplies to meet existing and projected future water demands, including those associated with the Proposed Project. The inclusion of planned future water supplies in this WSA is specifically allowed by the Water Code:

> *Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

As discussed above, the City's application for an additional water right from the San Joaquin River for up to 92,300 AFY, is currently unpermitted. The City plans to pursue this application in the future to meet the COSMUD ultimate water demand. Pursuant to the grant of this additional water right by the State Water Board, the DWTP is planned for several expansion projects, as needed, from the current capacity of 30 mgd, up to 160 mgd. It is assumed that the DWSP supply and DWTP capacity will be expanded to 50,000 AFY and 90 mgd, respectively, by 2035.

6.3 Summary of Existing and Additional Planned Future Water Supplies

Table 6-3 provides a summary of the COSMUD projected water supply entitlements. A discussion of the future anticipated availability of these existing and additional planned future water supplies during dry years is provided in the next section.

Table 6-3. Projected Water Supplies, AFY

Supply Source	Additional Detail on Water Supply	2020		2025		2030		2035		2040	
		Reasonably Available Volume	Total Right or Safe Yield	Reasonably Available Volume	Total Right or Safe Yield	Reasonably Available Volume	Total Right or Safe Yield	Reasonably Available Volume	Total Right or Safe Yield	Reasonably Available Volume	Total Right or Safe Yield
Purchased Water (treated surface water)	SEWD	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Purchased Water (untreated surface water)	WID (DWTP Intake Facility)	6,500	6,500	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Surface Water (untreated)	San Joaquin River (DWTP Intake Facility)	33,600	33,600	33,600	33,600	33,600	33,600	50,000	50,000	50,000	50,000
Groundwater	Eastern San Joaquin Subbasin	23,100	50,000	23,100	50,000	23,100	50,000	23,100	50,000	23,100	50,000
	Total	**69,200**	**96,100**	**75,700**	**102,600**	**75,700**	**102,600**	**92,100**	**119,000**	**92,100**	**119,000**

Source: City of Stockton 2015 UWMP, Table 5-7, July 2016.

Note: A normal year is assumed.

6.4 Water Supply Availability and Reliability

Water Code section 10910 (c)(4) requires that a WSA include a discussion with regard to "whether total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses." Accordingly, this WSA addresses these three hydrologic conditions through the year 2040.

Factors contributing to potential reductions in the COSMUD water supplies include legal limitations due to water rights and contracts that may limit the quantity of water available, environmental constraints, and reductions in availability due to climatic factors. The surface water supplies delivered to the COSMUD is subject to reductions during single and multiple dry years (seasonal and climatic shortages) as discussed below.

Also, in response to drought conditions and the State of Emergency proclaimed by Governor Brown, first in January 2014 and again in April 2015, this WSA provides a discussion of the availability and reliability of the COSMUD available water supplies to meet water demands in the event that the COSMUD surface water supplies are limited under emergency water supply conditions.

6.4.1 Normal, Single Dry, and Multiple Dry Years

The reliability of each of the COSMUD existing and additional planned water supplies and their projected availability during normal, single dry, and multiple dry years, as described in Section 6 of the 2015 UWMP, is summarized in Tables 6-4, 6-5, and 6-6, respectively.

Table 6-4. Normal Year Water Supply, AFY

Supply Source	2020	2025	2030	2035	2040
SEWD	6,000	6,000	6,000	6,000	6,000
WID (DWTP Intake Facility)	6,500	13,000	13,000	13,000	13,000
San Joaquin River (DWTP Intake Facility)	33,600	33,600	33,600	50,000	50,000
Eastern San Joaquin Subbasin	23,100	23,100	23,100	23,100	23,100
Total	**69,200**	**75,700**	**75,700**	**92,100**	**92,100**

Source: City of Stockton 2015 UWMP, Table 6-4, July 2016.

Table 6-5. Single Dry Year Water Supply, AFY

Supply Source	2020	2025	2030	2035	2040
SEWD	4,000	4,000	4,000	4,000	4,000
WID (DWTP Intake Facility)	4,500	9,000	9,000	9,000	9,000
San Joaquin River (DWTP Intake Facility)	33,600	33,600	33,600	50,000	50,000
Eastern San Joaquin Subbasin	23,100	23,100	23,100	23,100	23,100
Total	**65,200**	**69,700**	**69,700**	**86,100**	**86,100**

Source: City of Stockton 2015 UWMP, Table 6-5, July 2016.

Table 6-6. Multiple Dry Years Water Supply, AFY					
Supply Source	2020	2025	2030	2035	2040
First Year					
SEWD	6,000	6,000	6,000	6,000	6,000
WID (DWTP intake facility)	6,500	13,000	13,000	13,000	13,000
San Joaquin River (DWTP intake facility)	33,600	33,600	33,600	50,000	50,000
Eastern San Joaquin Subbasin	23,100	23,100	23,100	23,100	23,100
Total	**69,200**	**75,700**	**75,700**	**92,100**	**92,100**
Second Year					
SEWD	6,000	6,000	6,000	6,000	6,000
WID (DWTP intake facility)	6,500	13,000	13,000	13,000	13,000
San Joaquin River (DWTP intake facility)	33,600	33,600	33,600	50,000	50,000
Eastern San Joaquin Subbasin	23,100	23,100	23,100	23,100	23,100
Total	**69,200**	**75,700**	**75,700**	**92,100**	**92,100**
Third Year					
SEWD	4,000	4,000	4,000	4,000	4,000
WID (DWTP intake facility)	4,500	9,000	9,000	9,000	9,000
San Joaquin River (DWTP intake facility)	33,600	33,600	33,600	50,000	50,000
Eastern San Joaquin Subbasin	23,100	23,100	23,100	23,100	23,100
Total	**65,200**	**69,700**	**69,700**	**86,100**	**86,100**

Source: City of Stockton 2015 UWMP, Table 6-6, July 2016.

6.4.2 Emergency Water Supply Conditions

The COSMUD Water Shortage Contingency Plan is described in detail in Section 7 of the 2015 UWMP. The COSMUD water shortage contingency planning consists of the City's adopted Water Conservation Ordinance (1988) and Water Shortage Emergency Ordinance (1991) in the City Municipal Code Section 13.28. The intent of this planning is to guide staff and customers to help minimize drought or water supply shortage impacts. The City's Drought Contingency Plan identifies drought action levels, appropriate agency response, water demand reduction goals, and provides recommended demand management measures to assist customers in water conservation.

Water shortage emergency response is coordinated with the County's Advisory Water Commission. Actions to be taken in the event of loss of water facilities are incorporated into the City's Emergency Plan. The City's response planning includes the use of standby generators, water purification supplies and equipment, emergency drinking water storage, and water trucks. Water storage, treatment, and pumping facilities have been constructed to meet earthquake safety standards and are inspected regularly. The City has entered into a Memorandum of Understanding (MOU) with Cal WARN for mutual aid and assistance during times of emergency.

The COSMUD also maintains a three-year minimum water supply. Table 6-7 shows the three-year minimum water supply.

Table 6-7. Three-Year Minimum Water Supply, AFY

Condition	2016	2017	2018
Available Water Supply	69,200	69,200	65,200

Source: City of Stockton 2015 UWMP, Table 7-4, July 2016.

7.0 DETERMINATION OF WATER SUPPLY SUFFICIENCY BASED ON REQUIREMENTS OF SB 610

Water Code section 10910 states:

> *10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.*

Pursuant to Water Code section 10910(c)(4), and based on the technical analyses described in this WSA, the total projected water supplies determined to be available for the Proposed Project during normal, single dry, and multiple dry years during a 20-year projection will meet the projected water demand associated with the Proposed Project, in addition to existing and near-term planned future uses.

Table 7-1 summarizes the projected availability of the COSMUD existing and planned future potable water supplies compared with projected water demands in normal, single dry and multiple dry years through buildout.

Table 7-1. Summary of Water Demand Versus Water Supply During Various Hydrologic Conditions

Hydrologic Condition		Normal, Single Dry, and Multiple Dry Years, AFY				
		2020	2025	2030	2035	2040
Normal Year						
Available Water Supply[(a)]		69,200	75,700	75,700	92,100	92,100
Total Water Demand[(b)]		34,654	36,856	39,217	41,749	44,465
Potential Surplus (Deficit)		34,546	38,844	36,483	50,351	47,635
Percent Shortfall of Demand		--	--	--	--	--
Single Dry Year						
Available Water Supply[(c)]		65,200	69,700	69,700	86,100	86,100
Total Water Demand[(b)]		34,654	36,856	39,217	41,749	44,465
Potential Surplus (Deficit)		30,546	32,844	30,483	44,351	41,635
Percent Shortfall of Demand		--	--	--	--	--
Multiple Dry Years						
Multiple Dry Year 1	Available Water Supply[(d)]	69,200	75,700	75,700	92,100	92,100
	Total Water Demand[(b)]	34,654	36,856	39,217	41,749	44,465
	Potential Surplus (Deficit)	34,546	38,844	36,483	50,351	47,635
	Percent Shortfall of Demand	--	--	--	--	--
Multiple Dry Year 2	Available Water Supply[(d)]	69,200	75,700	75,700	92,100	92,100
	Total Water Demand[(b)]	34,654	36,856	39,217	41,749	44,465
	Potential Surplus (Deficit)	34,546	38,844	36,483	50,351	47,635
	Percent Shortfall of Demand	--	--	--	--	--
Multiple Dry Year 3	Available Water Supply[(d)]	65,200	69,700	69,700	86,100	86,100
	Total Water Demand[(b)]	34,654	36,856	39,217	41,749	44,465
	Potential Surplus (Deficit)	30,546	32,844	30,483	44,351	41,635
	Percent Shortfall of Demand	--	--	--	--	--

(a) *Refer to Table 6-4.*

(b) *Refer to Table 5-2.*

(c) *Refer to Table 6-5.*

(d) *Refer to Table 6-6.*

8.0 WATER SUPPLY ASSESSMENT APPROVAL PROCESS

Water Code section 10910 (g)(1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

Water Code section 10911 (b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

As the approving agency for the Proposed Project, the City must adopt this WSA at a regular or special meeting. Furthermore, the City must include this WSA in the EIR that is being prepared for the Proposed Project.

9.0 REFERENCES

Brown and Caldwell. July 2016. *City of Stockton 2015 Urban Water Management Plan*.

BaseCamp Environmental, Inc. November 2020. *Initial Study for the Mariposa Industrial Park, Stockton, CA.*

Eastern San Joaquin Groundwater Basin Authority. November 2019. *Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan*.

Kier & Wright Civil Engineers and Surveyors, Inc. October 2020. *Vesting Tentative Parcel Map.*

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APPENDIX I
HEALTH RISK ASSESSMENT

Draft Analysis of Public Health Risks At a Proposed Industrial Development

Stockton, California

April 23, 2021

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A: Construction and Operational Emissions
B: Detailed Emission Calculations
C: Excerpts of AERMOD Model Reports
D: Excerpts of HARP Risk Model Reports

SECTION 1: INTRODUCTION

1.1 BACKGROUND AND FACILITY LOCATION

Environmental Permitting Specialists (EPS) has been retained by BaseCamp Environmental, Inc., to evaluate public health risks associated with the proposed Mariposa Industrial Park to be located in the unincorporated portions of San Joaquin County adjacent to the Southeastern limits of the City of Stockton.

The project would combine 9 parcels occupying a total of 203.48 acres (see Figures 1-1 and 1-2). The project would develop approximately 3.6 million square feet of light industrial development consisting of "high cube" warehouses. Access to the site would be off Mariposa Road. Project construction would begin in January 2022 with expected completion by the end of 2025. Occupancy is expected in early 2026.

1.2 SCOPE OF HEALTH RISK ASSESSMENT AND SIGNIFICANCE CRITERIA

The objective in preparing this health risk analysis (HRA) is to determine if the construction and occupancy of the proposed project would cause significant public health risks. Three types of health risks are evaluated:

Table 1-1
Types of Health Risks Evaluated

Risk	Exposure Duration	Significance Crieria
Residential Cancer Risk	70 Years	20 in a Million
Worker Cancer Risk	40 Years	20 in a Million
Chronic Non-Cancer Risk	70 Years	Hazard Index > 1
Acute Non-Cancer R1sk	1 Hour	Hazard Index > 1

The criteria for significance appears in the San Joaquin Valley Air Pollution Control District's "Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI 2015) and is discussed Section 5 of this report.

1.3 REPORT ORGANIZATION

This report is divided into six main sections and four Appendices. Immediately following this Introduction, Section 2 discusses the short-term (construction related) and long-term (operational or occupancy phase) emissions associated with the project. This is followed by Section 3 that describes the exposure assessment. This assessment described the data and tools used to determine the dispersion pattern of emissions from the project. This analysis takes into account the location of nearby homes and businesses, local wind patterns and topography. Section 4 describes the risk calculation that combines the results from Sections 2 and 3 to calculate health risks. Section 4 discusses the results and the significance of the

findings. The report concludes with a discussion of uncertainties in the risk calculations. Technical data and calculations appear in the Appendices.

Figure 1-1
Vicinity Map

Source: BaseCamp Environmental, Inc.

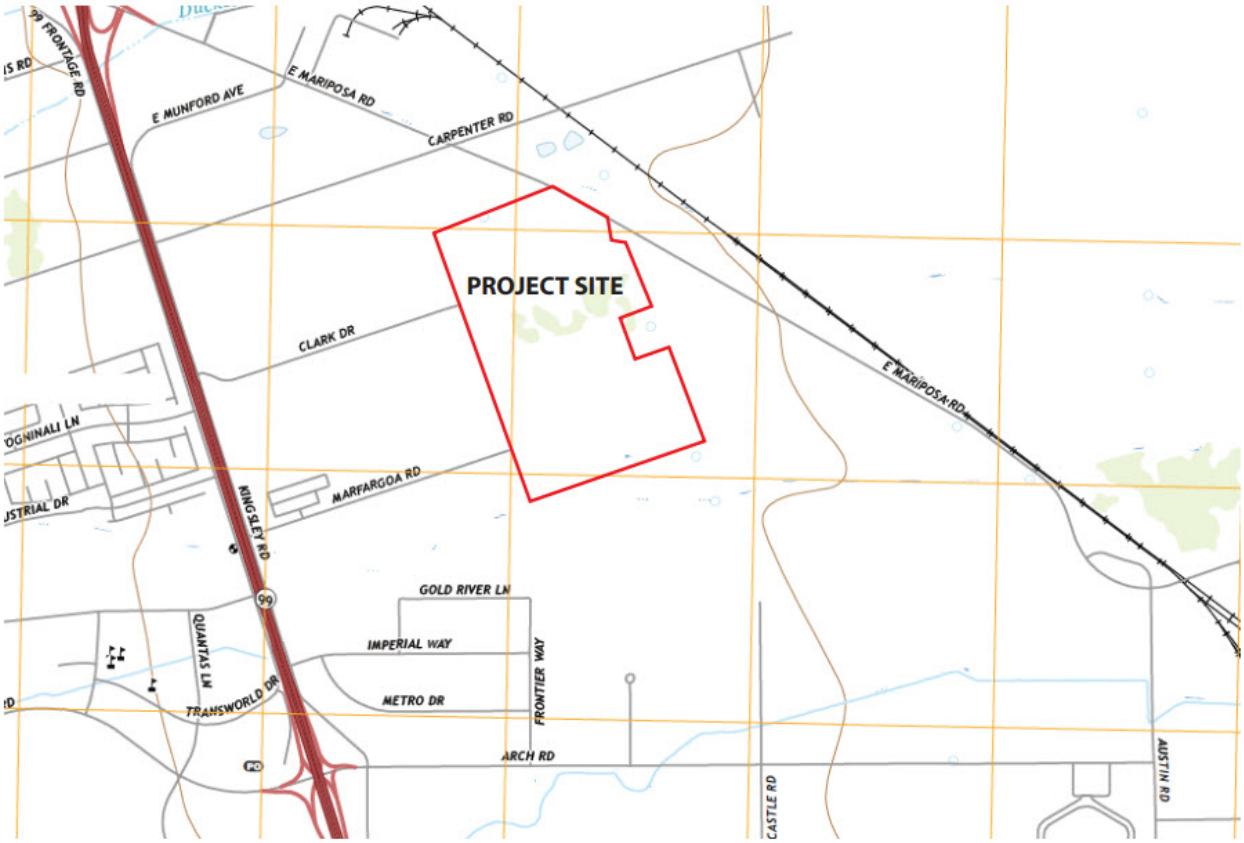


Figure 1-2
Site Map

Source: BaseCamp Environmental, Inc.

SECTION 2: EMISSIONS SUMMARY

EPS evaluated both short-term and long term emissions of toxic air contaminants (TACs) for this project. Short-term emissions are associated with the construction phase and typically last 1 to 4 years depending on the project and construction schedule. Long-term emissions are associated with the operational or occupancy phase.

EPS relied, in part, on air quality analysis completed by BaseCamp Environmental that provided annual emissions during the construction and operational phases. For the construction phase EPS relied on the air quality emissions modeling completed by BaseCamp Environmental staff that provided annual emission rates of exhaust PM-2.5. Annual PM-2.5 is considered a surrogate for diesel particulate matter (DPM) released from construction equipment.

For the operational (occupancy) phase, the BaseCamp data were supplemented with additional data such as traffic studies, emissions from idling of diesel trucks and on-site movement of trucks. These are non-refrigerated warehouses, so the trucks would not be equipped with transport refrigeration units (TRUs). As a result, emissions from TRUs are not included in the current analysis. The sources of emissions associated with the operational phase are summarized in Table 2-1.

2.1 Construction (Short-Term) Emissions

The main toxic air contaminant associated with construction is diesel exhaust consisting of fine particulate matter from construction equipment. As noted previously, emissions of fine particulate matter (Exhaust PM-2.5) from construction equipment are used as a surrogate of DPM.

EPS reviewed the air quality analysis that included emissions modeling reports using the California Emissions Estimation Model (CalEEMod) reports providing daily and annual emissions for the construction and operational phases. Construction would occur between January 2022 to December 2025 for a total of 48 month. Average annual emissions of PM-2.5 during this period were estimated to range from 0.0231 to 0.0530 tons per year with an average of 0.0435 tons per year (87 pounds per year) of PM-2.5 averaged over the four year period. A copy of the CalEEMod report is provided in Appendix A.

2.2 Operational (Long-Term) Emissions

Long-term (occupancy phase) toxic emissions are associated with several on-site and off-site activities. On-site emissions include emissions from truck idling, on-site travel of light duty vehicles and heavy-duty trucks. The analysis is based on a daily traffic volume of 10,572 vehicles per day, seven days per week. 25% of these vehicles are assumed to be heavy duty trucks. The

remainder 75% are assumed to be automobiles and light-duty trucks. A summary of traffic data used in the analysis is summarized in Appendix A (Page 32).

Off-site emissions would be associated with vehicle travel to and from the project site. The main vehicle routes would be West along Mariposa Road (80%) and East along Mariposa Rd (20%). See Figure 2-1.

Off-site vehicle emissions were calculated within ¼ mile of the project boundary. The ¼ mile "zone of influence" is recommended by District staff.

Table 2-1
Summary of Operational (Occupancy Phase) Emission Sources

On-Site Emission Sources	Off-Site Emission Sources
Truck Idle - DPM [emissions based on EMFAC 2017]	Heavy Duty Trucks - DPM, [emissions based on EMFAC 2017]
On-Site Truck Movement DPM [emissions based on EMFAC 2017]	Automobile/Light Truck Travel - various TACs [emissions from CARB 2004]

A summary of operational emissions is provided in Table 2-2. Detailed calculations are provided in Appendix B.

Figure 2-1
Travel Routes Used to Analyze Off-Site Vehicle Emissions

Table 2-1
Summary of Operational Emissions in Pounds per Day

	On-Site	Off-Site[1]			
	HD Truck Idle,etc	HD Trucks	Autos + Light Duty Trucks		
Daily Trips	2,643	2,643	7,929		10571.6
Pollutant					Total (lbs/day)
DPM	14.53	4.46	0		18.99
1,3 Butadiene			5.35		0.03
Acetaldehyde			4.41		0.11
Benzene			72.16		0.49
Formaldehyde			20.51		0.27

Note 1: These emissions are for each 1/4 mile segment shown in Figure 2-1.

SECTION 3: EXPOSURE ASSESSMENT

Exposure assessment involves translating the emission rate (e.g., lbs/hr) of individual toxic air contaminants (presented in Table 2-1) into the concentration (e.g., grams/cubic meter or parts per million) of each toxic air contaminant. The key step in performing an exposure assessment is the application of an air dispersion model. The dispersion model incorporates the local meteorological data (wind speed, wind direction, local temperature, inversion heights, etc.), stack height, exhaust flow characteristics, into the concentration of individual air contaminant. EPA and the SJVAPCD recommended AERMOD dispersion model (Version 19191) was employed in the current exposure assessment. The plot files created using Lakes Environmental (AERMODVIEW) Version 9.8.3 were exported into the HARP model.

This section discusses the model set-up, the extent of the modeling area, and the choice and duration of meteorological data.

3.1 Model Set-Up

The following regulatory default options were used. They are based on the latest EPA guidance on running AERMOD.

- Use of Calm Wind Processing
- Use of Missing Data Processing

For the construction phase, the emissions were modeled as a single area source. For the operational phase, emissions were modeled as a single area source plus two line sources representing roadways leading to the project sites. See Figure 2-1.

Emissions from the logistics park were modeled as a ground based area source. Emissions from vehicle movement were modeled as line sources. The line sources are treated as a series of small area sources in the AERMOD model. Adjustment due to changes in elevation in the modeling area were included using the digital elevation model (DEM)[1] terrain data.

For the construction phase, emissions were assumed to occur between 7 am and 5 pm. For the operational phase, emissions were assumed to occur between 5 am to 7pm. This is consistent with ITE data for high cube warehouses (Need Ref?).

3.2 Modeling Grid and Coordinate System

A rectangular (x-y) Cartesian coordinate system was used. A region 2,500 x 2,500 meters (3,675 meters x 2,450 meters) was used. The modeling region divided into 75 meter x 50 meter cells for a total of 2,500 individual receptors in the vicinity of the project area. In addition to the modeling grid, discrete receptors were located at each of the three residences located South of East Mariposa Road. See Figure 3-1 for a layout of the modeling grid.

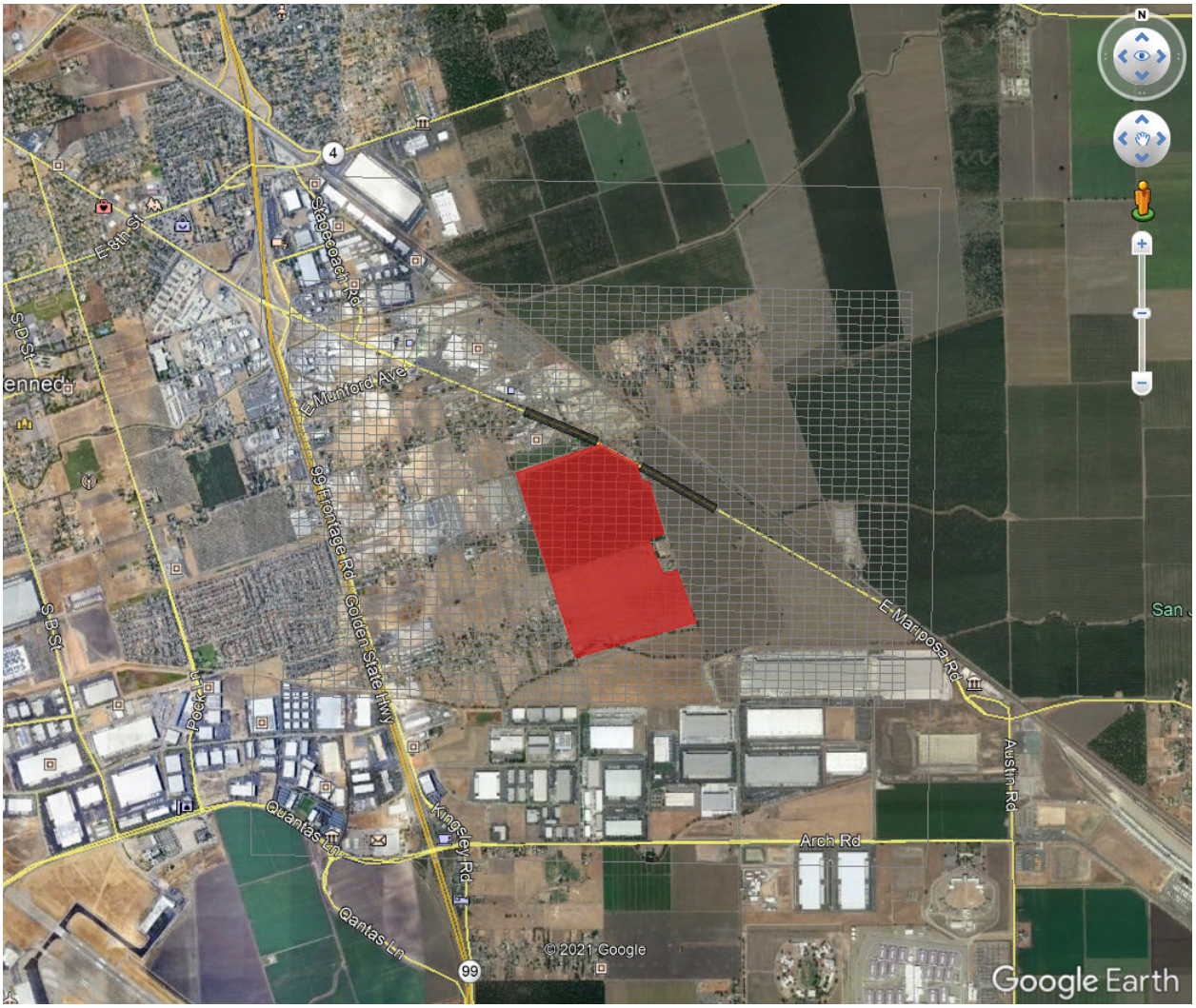
3.3 Meteorological Data

Five years of hourly meteorological data from 2013 to 2017 (total 43,800 hours) was used in the exposure assessment. The surface data (wind speed, wind direction, temperature, etc.) were recorded at Stockton Airport located 2 miles to the Southwest. These data were obtained from the District website and are considered representative of the project site as there are no topographical barriers.

In addition to surface meteorological data, hourly inversion height data are also required. Four years of data from the nearest upper air station (Oakland Airport, CA) were used to develop hourly inversion heights.

[1] Information available at: https://www.usgs.gov/faqs/what-are-digital-elevation-models-dems?qt-news_science_products=0#qt-news_science_products

Figure 3-1
Lay-Out of Modeling Grid and Emission Sources



SECTION 4: HEALTH RISK ANALYSIS

Health risks from exposure to various toxic air contaminants is discussed in this section. The emission rates of various TACs discussed in Section 2 are used as a basis to quantify various health risks. EPS used the HARP2 risk model developed by CARB and the Office of Environmental Health Hazard Assessment (OEHHA)[2] to calculate the actual health risks. As noted in Section 1, three types of health risks were calculated (cancer, chronic non-cancer and acute non-cancer).

4.1 Cancer Risks – Construction Phase

The modeling results for the construction phase are shown in Figure 4-1. This figure shows the spatial distribution of cancer risk in the vicinity of the project site. The results show that the cancer risk varies between 3.9 to less than 0.1 cancers per million depending on location. The maximum cancer risk at occurs at the residence adjacent to the project site. The cancer risk at this location is 3.93 cancers per million.

4.2 Cancer Risks – Operational Phase

The spatial distribution of residential (70 year) cancer risk is shown in Figures 4-2 and 4-3. The results show that maximum residential cancer risk is 10.49 at a residences along East Mariposa Road. The maximum worker risk varies between 0.78 to less than 0.01 cancer per million. The maximum worker risk is South of Eat Mariposa Road as shown in Figure 4-4.

The maximum non-cancer risks at this location are calculated in terms of a hazard index (HI) as follows:

Maximum Chronic Hazard Index (HI): 0.002

Maximum Acute Hazard Index (HI): <0.0001

Excerpts of the HARP2 model showing the calculated health risks are provided in Appendix C.

[2] OEHHA Hotspots Analysis and Reporting Program (HARP) available at: https://ww3.arb.ca.gov/toxics/harp/harp.htm

Figure 4-1
Spatial Variation of Residential Cancer Risk per Million
Construction Phase

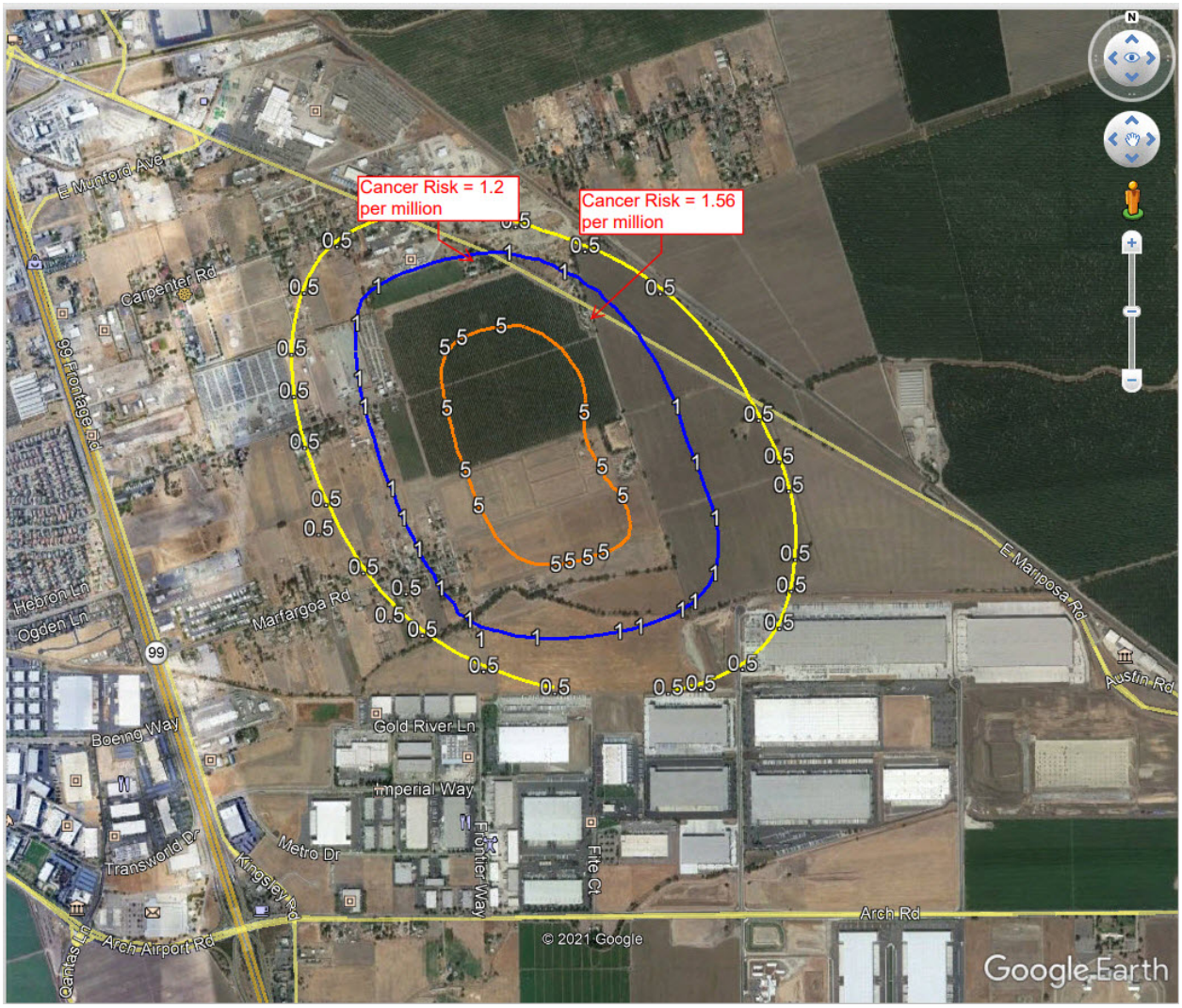


Figure 4-2
Spatial Variation of Residential Cancer Risk per Million
Operational Phase

Figure 4-3
Spatial Variation of Residential Cancer Risk per Million
Operational Phase (Close-Up)

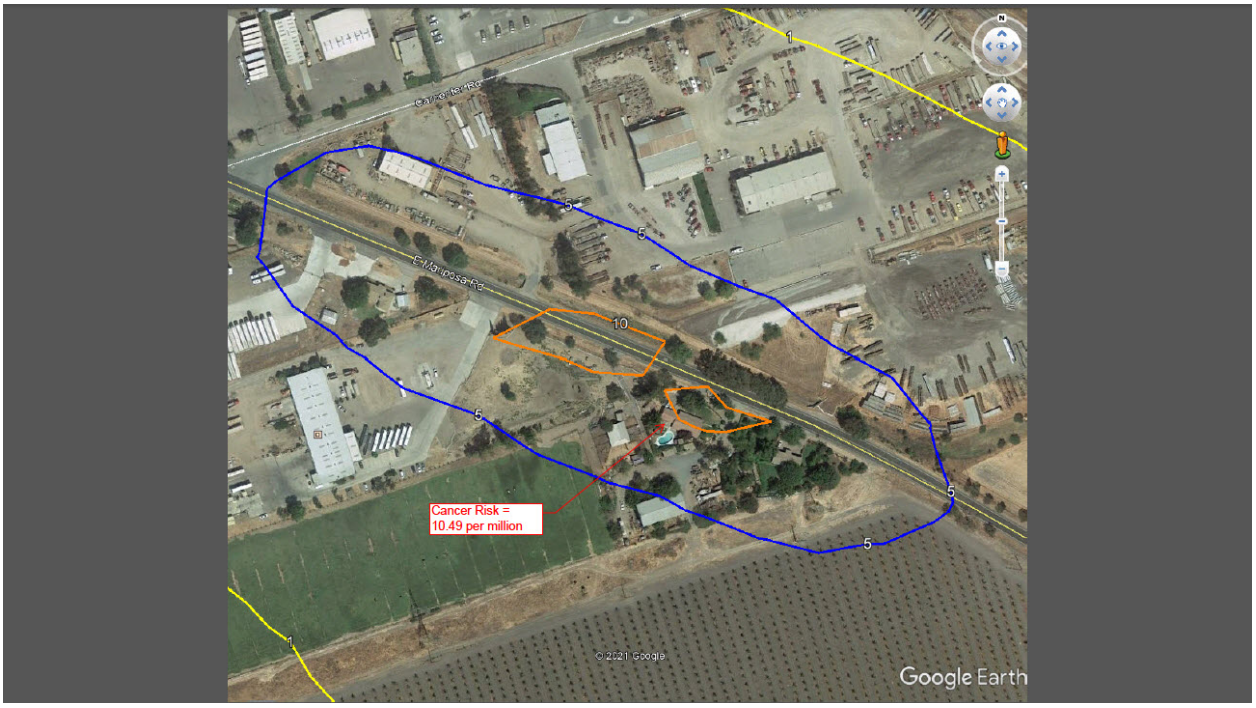
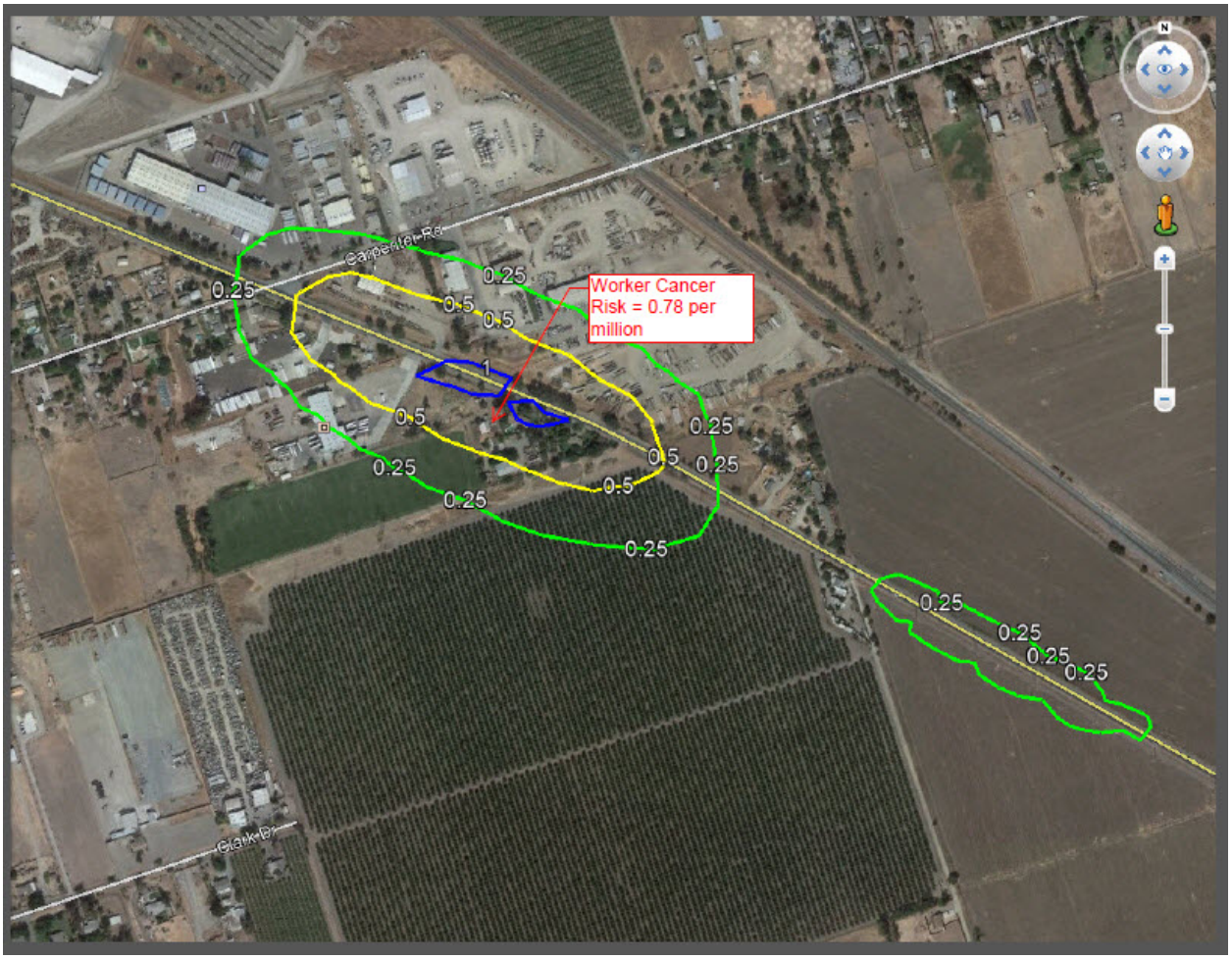


Figure 4-4
Spatial Variation of Worker Cancer Risk per Million
Operational Phase



SECTION 5: RESULTS AND CONCLUSIONS

The results of the current analysis are summarized in Table 4-1. These results demonstrate that public health risks associated with the construction or operation of the proposed Mariposa Industrial Project would not lead to significant public health risks. Note that there are no chronic or acute recommended exposure levels for DPM, therefore, acute and chronic hazard indices were not calculated.

Table 4-1
Summary of Maximum Project Level Health Risks

Risk Metric	Construction Phase	Operational (Occupancy) Phase	Significance Threshold	Significant?
Maximum Residential Cancer Risk	1.56 (per million)	10.45 (per million)	20 (per million)	No
Maximum Worker Cancer Risk	0.78	0.5 (per million)	20 (per million)	No
Maximum Chronic Hazard Index	N/A	0.002	1.0	No
Maximum Acute Hazard Index	N/A	<0.0001	1.0	No

Note 1. Worker risk was not evaluated for short-term exposure. Per District Guidance, worker exposure assumed 40 years minimum exposure.

The risk assessment process contains numerous, conservative assumption to ensure that public health risks are not underestimated. These assumptions are related to the exposure duration, toxicity data and use of Gaussian type statistical atmospheric dispersion models. For example, it is very unlikely any individual would remain at the same location for 70 years. As a result, this assumption substantially overstated the exposure and the health risks presented in this report. This is discussed in the next section.

SECTION 6: UNCERTAINTIES IN RISK EVALUATION

The HRA presented in this report contains numerous assumptions and uncertainties associated with estimates of emissions, dispersion modeling and risk characterization. The estimated risks in this HRA are based primarily on a series of conservative assumptions related to predicted environmental concentrations, exposure and chemical toxicity. As a result, the actual risks to nearby residents or workers would be 10 to 50 times lower than estimates presented in this report. These assumptions and uncertainties are discussed in this section

Emissions Estimates

For long-term risk evaluation, EPS used the DPM emissions assuming an aggregate fleet for 2023 heavy duty trucks. The HRA assumes that the emission rates will remain unchanged over the next 70 years. This substantially overstates the actual emissions over this period. As in the past, the emission rates of DPM will continue to declined. This decline will continue due to new regulations being considered as well as introduction of electric trucks.

Estimate of Exposure Concentration

The algorithms used in the AERMOD dispersion model tend to over-predict the actual concentration. According to the EPA[3], errors of +/- 10% to 40% are typical for the highest predicted concentrations due to limitations in the algorithms. As a result, the methodology used by EPS will overstate the actual concentration of DPM.

Exposure Assumptions

The 2015 OEHHA Guidelines assume that individuals spend 73% of the time at home. This is very conservative in that residents near the project site are likely to stay home every day for 70 years. This overestimate of exposure directly leads to an over estimate of cancer risk

[3] USEPA 2005: "Guidelines on Air Quality Models (Revised), 40 CFR 51, Appendix W. Available at: https://www.epa.gov/ttn/scram/guidance_permit.htm#appw

SECTION 7: REFERENCES

CalEPA (2012) "Technical Support Document for Exposure Assessment and Stochastic Analysis. Office of Environmental Health Hazard Assessment. California Environmental Protection Agency, August 2012.

CARB (2003) HARP User's Guide. Available at: http://www.arb.ca.gov/toxics/harp/harp.htm December 2003.

CARB (2004) Final Report to Research Division "Internal Combustion Engines (ICE) Air Toxics Emissions" Prepared by Zhu, Durbin, Norbeck and Cocker (July 2004).

EPA (2004) "User's Guide for the AMS/EPA Regulatory Model – AERMOD". EPA Document No. EPA=454/B-03-001 September 2004.

OEHHA (2014) Consolidated Table of Approved health Risk Values. Cal EPA, Office of Environmental Health Hazard Assessment. Available at: file:///C:/2014%20Feather%20River%20AQMD/Hollycross%20Cemetary/OEHHA%20contable.pdf. July 3, 2014.