

# Appendix A

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## Notice of Preparation and Comments

2020 Revised Notice of Preparation

2016 Notice of Preparation

Compiled Notice of Preparation Comments



**REVISED NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING FOR THE YOSEMITE AVENUE - GARDNER AVENUE TO HATCH ROAD ANNEXATION PROJECT**

**PUBLIC COMMENT PERIOD  
MAY 14, 2020 through JUNE 15, 2020**

In December 2016, as the Lead Agency, the City of Merced (City) issued a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Yosemite Avenue - Gardner Avenue to Hatch Road Annexation Project (proposed project). The City also held a public scoping meeting on December 15, 2016. Since that time the project applicant, University Village Merced, LLC, on behalf of Cliff Caton, property owner, has increased the number of residential units from 330 to 540 and increased the amount of parking. Therefore, the City is issuing a revised NOP. As the project location, land uses, and general scope has not substantially changed, the City will not hold another public scoping meeting.

The EIR for the proposed project will be prepared in compliance with the California Environmental Quality Act (CEQA). Under CEQA, upon deciding to prepare an EIR, the City, as lead agency, must issue an NOP to inform trustee and responsible agencies, and the public, of the decision to undertake preparation of an EIR. The purpose of the NOP is to provide information describing the proposed project and its potential environmental effects to those who may wish to comment regarding the scope and content of the information to be considered in the EIR.

The project includes a total of 70 acres with approximately 30 acres designated for The Crossings Mixed-Use Housing and Commercial development. The EIR will evaluate potential environmental effects associated with implementation of The Crossings Housing and Commercial component of the proposed project on a project level, consistent with Section 15161 of the CEQA Guidelines. The remaining 40-acre portion will be evaluated on a program level, consistent with Section 15168 of the CEQA Guidelines. The project description, location, and environmental issue areas that may be affected by future development of the proposed project are described below. The EIR will evaluate the project-specific and cumulative impacts, identify feasible mitigation measures to reduce or avoid significant project impacts, and identify a reasonable range of alternatives to the proposed project.

**SUBMITTING COMMENTS**

The City is soliciting comments from public agencies, organizations, and members of the public regarding the scope and content of the EIR, and the environmental issues and alternatives to be addressed in the EIR. Public agencies may need to use the EIR when considering permitting or other approvals that are germane to the agencies' responsibilities in connection with the project.

Comments as to the appropriate scope of analysis in the EIR are invited from all interested parties. Written comments or questions concerning the EIR for the proposed project should be directed to Julie Nelson, Associate Planner (address below). Due to time limits mandated by state law, public agencies and other interested parties must submit any comments in response to this notice at the earliest possible date, but not later than **5:00 p.m., June 15, 2020**, to the address shown

below (postmarks are acceptable). If you wish to be placed on the notification list for this project, or if you have any questions or need additional information, please contact Ms. Nelson.

City of Merced Planning Division, Attn: Julie Nelson, Associate Planner  
678 West 18th Street, Merced, CA 95340  
Phone: (209) 385-6967, Fax: (209) 725-8775  
email: Nelsonj@cityofmerced.org

## **PROJECT LOCATION**

The approximately 70-acre project site is located in Merced County on the north side of E. Yosemite Avenue between N. Gardner Avenue and Hatch Road (Exhibit 1). The site is unincorporated land contiguous with the City of Merced and is located approximately three miles from the UC Merced campus. The project site is bounded by the City on two sides and would be annexed into the City to receive full urban services.

## **PROJECT DESCRIPTION**

The City is proposing to annex the entire 70-acre project site into the City limits. The project includes The Crossings housing and retail component that proposes to provide multi-family housing and commercial retail uses on a 30-acre portion of the site at the northeast corner of E. Yosemite Avenue and N. Gardner Avenue (Exhibit 2). No development is proposed on the remaining 40 acres that surround the 30-acre portion. The City is proposing land use and zoning designations of Urban Transition (U-T) and Low Density Residential (R-1-10) for this land.

University Village Merced, LLC (project applicant) is requesting entitlements to allow construction of the student housing and retail component of the project. A general overview of the project elements is included below (Exhibit 3).

- 540 residential units in 20 3-story buildings
- 111,000 square feet of mixed-use structures (66,000 square feet of retail and 45,000 square feet of residential) in 5 2-story buildings providing 30 additional units (12 apartments and 18 extended stay units)
- 13,700 square foot clubhouse
- 1,223 parking spaces
- Stormwater retention basin

## **REQUESTED ENTITLEMENTS**

The proposed project requires the following discretionary approvals from the City of Merced and the Merced County Local Agency Formation Commission (LAFCo).

- Approval from Merced County LAFCo to annex 70 acres to the City of Merced;
- Pre-zoning to Planned Development (P-D), Low Density Residential (R-1-10), and Urban Transition (U-T);
- General Plan Amendment to change the land use designations from Rural Residential (RR) to Neighborhood Commercial (CN) and High-Medium Density Residential (HMD);
- Site utilization plan for the Crossings Residential and Mixed-Use Development portion of the site;
- Minor subdivision map;

- Approval of a Development Agreement for the Crossings Residential and Mixed-Use Development portion; and
- Certification of the EIR.

Environmental documentation for this project will be available for review at the City's website: <https://www.cityofmerced.org/>.

Depending on public health protection measures, hard copies of environmental documentation for the project *may* be available for review at the City's Planning Division, 678 West 18th Street, Second Floor, Merced, CA 95340, during regular business hours.

## **POTENTIAL ENVIRONMENTAL EFFECTS AND SCOPE OF THE EIR**

The EIR will evaluate whether the proposed project may potentially result in one or more significant environmental effects, which will be evaluated in the relevant EIR sections listed below.

- |  |   |
|--|---|
| • Aesthetics, Light and Glare              | • Hydrology, Drainage and Water Quality |
| • Agricultural Resources                   | • Land Use and Demographics             |
| • Air Quality and Greenhouse Gas Emissions | • Noise                                 |
| • Biological Resources                     | • Utilities and Service Systems         |
| • Cultural Resources                       | • Transportation                        |

## **EFFECTS FOUND TO BE LESS THAN SIGNIFICANT**

Unless specific comments are received during the NOP public comment period that raise specific concerns or request an issue be addressed unique to the project site, the following issues are anticipated to be less than significant and will be addressed in the Initial Study.

### **Geology, Soils, and Seismicity**

The project site contains flat relief and no known earthquake faults exist in the project vicinity.

These conditions make it unlikely that the proposed project would be exposed to significant hazards during a seismic event. Furthermore, the proposed project's construction activities would involve grading and soil engineering activities intended to abate any adverse soil conditions that may exist and would ensure that project buildings have adequate structural support. No impacts would occur.

### **Hazards and Hazardous Materials**

The project does not propose uses that would require the generation or use of hazardous materials and would not create a risk to the public or to schools in the project vicinity. The project site is not within two miles of an airport and would not interfere with an adopted emergency evacuation plan. It is anticipated that impacts would be less than significant.

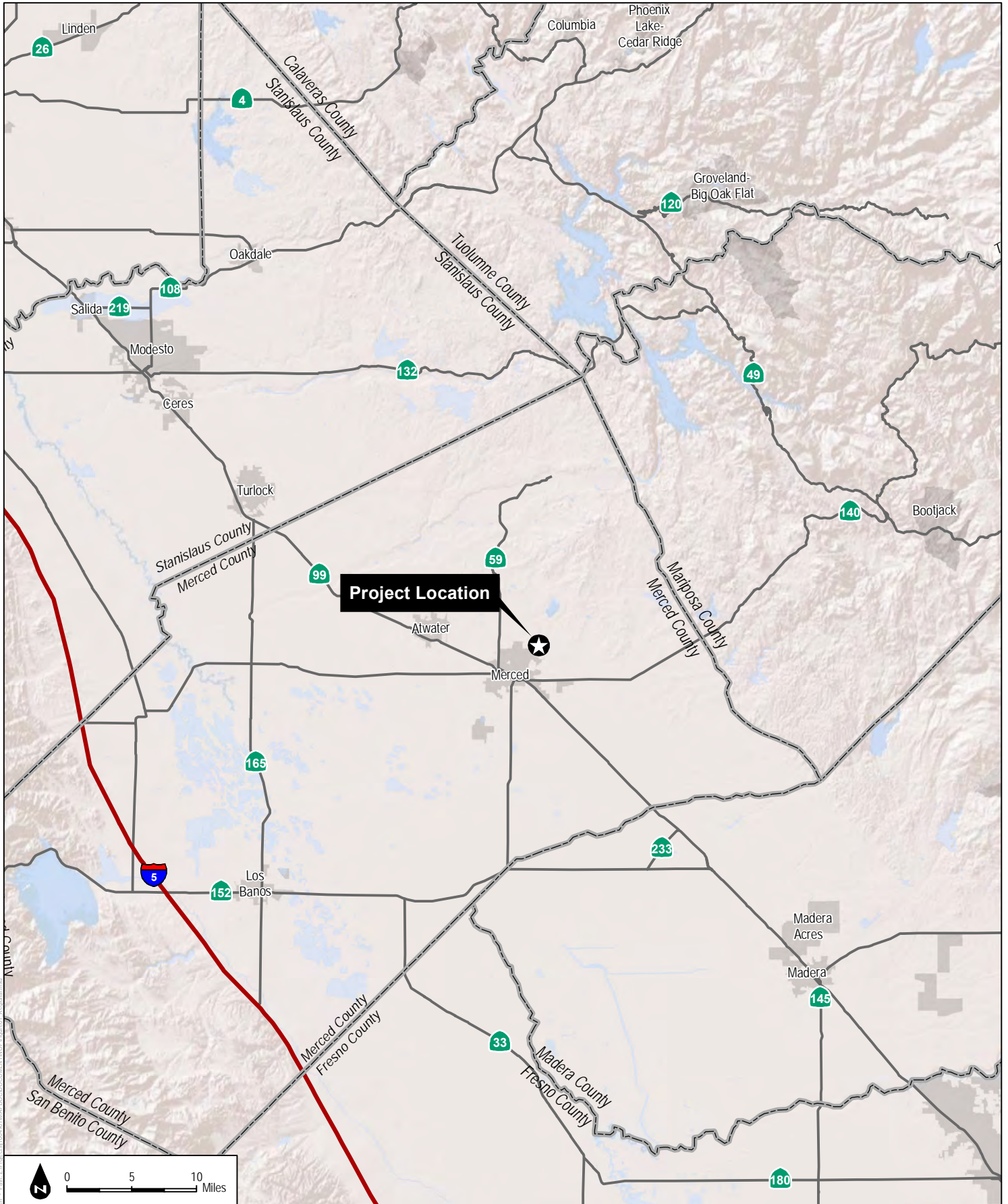
### **Mineral Resources**

The project site does not support mineral extraction operations. Neither the State of California nor the City of Merced designates the project site as a location of known mineral deposits. These

conditions preclude the possibility of a loss of mineral resources of statewide or local importance. No impacts would occur.

### **Population and Housing**

The project would introduce new residents into the City of Merced but would not displace any housing or require the construction of housing elsewhere. It is anticipated there would be no impacts to housing. Growth associated with the project and potential growth inducing effects will be addressed in the EIR.



SOURCE: ESRI, County of Merced 2014



Yosemite Avenue - Gardner Avenue to Hatch Road Annexation Project

**EXHIBIT 1**  
Regional Map





**NOTICE OF PREPARATION OF AN  
ENVIRONMENTAL IMPACT REPORT AND  
SCOPING MEETING FOR THE  
YOSEMITE AVENUE - GARDNER AVENUE TO  
HATCH ROAD ANNEXATION PROJECT**

**PUBLIC COMMENT PERIOD  
DECEMBER 9, 2016 through JANUARY 9, 2017**

As the Lead Agency, the City of Merced (City) will prepare an Environmental Impact Report (EIR) for the Yosemite Avenue - Gardner Avenue to Hatch Road Annexation Project (proposed project). The EIR is being prepared in compliance with the California Environmental Quality Act (CEQA). Under CEQA, upon deciding to prepare an EIR, the City, as lead agency, must issue a Notice of Preparation (NOP) to inform trustee and responsible agencies, and the public, of the decision to undertake preparation of an EIR. The purpose of the NOP is to provide information describing the proposed project and its potential environmental effects to those who may wish to comment regarding the scope and content of the information to be considered in the EIR.

The proposed project was initiated by University Village Merced, LLC, on behalf of Cliff Caton, property owner. The EIR will evaluate potential environmental effects associated with implementation of the University Village Merced Student Housing and Commercial component of the proposed project on a project level, consistent with Section 15161 of the CEQA Guidelines. The remaining 40 acre portion would be evaluated on a program level, consistent with Section 15168 of the CEQA Guidelines. The project description, location, and environmental issue areas that may be affected by future development of the proposed project are described below. The EIR will evaluate the project-specific and cumulative impacts, identify feasible mitigation measures to reduce or avoid significant project impacts, and identify a reasonable range of alternatives to the proposed project.

**SUBMITTING COMMENTS**

The City is soliciting comments from public agencies, organizations, and members of the public regarding the scope and content of the EIR, and the environmental issues and alternatives to be addressed in the EIR. Public agencies may need to use the EIR when considering permitting or other approvals that are germane to the agencies' responsibilities in connection with the project.

Comments as to the appropriate scope of analysis in the EIR are invited from all interested parties. Written comments or questions concerning the EIR for the proposed project should be directed to Bill King, Principal Planner (address below). Due to time limits mandated by state law, public agencies and other interested parties must submit any comments in response to this notice at the earliest possible date, but not later than **5:00 p.m., January 9, 2017**, to the address shown below (postmarks are acceptable). If you wish to be placed on the notification list for this project, or if you have any questions or need additional information, please contact Mr. King.

City of Merced Planning Division, Attn: Bill King, Principal Planner  
678 West 18th Street, Merced, CA 95340  
Phone: (209) 385-4768, Fax: (209) 725-8775  
email: KingB@cityofmerced.org



## **PUBLIC SCOPING MEETING**

A public scoping meeting will be held on Thursday, December 15, 2016, from 4:30 p.m. to 6:00 p.m. at the Sam Pipes Room in the Merced Civic Center, located at 678 W. 18th Street, Merced. Trustee and responsible agencies, as well as members of the public are invited to attend to learn more about the project and to provide written input on the scope of the EIR. The scoping meeting will have an “open house” format, so participants can attend at any point between 4:30 and 6:00 p.m. Participants arriving after 4:30 p.m. will not miss any meeting content.

## **PROJECT LOCATION**

The approximately 70-acre project site is located in Merced County on the north side of E. Yosemite Avenue between N. Gardner Avenue and Hatch Road (Exhibit 1). The site is unincorporated land contiguous with the City of Merced and is located approximately three miles from the UC Merced campus. The project site is bounded by the City on two sides and would be annexed into the City to receive full urban services.

## **PROJECT DESCRIPTION**

The City is proposing to annex the entire 70-acre project site into the City limits. The project includes the University Village Merced student housing and retail component that proposes to provide off-campus student housing and commercial retail uses on a 30-acre portion of the site at the northeast corner of E. Yosemite Avenue and N. Gardner Avenue (Exhibit 2). No development is proposed on the remaining 40 acres that surround the 30-acre portion. The City is proposing land use and zoning designations of Urban Transition (U-T) and Low Density Residential (R-1-10) for this land.

University Village Merced, LLC (project applicant) is requesting entitlements to allow construction of the student housing and retail component of the project. A general overview of the project elements is included below (Exhibit 3).

- 330 residential units in 22 three-story buildings;
- 813 spaces for student parking;
- An approximately 10,000 square foot (sf) single-story clubhouse/administration building, with gymnasium and study/lounge area;
- Outdoor recreation area and amenities including landscaping;
- 66,000 sf of commercial retail space in five single-story buildings with the potential for 18 extended stay units and 12 apartments above;
- 323 retail parking spaces; and
- Stormwater retention basin accommodating runoff from all 30 acres.

## **REQUESTED ENTITLEMENTS**

The proposed project requires the following discretionary approvals from the City of Merced and the Merced County Local Agency Formation Commission (LAFCo).

- Approval from Merced County LAFCo to annex 70 acres to the City of Merced;
- Pre-zoning to Planned Development (P-D), Low Density Residential (R-1-10), and Urban Transition (U-T);
- General Plan Amendment to change the land use designations from Rural Residential (RR) to Neighborhood Commercial (CN) and High-Medium Density Residential (HMD);

- Site utilization plan for the University Village Merced portion of the site;
- Minor subdivision map;
- Approval of a Development Agreement for the University Village Merced portion; and
- Certification of the EIR.

**POTENTIAL ENVIRONMENTAL EFFECTS AND SCOPE OF THE EIR**

The EIR will evaluate whether the proposed project may potentially result in one or more significant environmental effects, which will be evaluated in the relevant EIR sections listed below.

- |  |   |
|--|---|
| • Aesthetics, Light and Glare              | • Hydrology, Drainage and Water Quality |
| • Agricultural Resources                   | • Land Use and Demographics             |
| • Air Quality and Greenhouse Gas Emissions | • Noise                                 |
| • Biological Resources                     | • Utilities and Service Systems         |
| • Cultural Resources                       | • Transportation                        |

**EFFECTS FOUND TO BE LESS THAN SIGNIFICANT**

Unless specific comments are received during the NOP public comment period that raise specific concerns or request an issue be addressed unique to the project site, the following issues are anticipated to be less than significant and will be addressed in the Initial Study.

**Geology, Soils, and Seismicity**

The project site contains flat relief and no known earthquake faults exist in the project vicinity.

These conditions make it unlikely that the proposed project would be exposed to significant hazards during a seismic event. Furthermore, the proposed project’s construction activities would involve grading and soil engineering activities intended to abate any adverse soil conditions that may exist, and would ensure that project buildings have adequate structural support. No impacts would occur.

**Hazards and Hazardous Materials**

The project does not propose uses that would require the generation or use of hazardous materials and would not create a risk to the public or to schools in the project vicinity. The project site is not within two miles of an airport and would not interfere with an adopted emergency evacuation plan. It is anticipated that impacts would be less than significant.

**Mineral Resources**

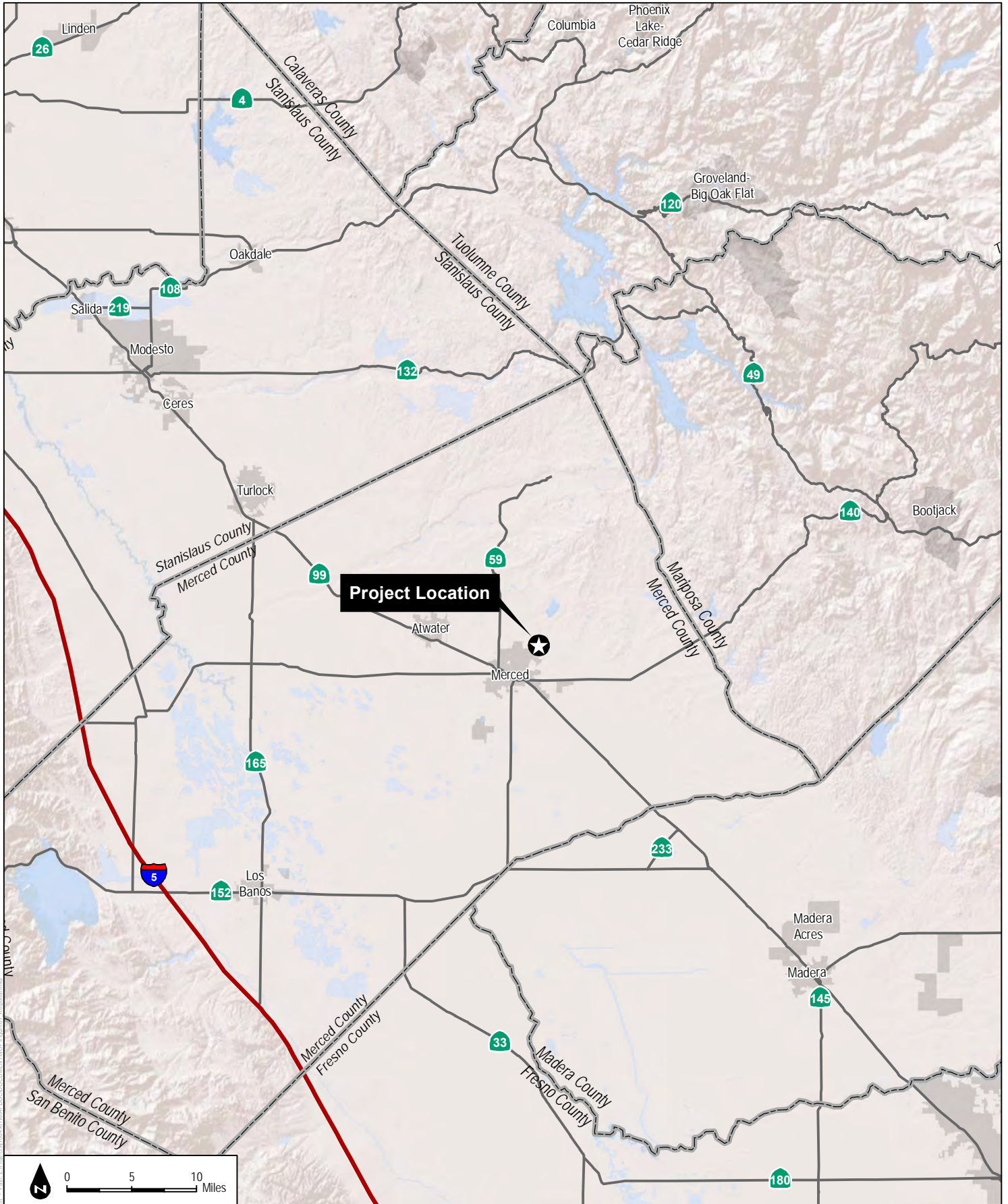
The project site does not support mineral extraction operations. Neither the State of California nor the City of Merced designates the project site as a location of known mineral deposits. These conditions preclude the possibility of a loss of mineral resources of statewide or local importance. No impacts would occur.

**Population and Housing**

The project would introduce new residents into the City of Merced, but would not displace any housing or require the construction of housing elsewhere. It is anticipated there would be no

impacts to housing. Growth associated with the project and potential growth inducing effects will be addressed in the EIR.

Environmental documentation for this project will be available for review at the City's Planning Division, 678 West 18th Street, Second Floor, Merced, CA 95340, during regular business hours and online at: <https://www.cityofmerced.org/>.



SOURCE: ESRI, County of Merced 2014



Yosemite Avenue - Gardner Avenue to Hatch Road Annexation Project

**EXHIBIT 1**  
Regional Map





- LEGEND**
- COMMERCIAL/RETAIL SPACE (1 STORY - 66,000 SF)
  - LEASING OFFICE/ CLUB HOUSE/ GYMNASIUM/ STUDY LOUNGE (1 STORY)
  - RESIDENTIAL BUILDINGS  
22 BLDGS - 24,895 SF EACH  
(2 BEDROOM, 3 BEDROOM & 4 BEDROOM)



SOURCE: Hochhauser Blatter 2016



Yosemite Avenue - Gardner Avenue to Hatch Road Annexation Project

**EXHIBIT 3**  
**Site Plan**

## Compiled Notice of Preparation Comments

To: Merced City Planning Department

EIR Committee / Bill King

Re: University Village Project

Date: December 26, 2016

From: Jim and Emily Archer

Dear Mr. King:

We are writing this in regards to the proposed University Village project that is proposed for the area of the Yosemite and Parson /Gardner intersection. Although we support the vision of the project and it's need for this community, we oppose the location because of the inconsistency with the surrounding developments. The existing 700 – 800 single residency houses could be drastically effected by the proposed project. For many years people purchased their homes based upon the knowledge that the vacant property adjacent to the current developments was zoned low impact, single family homes. If this property is rezoned to the developer's request it will seriously affect the whole area. This is the wrong location for a fine project!

There are several reasons that we would request the committee to consider. Here are a few:

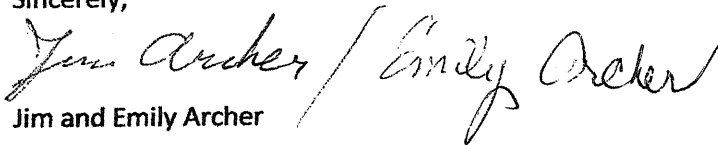
1. Traffic – At the morning and afternoon commute times these streets and that intersection are very near to the saturation point. They could possibly accept traffic from a housing project, but, not from an additional 1,400 vehicles. At present, there are times when traffic is backed up past and beyond the Chaparral intersection. It is often impossible to make a left hand turn on to Yosemite from the Silverado subdivision at several times during a work week day. Additional vehicles and the noise from them will cause a disturbing element to the current residents.
2. Noise – An additional 1,400 potential individuals in a concentrated area will certainly generate additional sound challenges for the existing residents in the adjacent homes, especially when weather is conducive to outdoor activities. Vehicle traffic as well as outdoor recreation at the proposed Village could raise the sound pollution quotient to near unacceptable levels.
3. Illumination – The required lighting and illumination from 3 story structures could intrude on residents nearby since most homes are 1 and 2 stories. Besides the proposed development's lighting, there will need to be street lights, stop lights and caution warnings added to the changes, all of which would affect the existing residents adversely.
4. Location – While almost everyone we have talked to about the proposed project agree that it is necessary and well thought out, however, almost everyone has been concerned about its location and the change in zoning that would be required. Many are worried about their property values and the effect upon their quality of life. It would result in a major change in the current well-being of these communities. As one resident said, "It would be like dropping a small

Casino in the middle of our lives” and we think that comment sums up our prospective on the issue.

5. Inconsistency – This project does not fit the area. The only structure in this area of multi-stories above 2 stories is the hospital and there are no 3 story residences within miles of the proposed development. The additional traffic, the noise/sound, the night illumination and the increase in emergency vehicle responses are all inconsistent with the existing community.
  
6. Marijuana – Finally, there is no evidence to determine what the current change in California’s Marijuana laws will have on a concentrated population of 1,000 to 1,400 students since it has never been experienced before. Such issues as collective behaviors of large groups, frequency of required responses by fire and law enforcement personal, invited and uninvited “guests” at social functions and increase ingress and egress at the Yosemite and Parson/Gardner traffic patterns have yet to be determined.

We appreciate the opportunity to submit our opinions and viewpoints and we hope this information is helpful in determining the outcome.

Sincerely,

Handwritten signature of Jim and Emily Archer in cursive script.

Jim and Emily Archer

1730 Pebble Beach Place

Merced, Ca

Cc: Council members





State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Central Region  
1234 East Shaw Avenue  
Fresno, California 93710  
(559) 243-4005  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

**GAVIN NEWSOM, Governor**  
**CHARLTON H. BONHAM, Director**



July 20, 2020

Julie Nelson, Associate Planner  
City of Merced  
678 West 18<sup>th</sup> Street  
Merced, California 95340  
Nelsonj@cityofmerced.org

**Subject: Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project  
(Project)  
Notice of Preparation (NOP)  
SCH No. 2016121029**

Dear Ms. Nelson:

The California Department of Fish and Wildlife (CDFW) received a NOP for a draft Environmental Impact Report from the City of Merced for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.<sup>1</sup>

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

## **CDFW ROLE**

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA,

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<sup>1</sup> CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Julie Nelson, Associate Planner  
City of Merced  
July 20, 2020  
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CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

**Nesting Birds:** CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

In this role, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on Project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

## **PROJECT DESCRIPTION SUMMARY**

**Proponent:** University Village Merced, LLC

**Objective:** The City of Merced proposes to annex a 70-acre site into the City limits. The Project includes The Crossings housing and retail component that proposes to provide multi-family and commercial retail uses on a 30-acre portion of the site. No development is proposed on the remaining 40 acres that surround the 30-acre portion. The City is proposing land use and zoning designations of Urban Transition and Low Density Residential for this land.

University Village Merced, LLC (Project applicant) is requesting entitlements to allow construction of the student housing and retail component of the Project as follows:

- 540 residential units in 20 3-story buildings

Julie Nelson, Associate Planner  
City of Merced  
July 20, 2020  
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- 111,000 square feet of mixed-use structures (66,000 square feet of retail and 45,000 square feet of residential) in 5 2-story buildings providing 30 additional units (12 apartments and 18 extended stay units)
- 13,700 square foot clubhouse
- 1,223 parking spaces
- Stormwater retention basin

**Location:** The approximately 70-acre Project site is located in Merced County on the north side of East Yosemite Avenue between North Gardner Avenue and Hatch Road. The site is unincorporated land contiguous with the City of Merced and is located approximately three miles from the University of California, Merced campus. The Project site is bounded by the City on two sides and would be annexed into the City to receive full urban services.

**Timeframe:** N/A

## **COMMENTS AND RECOMMENDATIONS**

CDFW offers the following comments and recommendations to assist the City of Merced in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

There are many special-status resources that may utilize the Project site, and these resources may need to be evaluated and addressed prior to any approvals that would allow ground-disturbing activities. CDFW is concerned regarding potential impacts to special-status species including, but not limited to, the State threatened Swainson's hawk (*Buteo swainsoni*), the State threatened California tiger salamander (*Ambystoma californiense*), and the State species of special concern burrowing owl (*Athene cunicularia*).

### **I. Environmental Setting and Related Impact**

**Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the United States Fish and Wildlife Service (USFWS)?**

Julie Nelson, Associate Planner  
City of Merced  
July 20, 2020  
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### **COMMENT 1: Swainson's Hawk (SWHA)**

**Issue:** SWHA have the potential to nest near and forage within the Project site. The proposed Project will involve activities near large trees that may serve as potential nest sites.

**Specific impacts:** Without appropriate avoidance and minimization measures for SWHA, potential significant impacts that may result from Project activities include: nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct mortality. Any take of SWHA without appropriate incidental take authorization would be a violation of Fish and Game Code.

**Evidence impact is potentially significant:** SWHA exhibit high nest-site fidelity year after year and lack of suitable nesting habitat in the San Joaquin Valley limits their local distribution and abundance (CDFW 2016). Approval of the Project will lead to subsequent ground-disturbing activities that involve noise, groundwork, and movement of workers that could affect nests and has the potential to result in nest abandonment and loss of foraging habitat, significantly impacting local nesting SWHA.

#### **Recommended Potentially Feasible Mitigation Measure(s)**

To evaluate potential impacts to SWHA associated with the Project, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the environmental impact report (EIR) prepared for this Project, and that these measures be made conditions of approval for the Project.

#### **Recommended Mitigation Measure 1: SWHA Surveys**

CDFW recommends that a qualified wildlife biologist conduct surveys for nesting SWHA following the survey methods developed by the Swainson's Hawk Technical Advisory Committee (SWHA TAC 2000) prior to project implementation. The SWHA TAC recommends a 0.5-mile survey distance from the limits of disturbance. The survey protocol includes early season surveys to assist the project proponent in implementing necessary avoidance and minimization measures, and in identifying active nest sites prior to initiating ground-disturbing activities.

#### **Recommended Mitigation Measure 2: SWHA No-disturbance Buffer**

If ground-disturbing activities are to take place during the normal bird breeding season (March 1 through September 15), CDFW recommends that additional pre-activity surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of Project implementation to ensure that no SWHA

Julie Nelson, Associate Planner  
City of Merced  
July 20, 2020  
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have begun nesting activities near the Project site. CDFW recommends a minimum no-disturbance buffer of ½ mile be delineated around active nests until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

### **Recommended Mitigation Measure 3: SWHA Take Authorization**

CDFW recommends that in the event an active SWHA nest is detected during surveys and a ½-mile no-disturbance buffer is not feasible, consultation with CDFW is warranted to discuss how to implement the project and avoid take. If take cannot be avoided, take authorization through the issuance of an ITP, pursuant to Fish and Game Code section 2081(b) is necessary to comply with CESA.

### **Recommended Mitigation Measure 4: Loss of SWHA Foraging Habitat**

CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's "Staff Report Regarding Mitigation for Impacts to Swainson's Hawks" (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

- For projects within 1 mile of an active nest tree, a minimum of 1 acre of habitat management (HM) land for each acre of development is advised.
- For projects within 5 miles of an active nest but greater than 1 mile, a minimum of ¾ acre of HM land for each acre of development is advised.
- For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of ½ acre of HM land for each acre of development is advised.

### **Recommended Mitigation Measure 5: SWHA Nest Trees**

CDFW recommends that the removal of known raptor nest trees, even outside of the nesting season, be replaced with an appropriate native tree species planting at a ratio of 3:1 at or near the Project site or in another area that will be protected in perpetuity to reduce impacts resulting from the loss of nesting habitat.

### **COMMENT 2: California Tiger Salamander (CTS)**

**Issue:** Even though the surrounding area consist of developed land (i.e., homes and neighborhoods), there are remnant habitat to the north and northeast and CTS have the potential to occur in the Project site. Aerial imagery shows that the Project site is within one mile from potential breeding habitat.

Julie Nelson, Associate Planner  
City of Merced  
July 20, 2020  
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**Specific Impacts:** Aerial imagery shows that the Project site is within one mile from potential breeding habitat. Potential ground- and vegetation-disturbing activities associated with Project activities include: collapse of small mammal burrows, inadvertent entrapment, loss of upland refugia, water quality impacts to breeding sites, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

**Evidence impact would be significant:** Up to 75% of historic CTS habitat has been lost to urban and agricultural development (Searcy et al. 2013). Loss, degradation, and fragmentation of habitat are the primary threats to CTS in both the Central and San Joaquin valleys. Contaminants and vehicle strikes are also sources of mortality for the species (CDFW 2015, USFWS 2017). The Project site is within the range of CTS and has suitable habitat (i.e., grasslands interspersed with burrows and vernal pools). CTS have been determined to be physiologically capable of dispersing up to approximately 1.5 miles from seasonally flooded wetlands (Searcy and Shaffer 2011) and have been documented to occur near the Project site (CDFW 2020). Given the presence of potential habitat within and near the Project site, ground-disturbing activities have the potential to significantly impact local populations of CTS.

### **Recommended Potentially Feasible Mitigation Measure(s)**

To evaluate potential impacts to CTS, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

#### **Recommended Mitigation Measure 6: Focused CTS Protocol-level Surveys**

CDFW recommends that a qualified biologist conduct protocol-level surveys in accordance with the USFWS "Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander" (USFWS 2003) at the appropriate time of year to determine the existence and extent of CTS breeding and refugia habitat. The protocol-level surveys for CTS require more than one survey season and are dependent upon sufficient rainfall to complete. As a result, consultation with CDFW and the USFWS is recommended well in advance of beginning the surveys and prior to any planned vegetation- or ground-disturbing activities. CDFW advises that the protocol-level survey include a 100-foot buffer around the Project area in all areas of wetland and upland habitat that could support CTS. Please be advised that protocol-level survey results are viable for two years after the results are reviewed by CDFW.

Julie Nelson, Associate Planner  
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### **Recommended Mitigation Measure 7: CTS Avoidance**

If CTS protocol-level surveys as described in the above Mitigation Measure 6 are not conducted, CDFW advises that a minimum 50-foot no-disturbance buffer be delineated around all small mammal burrows in suitable upland refugia habitat within and/or adjacent to the Project site. Further, CDFW recommends potential or known breeding habitat within and/or adjacent to the Project site be delineated with a minimum 250-foot no-disturbance buffer. Both upland burrow and wetland breeding no-disturbance buffers are intended to minimize impacts to CTS habitat and avoid take of individuals. Alternatively, the applicant can assume presence of CTS within the Project site and obtain from CDFW a State Incidental Take Permit (ITP) in accordance with Fish and Game Code section 2081(b).

### **Recommended Mitigation Measure 8: CTS Take Authorization**

If through surveys it is determined that CTS are occupying or have the potential to occupy the Project site, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization would be warranted prior to initiating ground-disturbing activities to comply with CESA. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081(b). As stated above, in the absence of protocol surveys, the applicant can assume presence of CTS within the Project site and obtain an ITP from CDFW.

### **COMMENT 3: Burrowing Owl (BUOW)**

**Issue:** BUOW may occur within and/or adjacent to the Project site. BUOW inhabit open grassland containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover. Habitat both within and bordering the Project site, supports grassland habitat (CDFW 2020).

**Specific impact:** Potentially significant direct impacts associated with subsequent activities and development include burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

**Evidence impact is potentially significant:** BUOW rely on burrow habitat year-round for their survival and reproduction. Habitat loss and degradation are considered the greatest threats to BUOW in California's Central Valley (Gervais et al. 2008). The Project site contain and is bordered by some of the only remaining undeveloped land in the vicinity. Therefore, subsequent ground-disturbing activities associated with Project approval have the potential to significantly impact local BUOW populations. In addition, and as described in CDFW's "Staff Report on

Julie Nelson, Associate Planner  
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Burrowing Owl Mitigation” (CDFG 2012), excluding and/or evicting BUOW from their burrows is considered a potentially significant impact under CEQA.

### **Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact)**

To evaluate potential impacts to BUOW associated with the Project, CDFW recommends conducting the following evaluation of the Project site, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

#### **Recommended Mitigation Measure 9: BUOW Surveys**

CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium’s “Burrowing Owl Survey Protocol and Mitigation Guidelines” (CBOC 1993) and CDFW’s “Staff Report on Burrowing Owl Mitigation” (CDFG 2012). Specifically, CBOC and CDFW’s Staff Report suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season (April 15 to July 15), when BUOW are most detectable.

#### **Recommended Mitigation Measure 10: BUOW Avoidance**

CDFW recommends no-disturbance buffers, as outlined in the “Staff Report on Burrowing Owl Mitigation” (CDFG 2012), be implemented prior to and during any ground-disturbing activities. Specifically, CDFW’s Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

\* meters (m)



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## II. Editorial Comments and/or Suggestions

**Nesting birds:** CDFW encourages that Project implementation occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the Project sites to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. In addition to direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends having a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction areas would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

## ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity

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Database (CNDDDB). The CNDDDB field survey form can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address: [CNDDDB@wildlife.ca.gov](mailto:CNDDDB@wildlife.ca.gov). The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

## FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CDFW appreciates the opportunity to comment on the Project to assist the City of Merced in identifying and mitigating the Project's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>). If you have any questions, please contact Jim Vang, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 243-4014 extension 254, or by electronic mail at [Jim.Vang@wildlife.ca.gov](mailto:Jim.Vang@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
041A77B10D78486...

**for** Julie A. Vance  
Regional Manager

Attachment

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### Literature Cited

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United State Fish and Wildlife Service (USFWS). 2003. Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander, October 2003.

USFWS. 2017. Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*). U. S. Fish and Wildlife Service, Region 8, Sacramento, California. June 2017.

**Attachment 1****CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE  
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM  
(MMRP)****PROJECT: Yosemite Avenue-Gardner Avenue to Hatch Road  
Annexation Project****SCH No.: 2016121029**

<b>RECOMMENDED MITIGATION MEASURE</b>	<b>STATUS/DATE/INITIALS</b>
<i>Before Disturbing Soil or Vegetation</i>	
Mitigation Measure 1: SWHA Surveys	
Mitigation Measure 3: SWHA Take Authorization	
Mitigation Measure 4: Loss of SWHA Foraging Habitat	
Mitigation Measure 6: Focused CTS Protocol-level Surveys	
Mitigation Measure 8: CTS Take Authorization	
Mitigation Measure 9: BUOW Surveys	
<i>During Construction</i>	
Mitigation Measure 2: SWHA No-disturbance Buffer	
Mitigation Measure 5: SWHA Nest Trees	
Mitigation Measure 7: CTS Avoidance	
Mitigation Measure 10: BUOW Avoidance	

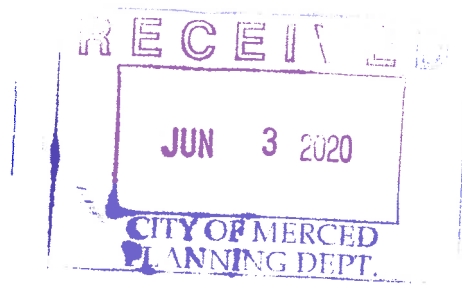
**Joseph and Michele Corvello**

3533 Hatch Rd.  
Merced, CA 95340  
(209) 722-2616

1st June 2020

**Julie Nelson**

Associate Planner,  
City of Merced Planning & Permitting  
678 West 18th Street  
Merced, CA 95340



Dear Julie Nelson,

This letter is in response to the public notice from the preparation of an environmental impact report for the city of merced "Yosemite Avenue-Gardner Avenue to Hatch Road annexation" project, received on May 19, 2020.

As residents of Hatch Road we strongly disapprove of this project for several reasons. First of all the high traffic impact on our quiet neighborhood. Secondly, the nuisance of a large complex becomes noisy. Lastly the impact on our property value. For these reasons we strongly DO NOT support this project.

Regards,

A handwritten signature in black ink that reads "Joseph &amp; Michele Corvello". The signature is written in a cursive, flowing style.

**Joseph and Michele Corvello**



JULY 3, 2020

VIA EMAIL: [NELSONJ@CITYOFMERCED.ORG](mailto:NELSONJ@CITYOFMERCED.ORG)

City of Merced Planning Division  
ATTN: Julie Nelson, Associate Planner  
678 West 18<sup>th</sup> Street  
Merced, CA 95340

Dear Ms. Nelson:

REVISED NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE YOSEMITE AVENUE – GARDNER AVENUE TO HATCH ROAD ANNEXATION PROJECT, SCH# 2016121029

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Yosemite Avenue – Gardner Avenue to Hatch Road Annexation 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 proposed project's potential impacts on agricultural land and resources.

#### Project Description

The City is proposing to annex the entire 70-acre project site into the City limits. The project includes The Crossings housing and retail component that proposes to provide multi-family housing and commercial retail uses on a 30-acre portion of the site at the northeast corner of E. Yosemite Avenue and N. Gardner Avenue. The City is also proposing land use and zoning designations of Urban Transition (U-T) and Low Density Residential (R-1-10) for this land.

Currently, the project site is in agricultural use and contains Prime and Unique Farmland, as identified by the Department of Conservation's Farmland Mapping and Monitoring Program<sup>1</sup>.

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<sup>1</sup> California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, <https://maps.conservation.ca.gov/DLRP/CIFF/>

## Department Comments

The conversion of agricultural land represents a permanent reduction and significant impact to California's agricultural land resources. Under CEQA, a lead agency should not approve a project if there are feasible alternatives or feasible mitigation measures available that would lessen the significant effects of the project.<sup>2</sup> All mitigation measures that are potentially feasible should be included in the project's environmental review. A measure brought to the attention of the lead agency should not be left out unless it is infeasible based on its elements.

As the courts have shown<sup>3</sup>, agricultural conservation easements on land of at least equal quality and size can mitigate project impacts in accordance with CEQA Guideline § 15370. The Department highlights agricultural conservation easements because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA. Agricultural conservation easements are an available mitigation tool and should always be considered; however, any other feasible mitigation measures should also be considered.

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/>

## Conclusion

The Department recommends the following discussion under the Agricultural Resources section of the Environmental Impact Report:

- 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.

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<sup>2</sup> Public Resources Code section 21002.

<sup>3</sup> *Masonite Corp. v. County of Mendocino* (2013) 218 Cal.App.4th 230, 238.



Thank you for giving us the opportunity to comment on the Revised Notice of Preparation of a Draft Environmental Impact Report for the Yosemite Avenue – Gardner Avenue to Hatch Road Annexation 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 at (916) 324-7347 or via email at [Farl.Grundy@conservation.ca.gov](mailto:Farl.Grundy@conservation.ca.gov).

Sincerely,

*Monique Wilber*

Monique Wilber

Conservation Program Support Supervisor

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 10 DIRECTOR

P.O. BOX 2048

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January 03, 2017

**10-MER-140-PM 036.824****NOP for EIR****Yosemite Ave – Gardner Ave to****Hatch Road Annexation****SCH# 2016121029**

Bill King, Principal Planner  
City of Merced Development Services  
678 W. 18<sup>th</sup> Street  
Merced, CA 95340

Dear Mr. King:

The California Department of Transportation appreciates the opportunity to review the Notice of Preparation for the Environmental Impact Report for the Yosemite Ave – Gardner Ave to Hatch Road Annexation. The project involves the annexation of a 70 acre area bounded by Hatch Road, Yosemite Avenue, and Gardner Avenue by the City of Merced. A 30 acre area will be developed with 66,000 square feet of office, retail, and restaurant uses and 330 multi-family residential units. The Department has the following comments:

- The proposed project might have a potential traffic impact on SR-59 and SR-140. Therefore, the proposed project's EIR must include a Traffic Impact Study which includes traffic analysis at the following intersections:
  - SR-140/E. Santa Fe Ave
  - SR-140/Kibby Road
  - SR-59/W. Yosemite Ave
  - SR-59/Santa Fe Drive/W. Olive Ave
  - SR-59/16<sup>th</sup> Street
  - All SR-99 and SR-140 on-ramps and off-ramps in the city.
- Please submit the completed Traffic Impact Study and EIR to the Department for review.
- The Department recommends the inclusion of sidewalks and bicycle facilities along Yosemite Avenue, Gardner Avenue, and Hatch Way to provide continuity between the proposed development and the existing and proposed bus facilities.

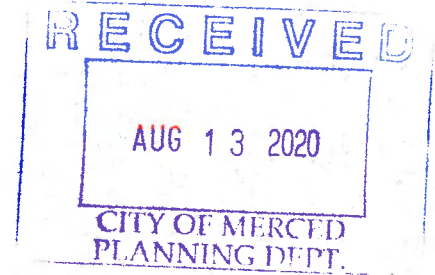
Please contact Nicholas Fung at (209) 948-7190 or myself at (209) 941-1921 if you have any further questions.

Sincerely,

A handwritten signature in black ink that reads "Nicholas Fung".

FOR TOM DUMAS, CHIEF  
OFFICE OF METROPOLITAN PLANNING

Offices of  
Emerson & Conway  
One Bush Plaza San Francisco, CA 94104



June 15, 2020

Julie Nelson, Associate Planner  
City of Merced Planning Division  
678 West 18<sup>th</sup> Street  
Merced, CA 95340

SUBJECT: NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE  
YOSEMITE AVENUE – GARDNER AVENUE TO HATCH ROAD ANNEXATION PROJECT

Dear Ms. Nelson:

The purpose of this communication is to bring attention to a significant omission in the annexation proposal, and in the California Environmental Quality Act Notice of Preparation, which is the City's exclusion of a property that should be part of the annexation. This is the contiguous, vacant, 30-acre property to the north that is within the City's Sphere of Influence and designated by the City's General Plan for residential development.

The adjacent parcel is not of sufficient size or future density to sustain an annexation proposal independently. Leaving this parcel out of the proposed annexation while the corner parcel, the low-hanging fruit, moves forward, is an extreme inefficiency. This represents either a lack of foresight or purposeful blockage of the neighboring property owner's reasonable right to exercise current and future zoning. There is insufficient reason to exclude it given that the City has determined to include other neighboring properties. The present canal that separates this property will be enclosed with the proposed project, and will no longer provide a theoretical boundary.

At this time the City is looking abroad at the horizon, far beyond the margins of the City, to productive farms and ranchlands, for possible annexation opportunities (Merced Annexation Feasibility Study). However, this proposed incremental annexation, peeling off the high value corner parcel, skips over a parcel that is contiguous with the City. Though smaller than the many thousands of acres far to the north that the City is entertaining for urban development, it is substantial enough to provide significant housing opportunities in close proximity to existing infrastructure and services. It is a parcel that is essentially infill, and will in any event become a passed-over infill site if the current proposal moves forward without it (Policy L-3.2).

Annexation of this adjacent 30-acre parcel is timely now. This contiguous parcel must be included in the environmental impact report (EIR) currently being prepared, and pre-zoned for Low Density Residential as others are.

Additionally, the present proposed site plan eliminates provision for adequate future circulation to, and connectivity with, the 30-acre northerly parcel. Proposals such as this create isolated and balkanized neighborhoods. The proposed site plan also thereby diminishes development options of the adjacent property. This action by the City will thwart the City's own plan for this property. This is contrary to the Merced Vision 2030 General Plan and City standards. The proposed project must provide through access to the parcel to the north, and/or a shared street with the property to the east, and construct a canal crossing now for emergency services vehicles to safely reach the rear of the subject apartment project (Policy L-1.9, Ensure Connectivity Between Existing and Planned Urban Area).

The proposed project should not be focused entirely on maximizing residential density to the extent of filling up the residential portion with apartments. The project should provide for more transitional densities such as townhomes given proximity to the County's A-R Zone, as well as apartments. Since it can be expected that many residents will be students or university staff, Campus-type research and development facilities should also be placed here, consistent with the City's Merced Vision 2030 General Plan (Policy L-2.9). This would also be consistent with the City's plan for economically vital, mixed use Urban Villages, rather than another monoculture of apartments that, without an integrating range of supporting uses, would be more subject to decay over time (Policies L-3.1, 3.2 and 3.3).

We look forward to the reviewing the pending Draft EIR for inclusion of the 30-acre property.

Cordially,

*Thomas Kent*

Thomas Kent



Local Agency Formation Commission  
2222 M Street  
Merced, CA 95340  
Phone (209) 385-7671 / Fax (209) 726-1710  
[www.lafcomerced.org](http://www.lafcomerced.org)

January 9, 2017

Bill King, Principal Planner  
City of Merced Planning  
678 West 18th Street  
Merced, CA 95340

RE: Yosemite Avenue – Gardner Avenue to Hatch Road Annexation NOP

Dear Mr. King:

Thank you for forwarding Merced LAFCO a copy of the Notice of Preparation (NOP) for this project, involving the annexation of approximately 70 acres into the City of Merced. While the only pending development project involves 30 acres at the northeast corner of Yosemite and Gardner Avenues, the City has included an additional 40 acres of existing and potential development area to form a more logical city boundary which is supported by local LAFCO policy. LAFCO will consider the EIR document in its role as a “responsible agency” under CEQA. Therefore, please consider these comments which will help clarify the environmental record when the project reaches the Commission.

Under the topic of “agriculture and forestry resources” the Draft EIR should identify that the vacant properties consist of soil designated as “Prime Farmland” in the State Department of Conservation Important Farmland Mapping Program. While the area is adjacent to existing development on the south and west, the overall rural residential area consists of a partially developed rural landscape with intermittent farming and animal raising operations. The loss of prime farmland is a central issue for LAFCO, and identification of feasible mitigation measures through the acquisition of open space easements over agricultural land, or the payment of a fee to obtain easements at a 1:1 ratio should be included in the analysis, even if the City will consider adoption of a statement of overriding considerations.

For LAFCO to rely on the City’s overriding considerations, the City should clearly identify the basis of these considerations as required under section 15091 of the CEQA Guidelines which include: “Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.”

In terms of the overall annexation area, it is commendable that the City took such a comprehensive approach to identifying the area for ultimate annexation to the City, even though only 30 acres are proposed for development at this time. Other land uses include existing large lot residential parcels, partially developed residential parcels, an existing church/school complex, and a horse stable facility. Some of this land will provide opportunity for future urban land uses following annexation.

Bill King, Principle Planner  
City of Merced  
January 9, 2017  
Page 2

While not necessarily part of the EIR analysis, LAFCO will review the proposal against its locally adopted policies. Policy 7 under Section C includes a consideration of how much vacant residentially designated land is available within the current city limits, and it reads:

*Consider the amount of existing vacant land within the City that is available for similar types of development to the proposed annexation. Make a comparison of existing vacant and available land to the amount of land needed to accommodate growth needs over a ten year period as established in the City's General Plan or other official projection such as that adopted by the Merced County Association of Governments. The City must provide evidence why the consideration of existing vacant land is not appropriate based on such factors as location, limitations to infrastructure, development constraints, agricultural viability, economic market conditions, or unique characteristics of the annexation project.*

In terms of adequate public services and facilities, when the City submits the future annexation application to LAFCO, one of the requirements is to submit a "plan for services" in compliance with Government Code section 56653(b). One of the historic concerns in this area of the City's sphere of influence is the City's long-term plans for extension of public services and future intensification of this Rural Residential Center located northeast of the City limits. The Bellevue Community Plan adopted by the City in 2015 focused on the corridor extending along both sides of Bellevue Road, but did not detail the infrastructure, service and transportation plans for the balance of the Rural Residential Center. What trunk line capacity is planned for this annexation for sewer, water and stormwater facilities? Does the sizing accommodate future annexations in this region or is the City contemplating the surrounding Rural Residential area will remain in the County with continued reliance on private wells, septic tanks and individual stormwater basins?

The City should also determine whether a "water supply assessment" (WSA) in conformance with SB 610 (in the State Water Code) is required for the project. A WSA is required for any residential project involving 500 residential connections or other urban development projects generating the equivalent in water demand. The information in a WSA, if required, is useful for the City and LAFCO in evaluating the water supply impacts from large projects, including the ability to serve new development during multiple year drought conditions.

This concludes the LAFCO comments on NOP, and we look forward to receipt of the Draft EIR. Please let me know if you have any questions or would like to discuss any issues raised in this letter.

Sincerely,



Bill Nicholson,  
Executive Officer

cc: LAFCO Counsel

James G. Marshall  
1252 Cathedral Creek Ct.  
Merced CA 95340  
(209) 383-3611  
(209) 205-8599 – cell  
[bagpipemarshall@comcast.net](mailto:bagpipemarshall@comcast.net)

June 8, 2020

Merced Planning Department  
City of Merced

Re: N O P "Yosemite Avenue - Gardner to Hatch Road Annexation"

Ladies and Gentlemen:

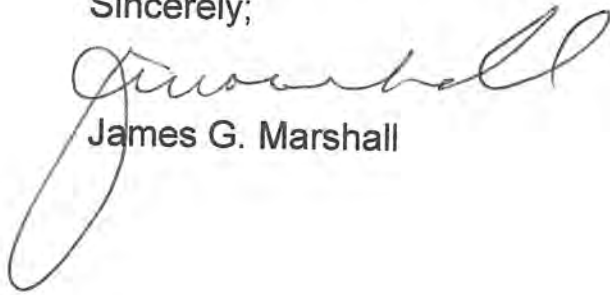
Thank you for the N O P regarding the above project. While I understand the Environmental review will be exhaustive in preparation of an EIR, I would like to report to pay particular attention to the following:

1. This property is currently outside of the North Merced Sewer District Boundaries. Please detail how this property will mitigate this impact with regard to: what is the buy-in cost; how will sewage be transmitted to WWTP as current trunks are insufficient; operational cost of alternatives (package plants); ultimate disposal location of effluent; and what undeveloped properties currently inside the North Merced Sewer District will be negatively impacted if capacity is used by this site.
2. Traffic mitigation for development including signalization at Parsons/Gardner/Yosemite intersection.
3. Water supply in drought years and groundwater impacts.
4. Storm Drainage in both Black Rascal and Cottonwood Creek watershed areas through downstream connections with Bear Creek - both have contributed to downstream flooding in previous storm incidents.
5. Visual impacts and privacy issues for properties already developed as SFD's. Please address properties both across Gardner from site; and, across Yosemite from site.

June 8, 2020  
Page 2

Please keep me informed of review opportunities.

Sincerely;

A handwritten signature in cursive script, appearing to read "James G. Marshall". The signature is written in black ink and is positioned above the printed name. It features a large, looping initial "J" and a long, sweeping underline that extends to the left.

James G. Marshall





June 14, 2020

Kim Espinosa, Planning Manager  
City Of Merced  
678 West 18th Street  
Merced, California 95340

Subject: Preparation of NOP for EIR for Yosemite Avenue, Gardner to Hatch

Dear Ms. Espinosa:

The Merced Irrigation District (MID) has reviewed the above referenced applications and offers the following comments:

MID operates and maintains the south half of the Yosemite Lateral located within an unspecified width easement by water contract as recorded April 19, 1888 in Book 2 of Water Rights, Page 45. MID operates and maintains the north half of the Yosemite Lateral located within an unspecified width fee strip as recorded in Volume 729 Official Records, Page 390 all being Merced County Records. This facility is located along the North line of the project from east to west and then north to its terminus at Cottonwood Creek.

This project has been previously reviewed January 10, 2013. See the attached conditions as they remain the same, also if any future roadways are proposed to cross MID facilities they will require a separate crossing agreement.

Thank you for the opportunity to comment on the above referenced applications. If you have any questions, please contact me at 722-5761.

Sincerely,

A handwritten signature in black ink that reads "Ronald L. Price".

Ronald L. Price  
Associate Engineer, Water Resources

cc: Bryan Kelly, Deputy General Manager, Water Resources  
Mike Morris, Associate Engineer, Water Resources  
Jake Feriani, Associate Engineer, Water Resources



January 10, 2013

Kim Espinosa, Planning Manager  
City of Merced Planning and Permitting Division  
678 West 18th Street  
Merced, CA 95340

Subject: Preliminary Annexation 12-01 – Caton /Reinero– APN- 060-570-010

Dear Ms. Espinosa:

The Merced Irrigation District (MID) has previously reviewed the above referenced application in association with Preliminary GPA #07-06. The current proposal is on one parcel and MID offers the following comments:

MID operates and maintains the south half of the Yosemite Lateral located within an unspecified width easement by water contract as recorded April 19, 1888 in Book 2 of Water Rights, Page 45. MID operates and maintains the north half of the Yosemite Lateral located within an unspecified width fee strip as recorded in Volume 729 Official Records, Page 390, all, Merced County Records. This facility is along the North line of the project from east to west and then north to its terminus at Cottonwood Creek.

MID respectfully requests that the City require the following, as conditions of approval:

1. MID policy dictates that the Yosemite Lateral be placed in an underground pipeline meeting MID standards. MID will quitclaim all right, title and interest in the existing unspecified width easement and sell the unspecified width fee strip on the Yosemite Lateral and take back an appropriate width easement with MID approved standard language attachments where the new pipeline is located.
2. That the applicants enter into a "Subdivision Drainage Agreement" with MID paying all applicable fees if the MID's Yosemite Lateral is slated to become the recipient of the project's storm drainage water per the Tentative Map.

3. A signature block is provided for MID on all Improvement Plans associated with MID facilities or storm drainage discharge to MID facilities.
4. The developer must enter into a "Construction Agreement" with MID for any work associated with MID facilities and pay all applicable fees.
5. A "Joint Use Agreement" may be required between the MID and the City of Merced to cover any shared easements which may arise depending upon where the new pipeline and dedicated streets are located.

In addition to providing reliable, low cost power, the Merced Irrigation District has developed a New Construction Rebate Program for new businesses. Rebates are available for projects estimated to exceed a Title-24 or standard practice baseline by at least 10% on a whole building performance basis. The maximum rebate is \$150,000 per year, per customer and will not exceed 60% of the project's cost (equipment plus labor). These incentives encourage owners to make energy efficiency a major goal in new building projects. For more information, please contact Chris Cuttone at 722-5761.

Thank you for the opportunity to comment on the above referenced application. If you have any questions, please contact me at 722-5761.

Sincerely,



Ronald L. Price  
Associate Engineer  
Water Resources

cc: John Sweigard, General Manager  
Hicham ElTal, Deputy General Manager - Water Resources Engineering  
John Wiersma, Senior Engineer - Water Resources  
Chris Cuttone, Electrical Services



## NATIVE AMERICAN HERITAGE COMMISSION

June 22, 2020

Julie Nelson, Assoc. Planner  
City of Merced  
678 West 18<sup>th</sup> Street  
Merced, CA 95340



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[NAHC.ca.gov](http://NAHC.ca.gov)

**Re: 2016121029, Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project, Merced County**

Dear Ms. Nelson:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines § 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

**Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

## AB 52

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](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](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](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, subs. (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](mailto:Nancy.Gonzalez-Lopez@nahc.ca.gov).

Sincerely,



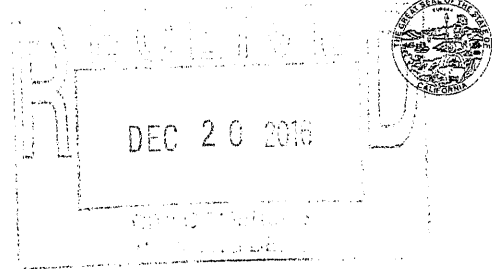
Nancy Gonzalez-Lopez  
Cultural Resources Analyst

cc: State Clearinghouse



## NATIVE AMERICAN HERITAGE COMMISSION

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December 14, 2016

Bill King  
City of Merced  
678 W. 18<sup>th</sup> Street  
Merced, CA 95340

sent via e-mail:  
[kingb@cityofmerced.org](mailto:kingb@cityofmerced.org)

RE: SCH# 2016121029; Yosemite Avenue- Gardner Avenue to Hatch Road Annexation Project, Notice of Preparation for Draft Environmental Impact Report, Merced County, California

Dear Mr. King:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, § 15064.5 (b) (CEQA Guidelines Section 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, § 15064 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 with the area of project 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). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," <http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf>. 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 or a notice of negative declaration or 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 **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

#### AB 52

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 sections 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 section 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 section 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 section 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 section 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 nonfederally 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 sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 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 section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)). *This process should be documented in the Cultural Resources section of your environmental document.*

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](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](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 section 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 sections 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](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 been already 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, section 15064.5(f) (CEQA Guidelines section 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 section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 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.

Please contact me if you need any additional information at [gayle.totton@nahc.ca.gov](mailto:gayle.totton@nahc.ca.gov).

Sincerely,



Gayle Totton, M.A., PhD.  
Associate Governmental Program Analyst

cc: State Clearinghouse

December 14, 2016

Bill King  
City of Merced  
Planning Department  
678 West 18<sup>th</sup> Street  
Merced, CA 95340

**Project: Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project**

**District CEQA Reference No: 20160829**

Dear Mr. King:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation (NOP) of an Environmental Impact Report for the Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project. The proposed project consists of the following:

- Pending Annexation #16-01 and Pre-Zone Application #16-01 would annex approximately 70 acres of land and affix the following prezone designations to the site:
  - a) Planned Development (P-D) #75
  - b) Low Density Residential (R-1-10)
  - c) Urban Transition (U-T)
- General Plan Amendment #16-01 would:
  - a) Change the general plan land use designation from Rural Residential (RR) to Neighborhood Commercial (CN) and High Medium Density Residential (HMD)
  - b) Allow project driveways at locations different than prescribed by City Policy
- Planned Development Establishment (P-D) #75 would establish Planned Development (P-D) #75, including a Site Utilization Plan for 66,000 square feet of retail uses, offices, restaurants, and 330 multifamily residential dwelling units all on 30 acres.

The project site is bounded by Yosemite Avenue, Gardner Avenue, Hatch Road, and the Yosemite Lateral in Merced, CA. The District offers the following comments:

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585

## **Emissions Analysis**

1) At the federal level for the National Ambient Air Quality Standards (NAAQS), the District is currently designated as extreme nonattainment for the 8-hour ozone standards; nonattainment for the PM2.5 standards; and attainment for the 1-Hour ozone, PM10 and CO standards. At the state level, the District is currently designated as nonattainment for the 8-hour ozone, PM10, and PM2.5 California Ambient Air Quality Standards (CAAQS). The District recommends that the Air Quality section of the Environmental Impact Report (EIR) include a discussion of the following impacts:

a) **Criteria Pollutants:** Project related criteria pollutant emissions should be identified and quantified. The discussion should include existing and post-project emissions.

i) **Construction Emissions:** Construction emissions are short-term emissions and should be evaluated separate from operational emissions. The District recommends preparation of an Environmental Impact Report (EIR) if annual construction emissions cannot be reduced or mitigated to below the following levels of significance: 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM10).

- *Recommended Mitigation:* To reduce impacts from construction related exhaust emissions, the District recommends feasible mitigation for the project to utilize off-road construction fleets that can achieve fleet average emissions equal to or cleaner than the Tier II emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. This can be achieved through any combination of uncontrolled engines and engines complying with Tier II and above engine standards.

ii) **Operational Emissions:** Operational Emissions: Permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. The District recommends preparation of an Environmental Impact Report (EIR) if the sum of annual permitted and the sum of the annual non-permitted emissions each cannot be reduced or mitigated to below the following levels of significance: 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM10).

- *Recommended Mitigation:* Project related impacts on air quality can be reduced through incorporation of design elements, for example, that increase energy efficiency, reduce vehicle miles traveled, and reduce construction exhaust related emissions. However, design elements and compliance with District rules and regulations may not be sufficient to

reduce project related impacts on air quality to a less than significant level. Another example of a feasible mitigation measure is the mitigation of project emissions through a Voluntary Emission Reduction Agreement (VERA). The VERA is an instrument by which the project proponent provides monies to the District, which is used by the District to fund emission reduction projects that achieve the reductions required by the lead agency. District staff is available to meet with project proponents to discuss a VERA for specific projects. For more information, or questions concerning this topic, please call District Staff at (559) 230-6000.

- iii) **Recommended Model:** Project related criteria pollutant emissions should be identified and quantified. Emissions analysis should be performed using CalEEMod (**California Emission Estimator Model**), 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](http://www.caleemod.com).
- b) **Nuisance Odors:** The project should be evaluated to determine the likelihood that the project would result in nuisance odors. Nuisance odors are subjective, thus the District has not established thresholds of significance for 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 objectionable odors.
- c) **Health Impacts:** Project related health impacts should be evaluated to determine if emissions of toxic air contaminants (TAC) will pose a significant health risk to nearby sensitive receptors. TACs are defined as air pollutants that which may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. The most common source of TACs can be attributed to diesel exhaust fumes that are emitted from both stationary and mobile sources. Health impacts may require a detailed health risk assessment (HRA).

Prior to conducting an HRA, an applicant may perform a prioritization on all sources of emissions to determine if it is necessary to conduct an HRA. A prioritization is a screening tool used to identify projects that may have significant health impacts. If the project has a prioritization score of 10 or more, the project has the potential to exceed the District's significance threshold for health impacts of 20 in a million and an HRA should be performed.

If an HRA is to be performed, it is recommended that the project proponent contact the District to review the proposed modeling approach. The project would be considered to have a significant health risk if the HRA demonstrates that project related health impacts would exceed the District's significance threshold of 20 in a million.

More information on TACs, prioritizations and HRAs can be obtained by:

- E-mailing inquiries to: [hramodeler@valleyair.org](mailto:hramodeler@valleyair.org); or
- Visiting the District's website at:

[http://www.valleyair.org/busind/pto/Tox\\_Resources/AirQualityMonitoring.htm](http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm).

- 2) In addition to the discussions on potential impacts identified above, the District recommends the EIR also include the following discussions:
  - a) A discussion of the methodology, model assumptions, inputs and results used in characterizing the project's impact on air quality. To comply with CEQA requirements for full disclosure, the District recommends that the modeling outputs be provided as appendices to the EIR. The District further recommends that the District be provided with an electronic copy of all input and output files for all modeling.
  - b) A discussion of the components and phases of the project and the associated emission projections, including ongoing emissions from each previous phase.
  - c) A discussion of project design elements and mitigation measures, including characterization of the effectiveness of each mitigation measure incorporated into the project.
  - d) 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>.

### **District Rules and Regulations**

- 3) The proposed project may be subject to District rules and regulations, including: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), 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).
- 4) This proposed project may require District permits. Prior to the start of construction the project proponent should contact the District's Small Business Assistance Office at (559) 230-5888 to determine if an Authority to Construct (ATC) is required.
- 5) Based on information provided, the proposed project would equal or exceed the relevant District Rule 9510 (Indirect Source Review) applicability threshold of 50



residential units and 2,000 square feet of commercial space. Therefore, the District concludes that the proposed project is subject to District Rule 9510.

Any applicant subject to District Rule 9510 is required to submit an Air Impact Assessment (AIA) application to the District no later than applying for final discretionary approval, and to pay any applicable off-site mitigation fees. If approval of the subject project constitutes the last discretionary approval by your agency, the District recommends that demonstration of compliance with District Rule 9510, including payment of all applicable fees 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>.

- 6) Particulate Matter 2.5 microns or less in size (PM2.5) from under-fired charbroilers (UFCs) pose immediate health risk. Since the cooking of meat can release carcinogenic PM2.5 species like polycyclic aromatic hydrocarbons (PAH), controlling emissions from under-fired charbroilers will have a substantial positive impact on public health.

Charbroiling emissions occur in populated areas, near schools and residential neighborhoods, resulting in high exposure levels for sensitive Valley residents. The air quality impacts on neighborhoods near restaurants with UFCs can be significant on days when meteorological conditions are stable, when dispersion is limited and emissions are trapped near the surface within the surrounding neighborhoods. This potential for neighborhood-level concentration of emissions during evening or multi-day stagnation events raises environmental concerns.

In addition, the cooking emissions source category is one of the largest single contributors of directly emitted PM2.5 in the Valley. Photochemical modeling conducted for the 2012 PM2.5 Plan showed that reducing commercial charbroiling emissions is critical to achieving PM2.5 attainment in the Valley.

The District committed to amend Rule 4692 (Commercial Charbroiling) in 2016, with a 2017 compliance date, to add emission control requirements for UFCs, as committed to in the District's 2012 PM2.5 Plan. Installing charbroiler emissions control systems during construction of new facilities is likely to result in substantial economic benefit compared to costly retrofitting.

Therefore, the District strongly recommends that your agency require new restaurants that will operate UFCs to install emission control systems during the construction phase. To ease the financial burden for Valley businesses that wish to install control equipment before it is required, the District is offering incentive funding during the time leading up to the amendment to the rule. Restaurants with UFCs may be eligible to apply for funding to add emission control systems. Please contact the District at (559) 230-5858 for more information.

- 7) The above list of rules is neither exhaustive nor exclusive. 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 (559) 230-5888. Current District rules can be found online at the District's website at [www.valleyair.org/rules/1ruleslist.htm](http://www.valleyair.org/rules/1ruleslist.htm).

The District recommends that a copy of the District's comments be provided to the project proponent. If you have any questions or require further information, please call Sharla Yang at (559) 230-5934.

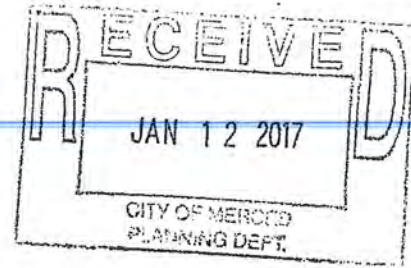
Sincerely,

Arnaud Marjollet  
Director of Permit Services



For Brian Clements  
Program Manager

AM: sy



**YOSEMITE AVENUE – GARDNER AVENUE TO HATCH ROAD ANNEXATION PROJECT  
ENVIRONMENTAL IMPACT REPORT (EIR) NOTICE OF PREPARATION (NOP)**

**COMMENT FORM**

Please provide the following information if you wish to receive a Notice of Availability of the Draft EIR and to document the author of comments received. Thank you.

Name: David Squibb  
Email: dwsquibb@earthlink.net  
Address: 1463 Hunters Dr  
Organization: \_\_\_\_\_

I would like to receive future environmental notices via email.

Please provide us with your written comments on the NOP by **January 9, 2017**. Comments on the NOP may be sent to:

City of Merced  
Development Services  
678 West 18th Street  
Merced, California 95340

Attn: Bill King, Principal Planner (Email: [kingb@cityofmerced.org](mailto:kingb@cityofmerced.org))

You may attach additional pages to this form and/or you may submit your written comments separately. Written comments on the scope of the EIR will be acknowledged in the Draft EIR and will be considered in preparation of the document.

See attached

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January 6, 2017

Bill King, AICP  
Principal Planner  
City of Merced  
Development Services  
678 West 18<sup>th</sup> Street  
Merced, CA 95340

re: Yosemite Ave – Gardner Ave to Hatch Road Annexation Project  
Environmental Impact Report (EIR) Notice of Preparation (NOP)

Mr. King:

We are residents near the proposed Gardner Ave to Hatch Road Annexation Project and would like to express our concerns using this location for this type of development. We hope the city will reconsider the placement of such a project in our residential community. Please see our concerns and comments for consideration below.

Concerns:

#### Noise & Light

- A) Increased noise pollution in a quiet residential neighborhood due to more people (both visiting and residing), activities (retail, living) and vehicle traffic (residents, customers, delivery supply trucks, potential parking lot vacuum trucks etc.). The project will also introduce light pollution to existing residential neighborhood. Bordering properties along the proposed development may be exposed to excessive light through the night.

#### Traffic Safety

- B) Increased traffic in quiet residential neighborhood is a potential safety issue. In our specific situation, we expect that traffic would increase off Gardner down Hunters Drive to White Dove and then Yosemite in order to avoid delays at a needed signal at Gardner and Yosemite Ave.

#### Property Value of Existing Home Owners

- C) Building of medium density housing and retail in an established quiet residential area has the potential to negatively impact property values due to increased noise and traffic.

Comments:

#### Need & Location Considerations

- A) We ask the city to consider other apartment building expansions in Merced and UC Merced construction to determine anticipated needs for student housing. We also propose that if more medium density housing is needed that alternate Merced locations be considered. For instance, it may make more sense for medium-density housing to be developed in areas with existing apartments and where roadways are better prepared to deal with increased traffic (e.g. corner of G and Yosemite).

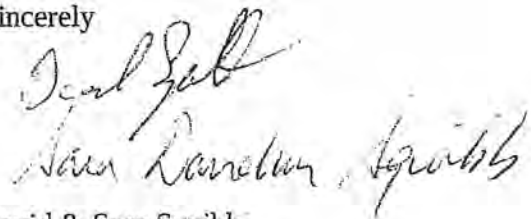
Ongoing City Planning

B) We also ask the city to plan ongoing developments in a transparent, coherent, and long-term fashion so home owners, in particular, can choose the neighborhoods in which they wish to live and have confidence in proposed developments in keeping with community expectations. For instance, at one point it seemed as though the corner of Gardner and Yosemite was going to be developed into 1 acre residential lots. This type of development seems more in keeping with the existing neighborhoods than the proposed development.

Infrastructure

C) Whether or not this project moves forward, we ask the city to seriously and carefully consider the infrastructure needs in this area to ensure that water and sewer lines have the necessary capacity for increase population and services. The current road situation seems woefully inadequate for the current traffic flows (e.g. Yosemite from McKee to Mansionette) so particular attention will need to be paid to roads and access to ensure the efficient and safe flow of traffic.

Sincerely

Handwritten signatures of David and Sara Squibb in cursive script.

David & Sara Squibb  
1463 Hunters Drive  
Merced, CA 95340

## COMMENTS on the REVISED NOTICE OF PREPERATION for an ENVIRONMENTAL IMPACT REPORT for the YOSEMITE AVENUE-GARDNER AVENUE to HATCH ROAD ANNEXATION PROJECT

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The City of Merced does not currently have a City-wide sewer master plan. The Subject Property is not within the North Merced Sewer District (“NMSD”) boundary (see EXHIBIT 1 following). The NMSD real property owners (not the City of Merced) permitted the mortgaging of their real estate in order to sell bonds for the purpose of generating money necessary to pay for the construction of sewer line infrastructure. Said infrastructure included, but is not limited to, the *sewer line capacity* along the Yosemite Avenue frontage of the Subject Property, as well as the *sewer line infrastructure capacity* at the “G” Street and Yosemite Avenue intersection, together with the *sewer line capacity* downstream from there.

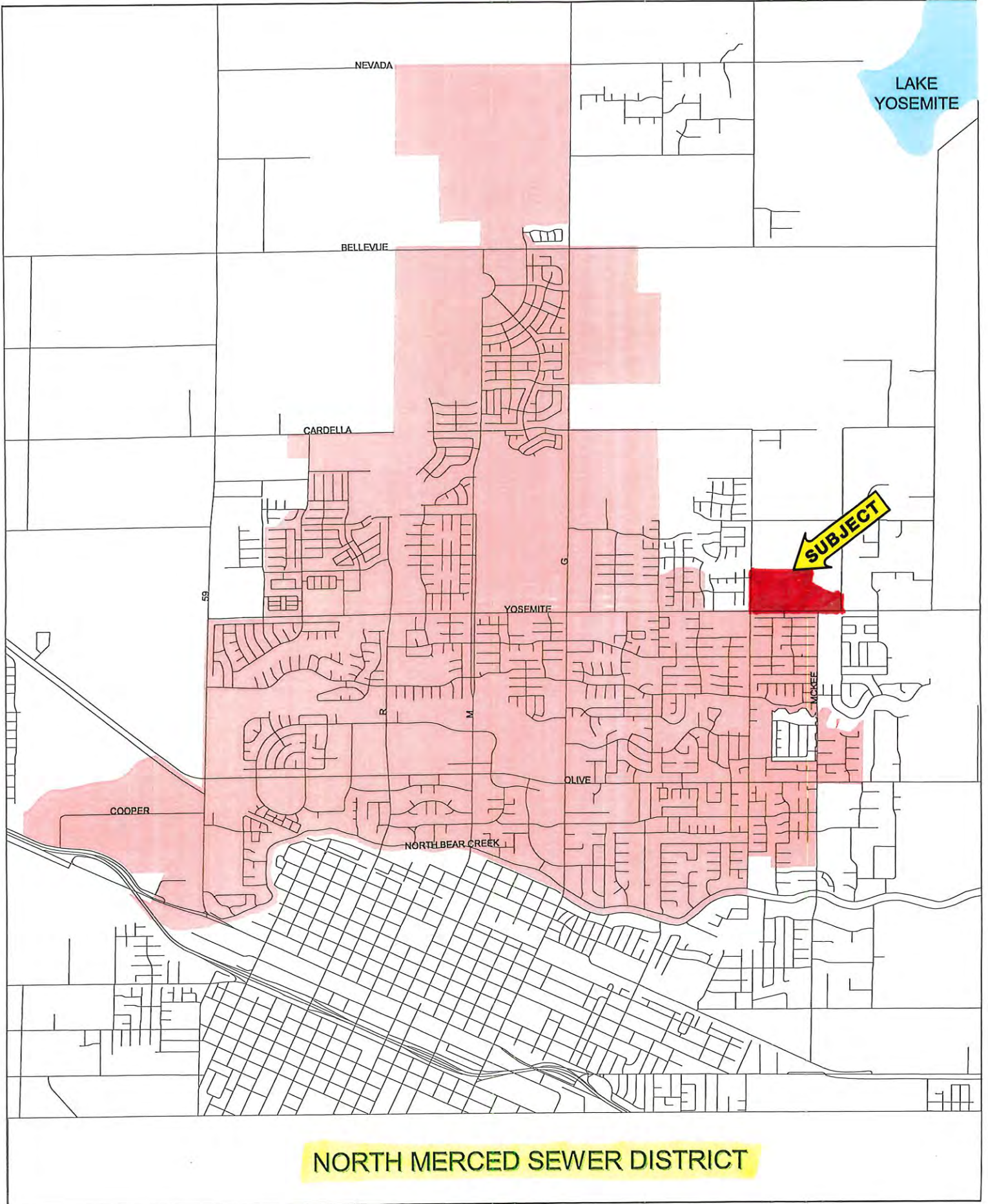
The NMSD was established in the early 1980s, decades prior to the Subject Property being planned or even considered for urban development until the City’s adoption of the MERCED VISION 2030 GENERAL PLAN in January, 2012. The City has already impacted the *sewer line infrastructure capacity* at the “G” Street and Yosemite Avenue intersection when it allocated unanticipated *sewer line capacity* to UC Merced.

The proposed project should not proceed without thoroughly evaluating the environmental impacts on the existing undeveloped NMSD properties that have **vested rights** to the *sewer line infrastructure capacity* as a result of having paid money to retire the debt (assessment district bonds). In addition, this project cannot rely on a “future”, as yet un-adopted, city-wide sewer master plan.

Further, there needs to be an analysis completed that accurately shows how much additional fees will the City need to charge and collect from this proposed development, and others, in order to balance out with those properties within the NMSD who have previously paid for their existing *sewer line capacity*.

It’s worth noting that the additional fee listed in the Merced Municipal Code of Ordinances Section 15.16.070 is a flat fee based on any given land use *without* consideration for the distance that the wastewater must travel. In other words, following the City’s established policy of “user pays”, the farther away a particular project is, the greater the distance that the effluent must travel, the greater the *sewer line infrastructure* that the project will utilize, the more that project should be required to pay. That’s currently not the case.

**EXHIBIT 1**







The City of Merced does not have a sewer master plan. The subject property is not within the North Merced Sewer District (NMSD) boundary (see exhibit 1 following). The NMSD property owners paid for the sewer line capacity along the Yosemite Avenue frontage of the subject, as well as the sewer line infrastructure at the “G” Street and Yosemite Avenue intersection, together with the sewer lines downstream from that intersection.

The NMSD was established in the early 1980s, decades prior to the subject property being planned and included for urban development with the city’s January, 2012 General Plan.

The city has already impacted the sewer line infrastructure at the “G” Street and Yosemite Avenue intersection when it allocated unanticipated sewer line capacity to UC Merced.

The proposed project cannot precede without thoroughly evaluating the environmental impacts on the existing NMSD properties that have a vested right to the line capacity as a result of having paid money to retire the assessment district bonds. In addition, the project cannot rely on a “future,” as yet unadopted, city-wide sewer master plan.

Further, there needs to be an analysis completed that shows how much more sewer fees will the city need to charge and collect from this development in order to balance out with those properties within the NMSD who have paid for their existing line capacity.

LAKE  
YOSEMITE

NEVADA

BELLEVUE

CARDELLA

YOSEMITE

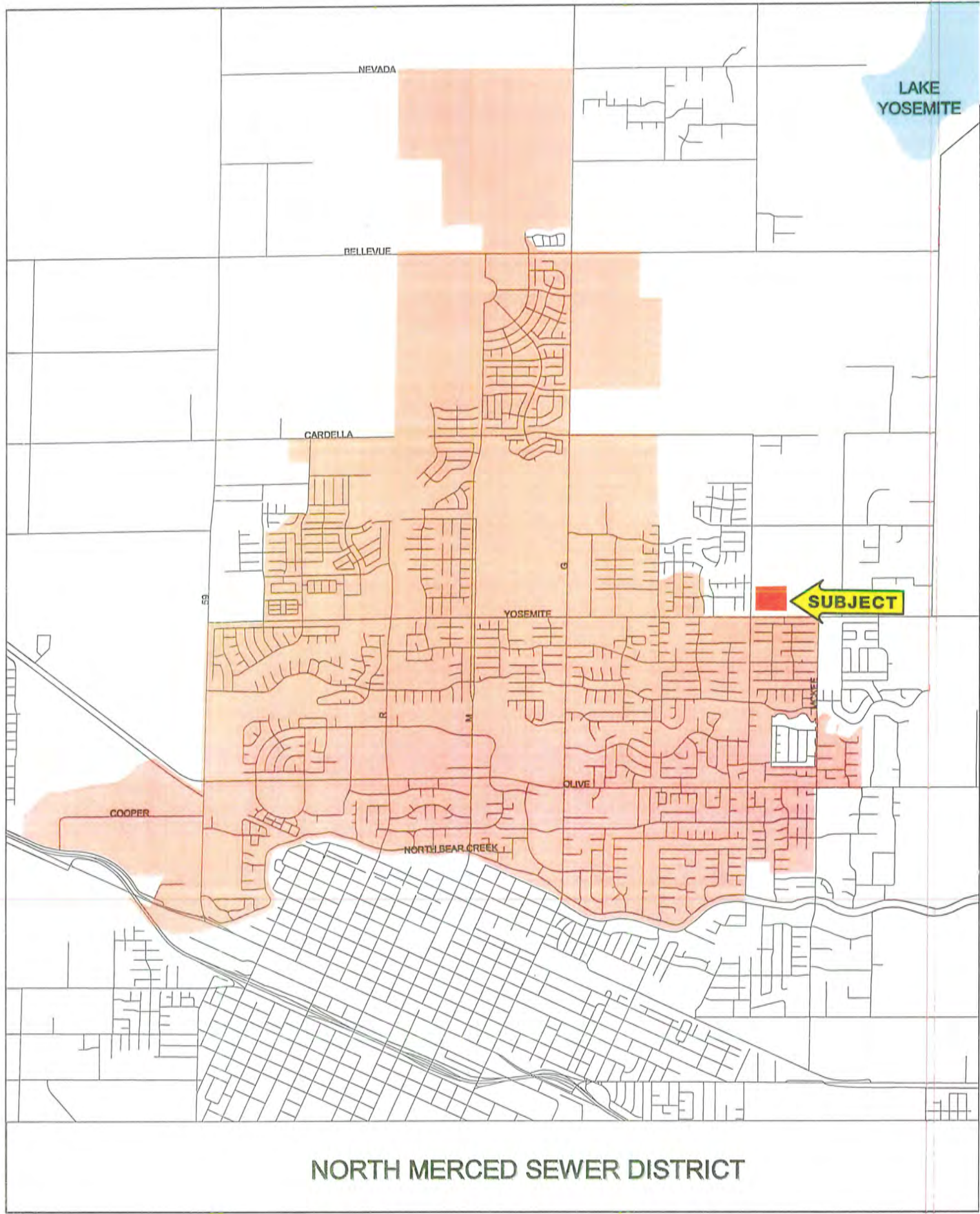
**SUBJECT**

COOPER

NORTH BEAR CREEK

OLIVE

**NORTH MERCED SEWER DISTRICT**



# Appendix B

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Initial Study

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# **INITIAL STUDY**

## **YOSEMITE AVENUE – GARDNER AVENUE TO HATCH ROAD ANNEXATION PROJECT**

*Prepared for:*

### **City of Merced**

678 West 18th Street,  
Merced, California 95340

*Contact: Julie Nelson, Associate Planner*

*Prepared by:*

### **DUDEK**

853 Lincoln Way, Suite 208  
Auburn, California 95603

*Contact: Katherine Waugh, AICP*

## **JUNE 2021**



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# Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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## 1 INTRODUCTION

The City of Merced (City) is the lead agency under the California Environmental Quality Act (CEQA) evaluating the environmental effects that would result from the proposed Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project (proposed project). This Initial Study has been prepared to support the focused Environmental Impact Review (EIR) for this project, as further discussed in EIR Chapter 1, Introduction. This Initial Study has been prepared to satisfy the environmental review requirements under the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.) applicable to the City of Merced (City), as the lead agency, for consideration of the proposed project. CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

This Initial Study was prepared to identify those resource areas and discrete individual impact topics within given resource areas where the impacts of the proposed project will not be significant, allowing for the preparation of an EIR that is focused on the project’s potentially significant impacts. This approach is consistent with CEQA Guidelines section 15128, which requires that an EIR “shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Such a statement may be contained in an attached copy of an Initial Study.” A summary of the impacts determined not to be significant is also included in Draft EIR Chapter 1 and Draft EIR Chapter 5, CEQA Mandated Sections.

A Notice of Preparation (NOP) was circulated for a 30-day public and agency review from December 9, 2016 through January 9, 2017, and a scoping meeting was held on December 16, 2017. Since this time, the project applicant has revised the proposed project by increasing the number of dwelling units and parking spaces. A revised NOP was issued and circulated for local public and agency review between May 14, 2020 and June 15, 2020 and circulated to state agencies through the State Clearinghouse for review between May 29 and June 29, 2020. The public was encouraged to provide written comments regarding the scope of the EIR during both NOP public review periods. A total of 12 written comments were submitted, with seven submitted in response to the 2016 NOP and five submitted in response to the 2020 NOP. These comments are addressed, as applicable, within the Initial Study and the EIR. Both NOPs and all comments received in response to them are provided in Draft EIR Appendix A.



# Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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## 1.1 Project Background and Setting

### Regional Location

The City of Merced is located within the San Joaquin Valley along Highway 99, in the County of Merced, California. It is approximately 115 miles south of Sacramento and 58 miles north of Fresno. The City was established in 1889 as an agricultural city and is currently the Merced County seat. The Merced Vision 2030 General Plan, adopted on January 3, 2012, serves as the blueprint for growth and development within the City and provides a land use plan to depict the City's desired arrangement and general location of land uses (City of Merced 2012a). The Program EIR for the Merced Vision 2030 General Plan evaluated potential environmental impacts associated with implementation of the General Plan (City of Merced 2012b).

### Regional Population

Both the City and County General Plan anticipate increasing residential populations in the respective jurisdictions. The City's General Plan Urban Expansion Element reports on the City's existing and projected residential population based on data obtained from the Merced Council of Governments in 2010. At that time, the city's population was projected to be 107,600 people in 2020 (City of Merced 2015b). However, growth did not occur as rapidly as anticipated, based on the US Census Quick Facts data, which indicates that there were 83,676 residents in the City of Merced in 2019 (US Census 2020), and the California Department of Finance (DOF) data that reports 88,120 city residents in 2020 (DOF 2020).

Population data from the California Department of Finance (DOF) also shows that there were approximately 255,793 people in Merced County in 2020, which is projected to increase to 298,184 by 2025 and 314,690 by 2030 (DOF 2021).

### Project Location

The project site is located in Merced County on the eastern boundary of the City. It is located within the City's Sphere of Influence (SOI) and the City's Specific Urban Development Plan (SUDP). The site extends north of East Yosemite Avenue between Gardner Avenue on the west and Hatch Road on the east.

### Project Site Conditions

The project site currently supports agricultural production, rural residences, and a church and associated private school. It is surrounded by single-family residential development to the west and south and undeveloped agricultural land/rural residential land uses to the north and east. The

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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project vicinity represents a transitional area between urban development within the City, to the west and south, and rural development and agricultural uses in the County, to the north and east.

The topography of the project site is flat and is located between 150-200 feet above mean sea level. There are four existing buildings within the project site that would be demolished as part of the proposed project, including a farmhouse and three farm related structures. There are an additional nine rural residences and a church with a private school within the site; these structures are not proposed to be demolished.

### 1.2 Project Summary

The Yosemite Avenue-Gardner Avenue to Hatch Road Annexation project (proposed project) proposes to annex approximately 68.6 acres currently within Merced County (County) into the City of Merced (City) and to construct “The Crossings,” a mixed-use development on an approximately 28.4-acre portion of the project site. The Crossings would consist of a 540-unit apartment village including a 13,700 square foot clubhouse and associated outdoor recreation space. The Crossings also includes five mixed-use buildings consisting of 66,000 square feet of retail space on the ground level and 45,000 square feet of residential space on the second level, totaling 30 additional units (12 apartments and 18 extended stay units). The other approximately 40.2 acres of the project site are referred to as the Remainder Area. No development is proposed in the Remainder Area, which includes approximately 9.4 acres in the northwestern corner of the site and 30.8 acres in the eastern portion of the site. The northwestern corner of the project site is proposed to remain under the existing Rural Residential land use designation while the project proposes to apply the Low Density land use designation to the eastern portion of the site. Approximately half of the Remainder Area is proposed to be zoned Urban Transition, while the area in the southeastern portion of the site is proposed to be zoned R-1-10.

Refer to Section 2.8 below for further details regarding the project description and to Draft EIR Chapter 2, Project Description, for a detailed project description.

# Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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## 2 INITIAL STUDY CHECKLIST

### 1. Project title:

Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project

### 2. Lead agency name and address:

City of Merced, Development Services, Planning Division  
678 West 18th Street  
Merced, California 95340

### 3. Contact person and phone number:

Julie Nelson, Associate Planner  
209.385.6967

### 4. Project location:

The approximately 68.6-acre project site is located in Merced County on the north side of Yosemite Avenue between Gardner Avenue and Hatch Road.

### 5. Project sponsor's name and address:

John Heintz  
University Village Merced, LLC  
952 W. Main Street,  
Merced, California 95340

### 6. General plan designation:

Existing: Agricultural-Residential (A-R), Merced County

Proposed: Neighborhood Commercial (CN) and High-Medium Density Residential (HMD), City of Merced

### 7. Zoning:

Existing: Rural Residential (R-R), Merced County

Proposed: Planned Development (P-D), Low Density Residential (R-1-10), and Urban Transition (U-T), City of Merced

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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**8. Description of project. (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary):**

This section provides an overview of the proposed project. Refer to Draft EIR Chapter 2, Project Description, for a detailed discussion of the proposed project.

The proposed project consists of annexing 68.6 acres from Merced County to the City and development of a 28.4-acre residential and retail development (The Crossings). No development is proposed for the remaining 40.2 acres of the project site (the Remainder Area), however the proposed land use and zoning designations for that portion of the site would allow future development of single-family residential uses. This Initial Study and the project EIR evaluate The Crossings component at a project level and evaluate the Remainder Area at a program level, consistent with CEQA Guidelines Sections 15161 and 15168.

The project site is located adjacent to the north side of East Yosemite Avenue, the east side of Gardner Avenue, and the west side of Hatch Avenue. The Crossings component is proposed to be located in the western portion of the site, adjacent to the northeast corner of the intersection at Gardner Avenue and East Yosemite Avenue and extending to the center of the site. This area currently supports primarily agricultural land with four buildings, trailers, shipping containers, and various pieces of equipment located on 3 acres of this portion of the project site. All of the buildings within this portion of the site would be demolished as part of the project and the equipment removed. The Remainder Area consists of 9.4 acres in the northwest corner of the site that supports four single-family agricultural-residential properties and 30.8 acres in the eastern portion of the site that supports undeveloped agricultural lands, Yosemite Church and associated school, and several rural residences.

The Crossings component of the proposed project would include development of 540 apartments in 20 three-story residential buildings. There would be a total of 626,280 square feet of building space and a total of 300 one-bedroom units and 240 two-bedroom units. The apartment community would also include a 13,700 square-foot two-story clubhouse, and a network of walking and biking trails/outdoor recreation space. The mixed-use portion of The Crossings development would include five two-story mixed-use buildings totaling 111,000 square feet. The first floor of the mixed-use buildings would consist of commercial/retail space, totaling 66,000 square feet, while the second floor of the buildings would contain 45,000 square feet of residential apartments, providing 30 additional units within the project site (12 apartments and 18 extended stay dwelling units).

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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The proposed project would provide a total of 1,233 parking spaces, with 901 spaces designated for residential use and 322 spaces for commercial/retail use. A bus stop would be provided in the northeast portion of the mixed-use area.

No development is proposed in the Remainder Area. The northwestern corner of the project site is proposed to remain under the existing Rural Residential land use designation while the project proposes to apply the Low Density Residential land use designation to the eastern portion of the site. Approximately half of the Remainder Area is proposed to be zoned Urban Transition (U-T), while the area in the southeastern portion of the site is proposed to be zoned Low Density Residential with a minimum lot size of 10,000 square feet (R-1-10). The R-1-10 zone district allows single-family development with a minimum lot size of 10,000 square feet. The U-T zone district allows development of agricultural uses, large and small residential day care facilities, and home occupations but does not allow development of new residential, commercial, or industrial uses.

**9. Surrounding land uses and setting (Briefly describe the project’s surroundings):**

The approximately 68.6-acre project site is located in Merced County on the north side of Yosemite Avenue between Gardner Avenue and Hatch Road. The site is unincorporated land contiguous with the City of Merced and is located approximately three miles from the UC Merced campus. The project site is bounded by the City on two sides and would be annexed into the City to receive full urban services. The project site is bounded by the City on the west and to the south. The areas to the west and south are residential and the areas to the north and east are mainly agricultural.

**10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**

The proposed project requires discretionary approvals from the Merced County Local Agency Formation Commission (LAFCo).

**11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?**

The City of Merced sent notification letters to each of the Native American tribes who have requested such notification under Public Resources Code section 21080.3.1. No responses were received; thus, no consultation was requested, and none has been conducted.

# Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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## ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact,” as indicated by the checklist on the following pages. All impacts identified in this Initial Study as potentially significant are evaluated in the Draft EIR.

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

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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**DETERMINATION:** (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

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Signature

Date

# Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

## EVALUATION OF ENVIRONMENTAL IMPACTS

### 2.1 Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. AESTHETICS – Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality??	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

The project site is located within the San Joaquin Valley in Merced County and directly adjacent to the City of Merced’s northeastern boundary. The project site is bound by Gardner Avenue, East Yosemite Avenue, and Hatch Road to the west, south, and east respectively as well as an irrigation canal and agricultural land to the north. The project site currently supports rural residences, a church (Yosemite Church) and associated school, and agricultural activities.

To the east of the City is the western slope of the Sierra Nevada Mountains; the southern portion of the City is relatively flat whereas the northern portion is defined by gently rolling hills. In addition, the northern, western, and eastern areas contain four creeks and their corresponding watersheds: Bear Creek, Black Rascal Creek, Fahrens Creek, and Cottonwood Creek. Lake Yosemite is located three miles northeast of the City and is bordered by UC Merced. The project site is located between the City limits and Lake Yosemite.

The City of Merced Vision 2030 General Plan identifies eleven scenic corridors; however, the project site is not within any of the City’s defined scenic corridors (City of Merced 2012a).



## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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### Impact Analysis

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

As identified in Policy OS-1.3 of the City’s General Plan, the City has designated 11 scenic corridors subject to special development review and regulation. None of these designated scenic corridors are adjacent to the project site or visible from the project site. Thus, the implementation of the proposed project would not result in an impact to a designated scenic corridor.

Views of the project site are generally of relatively flat land. In the western portion of the site, views include the four rural residential properties in the northwest corner of the site, row crops that surround a 3-acre area used for equipment storage and supporting several agricultural buildings and one residence. There are a few trees near the residences and along the site’s frontages on adjacent public streets but the interior of this portion of the site does not support any trees. Views of the eastern portion of the site include additional agricultural land, Yosemite Church and the associated school, and several rural residential parcels. Several trees occur in this portion of the site, as part of the landscaping for the developed properties. Visual features in the background of views across the project site include trees on nearby residential parcels, walls and roofs of residences, and additional agricultural land to the north. There are no unique or highly scenic resources visible within or across the project site and there are no scenic vistas associated with the site or the immediate area around the site. Thus, the project would have **no impact** on scenic vistas and this issue is not evaluated in the EIR.

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

None of the three state route (SR) highways that pass through the City of Merced (SR-140, 59, and 99) are listed as state scenic highways (Caltrans 2020). Therefore, alterations to the project site would have **no impact** on scenic resources within view of a state scenic highway.

In addition, the project site is currently tilled land used for growing crops or developed with a church, school, and rural residences. As noted above, the western portion of the site supports a few trees near the residences and along the site’s frontages on adjacent public streets but there are no trees in the interior of this portion of the site and there are several trees in the eastern portion of the site in the landscaped areas of the developed parcels. The site does not contain any trees or rock outcroppings. The proposed project would require

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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removal of some trees throughout the site, but new trees would be planted as part of the proposed landscaping for the project, thus the project would have a **less than significant** impact on scenic resources. This issue is not evaluated in the Draft EIR.

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

The project site is a point of transition between the urbanized area of the City of Merced to the south and west and the rural and agricultural areas in Merced County to the north and east. The project would convert the western portion of the site from agricultural to the urban uses proposed under The Crossings component of the project and could facilitate development of single-family residences in the Remainder Area. These activities have the potential to degrade the existing visual character and/or quality of views of the project site, thus this impact is considered **potentially significant** and is addressed in the Draft EIR.

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

The proposed project would include lighting for the residential units, clubhouse, retail uses, and parking areas. Nighttime lighting is necessary to ensure the safety of people living, working and patronizing the commercial and residential components of the project. There is the potential project lighting could affect adjacent uses; therefore, this is considered a **potentially significant** impact and this issue is evaluated in the EIR.

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

### 2.2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>II. AGRICULTURE AND FORESTRY RESOURCES</b> – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

The project site is located within the County of Merced and within the City of Merced’s SOI/SUDP. The County is listed as the fifth largest agricultural producing county in the State of California and produces billions of dollars’ worth of milk, chickens, almonds, cattle, tomatoes and sweet potatoes (City of Merced 2012b). The project site contains land designated under the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program as Primate Farmland, Unique Farmland, and Farmland of Local Importance (DOC 2016). Refer to Draft EIR Section 3.2 for additional discussion of these designations.

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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The County of Merced maintains Williamson Act contracts as part of the State of California Williamson Act agricultural land preservation program. The Act aims to preserve open space and agricultural land from unnecessary development pressures. The project site is not subject to a Williamson Act contract (City of Merced 2012b).

### Impact Analysis

- a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

As stated above, the project site includes land designated as Prime Farmland, Unique Farmland, and Farmland of Local Importance (DOC 2016). The Crossings component of the project would result in the conversion of these designated farmlands to urban uses. Thus, this impact is **potentially significant** and is evaluated in the Draft EIR.

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

The Merced Vision 2030 General Plan provides a map of all the agricultural areas that maintain a Williamson Act contract. Neither the project site nor the surrounding areas are under active Williamson Act contracts (City of Merced 2012a). The project site is currently outside of the city limits and thus does not have a City zoning designation. However, the project site is within the City's SOI and is designated for Rural Residential land uses in the Merced Vision 2030 General Plan (City of Merced 2012a). Under Merced County's General Plan, the site is designated as a Rural Residential Center and the County's zoning designation for the site is Rural Residential (Merced County 2010). Therefore, the project would have **no impact** associated with a Williamson Act contract or conflict with existing agricultural zoning and this issue is not evaluated in the Draft EIR.

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

The project site is currently used as agricultural land and does not contain any forest land, timberland, or timberland zoned Timberland Production. Therefore, the project would have **no impact** on the removal of forest land or land zoned for timberland production. This issue is not evaluated in the Draft EIR.

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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

As discussed in response c) above, there are no forest lands on or within the vicinity of the project site. The project site does not support any forest resources, as it is currently used for agricultural purposes. Thus, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, the project would have **no impact** in regard to forest resources and this issue is not evaluated in the Draft EIR.

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

The project site is currently used as agricultural land and is bordered by agricultural land to the north and east. Development of the site would require the conversion of Prime Farmland, Farmland of Local Importance, and Unique Farmland to non-agricultural uses. Therefore, this impact is considered **potentially significant** and is evaluated in the Draft EIR. As discussed in responses c) and d) above, the proposed project would have **no impact** associated with the conversion of forest land as neither the project site nor surround lands support forest resources and this issue is not evaluated in the Draft EIR.

### 2.3 Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>III. AIR QUALITY</b> – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

# Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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## Environmental Setting

The project site is located in the San Joaquin Valley Air Basin (SJVAB) and within the jurisdiction and regulation of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The Basin encompasses the southern half of the San Joaquin Valley and is bounded by the Sierra Nevada Mountains, the Coast Range, and the Tehachapi Mountains and San Emigdio Mountains to the east, west, and south, respectively. The Basin exists in a ‘bowl,’ as the mountain ranges block the free circulation of air. As such, air pollutants produced within the Basin linger and accumulate, resulting in poor air quality. These stagnant conditions occur with the highest frequency happening in the colder, winter months. Air quality in a majority of the City is monitored and managed by the SJVAPCD. The SJVAPCD is responsible for establishing programs, plans and regulations enforcing air pollution controls in order to attain all state and federal ambient air quality standards.

Vehicle use is the primary source of pollutants in the City, which contributes both directly and indirectly to air pollution. Additional sources of air pollutants include wood smoke from residential fireplaces, construction activities, consumer productions, architectural coatings, fertilizers, asphalt paving, and agriculture operations (City of Merced 2012b).

Sensitive receptors refer to those segments of the population most susceptible to poor air quality and typically include children, elderly people and sick people, as well as sensitive land uses such as schools, hospitals, parks, and residential communities.

## Impact Analysis

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

The Project site is located within the SJVAB, under the jurisdiction of the SJVAPCD, which is the applicable agency principally responsible for air pollution control within the SJVAB. The SJVAPCD has adopted a series of Air Quality Management Plans that detail the regulatory and incentive-based measures that would allow the SJVAPCD to meet the EPA National Ambient Air Quality Standards. Construction and operation of the proposed project would result in emissions of criteria pollutants which could result in a conflict with or obstructing implementation of the applicable air quality plan. Therefore, this impact is **potentially significant** and is evaluated in the Draft EIR.

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

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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The SJVAPCD has adopted thresholds for criteria air pollutant emissions to identify whether a project could result in a cumulatively considerable increase in pollutant concentrations that could lead or contribute to violations of the federal and state standards. Project-specific emissions associated with construction and operation of the proposed project could exceed these thresholds thus, this impact is **potentially significant** and is evaluated in the Draft EIR.

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

The closest sensitive receptors (single-family residences) to the project site are located adjacent to the project site, across East Yosemite Avenue and Gardner Avenue on the south and western boundaries of the site. Since project-specific emissions associated with construction and operation of the proposed project may exceed applicable thresholds and could expose sensitive receptors to substantial pollutant concentrations. This impact is **potentially significant** and is evaluated in the Draft EIR.

*d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people??*

Odor impacts from construction activity occurring within the project site would be generated from vehicles and/or equipment exhaust emissions during construction of the proposed project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and to architectural coatings associated with building painting during construction. Most of the people within the project area who could be subjected to odors would include construction workers. During construction, the various diesel-powered vehicles and equipment in use on-site would create localized odors. However, these odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for construction-related odor impacts would be **less than significant**.

Land uses that are typically associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. Once constructed, the proposed Project would include the operation of residential and commercial uses, which are land uses that are not expected to produce offensive odors that would result in frequent odor complaints. Therefore, impacts associated with odors during construction and operation would be considered **less than significant**. This issue is not evaluated in the Draft EIR.

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### 2.4 Biological Resources

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

### Environmental Setting

The project site is within the Central Valley that extends from the Sacramento Valley to the San Joaquin Valley; the Central Valley contains its own ecoregion that is defined by extensive farmland and long, hot dry summers and cool, wet winters.

A Biological Resources Assessment was prepared for the project site and is provided in EIR Appendix E. Preparation of the Biological Resources Assessment included a field assessment of The Crossings component of the project site and observation of the Remainder Area. The project site has been extensively farmed or supports rural residential and institutional land uses and thus contains very few native/natural plant communities. Agriculture and developed/rural residential



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were the two land cover types observed within the survey area and two potentially jurisdictional drainages were identified within the study area.

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

As determined in the Biological Resources Assessment, the project site has the potential to support special-status plant and wildlife species. Therefore, this impact is **potentially significant** and is evaluated in the Draft EIR.

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

No sensitive natural communities were identified within The Crossings component of the project site. However, a detailed field assessment of the Remainder Area was not conducted due to the existing development within that portion of the site and because there is no current proposal for development within the Remainder Area. Thus, it is possible that sensitive natural communities could be present within the Remainder Area and development within that portion of the site would have a **potentially significant** impact to such communities if they are present. This impact is evaluated in the Draft EIR.

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

As determined in the Biological Resources Assessment, The Crossings component of the project site contains two drainages that may be considered jurisdictional waters of the State, under the joint regulation of the RWQCB and CDFW. Additionally, as discussed in response b) above, a detailed field assessment of the Remainder Area was not conducted, and it is possible for state or federally protected wetlands to be present in that portion of the site. Therefore, this impact is **potentially significant** and is evaluated in the Draft EIR.

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- d) *Would the project 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?*

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as steppingstones for wildlife dispersal. As determined in the Biological Resources Assessment, the 68.6-acre project area is a non-linear feature that is bound by existing roads and development and portions of the site support rural and institutional land uses. Thus, the site has little value as a potential wildlife corridor or habitat linkage (EIR Appendix E) and the project's impact to wildlife movement and nursery sites would be **less than significant**. This issue is not evaluated in the Draft EIR.

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

If the project site is annexed to the City of Merced, as proposed, the project would be subject to all City policies or ordinances protecting biological resources. It is possible that the conversion of agricultural land to developed, urban land would result in the loss of biological resources and therefore conflict with General Plan Policy OS-1.1, which requires that impacts to habitats that support rare, endangered, or threatened species be identified and mitigated, or the City of Merced Municipal Code pertaining to trees, shrubs, and plants. This impact is considered **potentially significant** and is evaluated in the Draft EIR.

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

The project site is not located within or adjacent to any preserve or conservation area and there is no adopted Habitat Conservation Plan or Natural Community Conservation Plan in Merced County. Therefore, the project would have **no impact** and this issue is not evaluated in the Draft EIR.

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### 2.5 Cultural Resources

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

#### Environmental Setting

Refer to Draft EIR Section 3.5 for a discussion of the history and pre-history of the project region.

A Cultural Resources Letter Report (provided in EIR Appendix F) found that there are no known archeological resources within The Crossings component of the project site, but a detailed field assessment of the Remainder Area was not conducted due to the existing development within that portion of the site and because there is no current proposal for development within the Remainder Area.

#### Impact Analysis

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

As discussed further in Draft EIR Section 3.5, the Cultural Resources Letter Report for the project found that there are no historical resources within The Crossings portion of the project area, but the Remainder Area was not subject to a historic resources evaluation and thus the project could result in **potentially significant** impacts to historic resources. This issue is evaluated in the Draft EIR.

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

As discussed further in Draft EIR Section 3.5, the Cultural Resources Letter Report for the project found that there are no known archaeological resources within The Crossings

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portion of the project area, but the Remainder Area was not subject to an archaeological resources evaluation and thus the project could result in **potentially significant** impacts to archaeological resources. This issue is evaluated in the Draft EIR.

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

There are no known human burial sites within the project site, however earth disturbance during construction has the potential to uncover and impact previously unrecorded human remains. This impact is considered **potentially significant** and is evaluated in the Draft EIR.

### 2.6 Energy

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

### Environmental Setting

As required by CEQA Guidelines Appendix F, Draft EIR Section 3.6 evaluates the potential for the proposed project to result in potentially significant energy impacts during both the project’s construction and operational phases.

### Impact Analysis

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

Construction and operation of the proposed project would result in the consumption of energy resources, and could result in energy usage that is wasteful, inefficient, or unnecessary. Therefore, this impact is considered **potentially significant** and is evaluated in the Draft EIR.

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**b) *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?***

Construction and operation of the proposed project could result in energy usage that conflicts with or obstructs a state or local plan for renewable energy or energy efficiency. Therefore, this impact is considered **potentially significant** and is evaluated in the Draft EIR.

### 2.7 Geology and Soils

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

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### Environmental Setting

The City of Merced is located along the western edge of the Great Valley Geomorphic Province, also known as the San Joaquin Valley. The Valley is filled with thick sedimentary deposits, and as discussed in the Merced Vision 2030 General Plan EIR, the area around Merced is primarily underlain with Pleistocene Modesto and Riverbank Formations with Holocene alluvial deposits. Modesto and Riverbank Formation deposits are characterized by sand and silt alluvium derived from the weathering of rocks. In addition, indications of the Miocene-Pliocene Mehrten and Pliocene Laguna Formations are found on the eastern portion of the SOI/SUDP area, which includes the project site (City of Merced 2012b). The Laguna Formation is characterized by consolidated gravel sand and silt alluvium while the Mehrten Formation is characterized by well consolidated andesitic mudflow breccia conglomerate.

The City is not located in an area known for active faults or Alquist-Priolo Earthquake Fault Zones (City of Merced 2012b). The closest active fault line is Great Valley, Segment 9, which is located approximately 30 miles from the City. The greatest concern stemming from earthquake activity is the damage or destruction of buildings and the risk it poses to people.

Liquefaction is the sudden loss of soil stiffness and loss of bearing capacity, most often as a result of seismic activity. It is most common with granular soils, especially well saturated, loose granular soils. The Merced Vision 2030 General Plan EIR states that the general liquefaction potential is low within the City and that “based on the predicted seismic accelerations, and soil and groundwater conditions typically encountered in the region, general liquefaction potential is low within the SUDP/SOI” (City of Merced 2012b). The General Plan Safety Element states “although no liquefaction hazard areas have been identified to date in the SUDP/SOI, the future potential of liquefaction is recognized because unconsolidated sediments and a high water table do coincide in many areas” (City of Merced 2012a). The Merced Groundwater Sustainability Plan Figure 2-46 shows that groundwater levels in the project area are between 60 and 80 feet above mean sea level (Merced SGMA 2019), while the project site is at an elevation of approximately 185 feet above mean sea level. Thus, the depth to groundwater in the project area is approximately 100 feet, which indicates that the site has a low liquefaction potential.

There are two dams in the area that could experience dam failure: Lake Yosemite Dam and Bear Reservoir Dam. Both are earthen dams and thus are more flexible to seismic activity but may fail if the reservoirs become too full and over-top. The project site is not within the inundation area of either dam (City of Merced 2012a).

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The Merced Vision 2030 General Plan EIR states that the soils in the project area are generally moderate to deep, silty and clayey loams. Thus, they are not considered to be expansive and they have a generally low to moderate erosion potential (City of Merced 2012b).

### Impact Analysis

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

i-ii) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*

There are no active or potentially active faults that cross the project site, and the project site is not located within an Alquist-Priolo Fault Zone (DOC 2019). In addition, there are no active faults in proximity to the project site. As discussed above, the closest active fault line is located 30 miles from the City. Therefore, the project would have a **less-than-significant** impact related to exposing people or structures to adverse effects from rupture of a known earthquake fault. This impact is not evaluated in the Draft EIR.

ii) *Strong seismic ground shaking?*

As noted above, the closest fault line is located 30 miles from the project site, and since the project site is located within the seismically active State of California, ground shaking of moderate severity may be expected to be experienced on the project site during a large seismic event. However, all building permits would be reviewed to ensure compliance with the California Building Code. Since all structures would be designed and built in accordance with the standards of the California Building Code, impacts associated with strong seismic ground shaking would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

Liquefaction occurs when seismic vibrations affect loose, granular, and saturated soil and result in the soil's loss of strength and stiffness. Soils in and around the City of Merced are moderate to deep, silty and clayey loams which are not considered to be expansive and have a generally low to moderate erosion potential. Groundwater in the project area is approximately 100 feet below ground surface. The Merced Vision 2030 General Plan EIR concluded that soils and groundwater conditions in the region carry a low potential for liquefaction (City of Merced

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2012b). Therefore, the project's impact would be **less than significant**. This impact is not evaluated in the Draft EIR.

*iv) Landslides?*

The proposed project site and surrounding area is relatively level with no steep slopes or exposed cut slopes and thus has a low risk of landslides. The proposed project would maintain the generally flat slopes within the project site, with the exception of the detention basin proposed to be located north of the mixed-use area within The Crossings component of the project. All sloped areas associated with construction of the detention basin would be within the interior of the basin and would not create sloped areas above any existing or planned buildings, parking lots, pedestrian pathways, or other areas where people may be present. Therefore, the project would have **no impact**. This impact is not evaluated in the Draft EIR.

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

The Merced Vision 2030 General Plan EIR describes the soils in and around the City of Merced as being moderate to deep silty and clayey loams that have a low to moderate erosion potential. Construction within the project site could result in temporary soil erosion and the loss of top soil due to construction activities, including clearing, grading, site preparation activities, construction of the detention basin, and installation of on-site infrastructure (stormwater, sewer, and water conveyance pipelines). Construction activities disturbing one or more acres are required by the State Water Resources Board (SWRCB) to obtain a General Construction Activity Stormwater Permit, which would require the proposed project to implement a Storm Water Pollution Prevention Plan (SWPPP). Compliance with SWRCB and City of Merced regulations would ensure that erosion and associated siltation effects are avoided. During construction, best management practices would be followed as well as compliance with state and local construction standards in order to restrict and minimize any and all soil erosion and/or loss of topsoil. Therefore, the project impact due to soil erosion and loss of topsoil would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

Soils in the area are moderate to deep, and silty and clayey loams (City of Merced 2012b); these soils are not considered to be expansive and, thus in conjunction with the general lack



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of slopes in the area, the soils on the project site are considered relatively stable. As discussed in response a.iii) above, the liquefaction potential at the project site is low. During construction, BMPs will be utilized in order to restrict and minimize any and all concerns regarding landslide, lateral spreading, subsidence, liquefaction or collapse. Therefore, the project impact would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

Expansive soils are defined as soils that shrink and swell in relation to the amount of water in the soil. Soils in the area are classified as moderate to deep, and silty and clayey loams (City of Merced 2012b); these soils are not considered to be expansive and have a low to moderate erosion potential. Therefore, the project impact would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

The project proposes to annex the project site to the City of Merced; therefore, public utilities would be available, and the project would tie into the City's wastewater system. The project does not propose using septic tanks or other alternative wastewater disposal systems. Therefore, the project would have **no impact**. This impact is not evaluated in the Draft EIR.

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

The project site is generally flat and does not contain any unique geologic features, such as rock outcroppings, or topographic formations. There are no known paleontological resources within or adjacent to the site. However, construction of the proposed project would result in ground-disturbing activities on vacant and undeveloped portions of the project site, which could damage or destroy paleontological resources if any are encountered during earth disturbance activities. Although the project site has been in use for agricultural resources, grading activity may have the potential to impact previously undisturbed paleontological resources. Therefore, impacts are considered **potentially significant**. This impact is evaluated in the Draft EIR.

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### 2.8 Greenhouse Gas Emissions

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

#### Environmental Setting

Greenhouse gas emissions are regulated by the State of California under multiple Executive Orders and legislative actions. The primary legislation is the California Global Warming Solutions Act of 2006 (California Health and Safety Code, Sections 38500–38599 et seq), also referred to as Assembly Bill (AB) 32. AB 32 provided initial direction on creating a comprehensive multiyear program to limit California’s GHG emissions to 1990 levels by 2020, and initiate the transformations required to achieve the state’s long-range climate objectives. Under AB 32, the California Air Resources Board (CARB) adopted a Climate Change Scoping Plan in 2008, which was updated in 2014 and 2017. In part, the Scoping Plan updates recognize the newer GHG emissions targets, established by Executive Orders, to reduce emissions to 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050.

In addition, the City of Merced adopted a Climate Action Plan in 2009. This plan establishes a goal to reduce GHG emissions and a variety of incentive-based actions, communication-based actions, and encouragement-based actions that will help to achieve broadly-supported community values including: 1) protecting water and air resources; 2) reducing the waste-stream to the landfill; 3) improving energy-efficiency; 4) enhancing choice in mobility; and 5) creating healthy and livable communities.

The CAP recognizes that the City and larger region is expected to grow substantially, but that growth can and must occur in a manner that allows the City to achieve its GHG reduction goals. The CAP notes that the “urban village” concept that informs the City’s General Plan encourages transit-oriented development and mixed-use development, “which are foundational elements of reducing GHG emissions through land use planning” (Merced 2009).

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### Impact Analysis

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

Construction and operation of the proposed project would generate greenhouse gas emissions, and additional information is needed to determine if the proposed project could directly or indirectly have a significant impact on the environment. Therefore, impacts are considered **potentially significant**. This issue is evaluated in the Draft EIR.

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

Construction and operation of the proposed project would generate greenhouse gas emissions, and additional information is needed to determine if the proposed project could directly or indirectly have a significant impact on the environment. Therefore, impacts are considered **potentially significant**. This issue is evaluated in the Draft EIR.

### 2.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

Hazardous materials and hazardous wastes are heavily regulated by federal, state and local agencies including the California Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC), and the California State Water Resources Control Board (SWRCB). Hazardous wastes that are common in the City are typically generated by gasoline service stations, dry cleaners, automotive mechanics, auto body repair shops, machine shops, printers, photo processors and agricultural operations.

The proposed project would be expected to generate limited amounts of household hazardous waste but would not be anticipated to generate hazardous waste generated by the sources listed above, which are regulated by the Merced County Hazardous Waste Management Plan. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) (DTSC 2020; SWRCB 2020).

The nearest school to the project site is Peterson Elementary, which is located approximately 0.6 miles to the southwest. The project site is not included in the area of influence for Merced County Castle Airport (7.25 miles northwest) and Merced Regional Airport (4.75 miles southwest). The project site is not mapped in an area of high wildland fire risk; however, open space agricultural lands in near the project site pose a threat related to grass fires.

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### Impact Analysis

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

The proposed project includes development of residential and mixed-use commercial/residential buildings within the project site. During construction, there is the potential for short-term use of hazardous materials and fuels including diesel fuel, gasoline, and other oils and lubricants. These hazardous materials would be handled, transported and disposed of in compliance with all existing local, state and federal regulations established by the Department of Toxic Substances Control (DTSC), the United States Environmental Protection Agency, and the Occupational Safety and Health Administration (OSHA). Operation of the proposed project would not require the routine, use, transport or disposal of hazardous waste other than typical household materials, such as cleaning products and landscape maintenance products. The types and quantities of these common household materials would not be substantial and would not pose a health risk to those utilizing the project site or adjacent users. Therefore, the project's impact associated with the routine transport, use, or disposal of hazardous materials would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

As stated above, the project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Thus, it is not expected that hazardous material conditions would be encountered within the project site during construction. Any hazardous materials used during construction would be handled according to required regulations (refer to response a) above). Therefore, construction of the proposed project would not 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.

Operation of the mixed-use and residential buildings may involve the use of small quantities of typical household and commercially available hazardous materials that could be potentially hazardous if handled improperly. However, these typical household products are not generally considered unsafe. All storage, handling, and disposal of hazardous materials during project construction and operation would comply with applicable standards and regulations. Therefore, the proposed project would not result in a significant

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hazard to the public or the environment through a reasonably foreseeable upset or accident condition related to the release of hazardous materials, and the impact would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

The project site is not within one-quarter mile of an existing or proposed school. The closest schools are as follows: Peterson Elementary is 0.6 mile to the southwest; Donn B Chenoweth Elementary is 0.8 mile to the south; Merced College is 1.44 miles to the west; Rudolph Rivera Intermediate School is 1.84 miles to the west; and UC Merced is 2.5 miles to the northeast. As there are no schools within one-quarter mile of the project site, the proposed project would have **no impact**. This impact is not evaluated in the Draft EIR.

- d) *Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

California Government Code Section 65962.5 combines several regulatory lists of sites that may pose a hazard related to hazardous materials or substances. The DTSC's EnviroStor database and SWRCB's GeoTracker database identify sites that have known contamination or sites for which there may be reasons to investigate further. The project site is not designated as a hazardous materials site on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and is not included on any state or federal list of potentially hazardous materials (DTSC 2020; SWRCB 2020). There are no sites within 1,000 feet of the project site mapped on the EnviroStor or GeoTracker databases (DTSC 2020; SWRCB 2020). Therefore, the project would have **no impact** related to being located on a listed hazardous materials site. This impact is not evaluated in the Draft EIR.

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

As discussed above in the environmental setting for hazards and hazardous materials, the project site is located approximately 4.75 miles to the northeast of the Merced Regional Airport, and approximately 7.25 miles to the southeast of the Merced County Castle

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Airport. The project site is not located within the Airport Influence Area or Noise Compatibility Zones for either airport, as designated by the Merced County Airport Land Use Compatibility Plans (Merced County ALUCP 2012). Thus, implementation of the proposed project would not expose people residing or working in the project area to a safety hazard or excessive noise levels from aviation activity, since the project site is not within the Airport Influence Area or Noise Compatibility Zone a designated by an applicable airport land use plan, and is not within two miles of an existing public or private use airport. Therefore, there would be **no impact**. This impact is not evaluated in the Draft EIR.

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

The Merced Vision 2030 General Plan Safety Element includes Policy S-1.1, which aims to develop and maintain an evacuation plan through Implementation Actions 1.1a through 1.1f. These implementation actions require an annual review of the City's evacuation plan, evaluation and creation of evacuation routes contingent on type of emergency, and creation of process by which local agencies and emergency responders are continuously updated on current evacuation measures and plans (City of Merced 2012b). In addition, the City has adopted an emergency response plan that identifies potential hazards that threaten the City of Merced and provides strategies to minimize such hazards. The City adopted the Local Hazard Mitigation Plan in March of 2015 in an effort to reduce future loss of life and property resulting from disasters (City of Merced 2015). This plan outlines the implementation programs needed to prevent risks to occupants and to minimize injury from an unavoidable disaster or emergency. Any potential impacts created by the proposed project would be less than significant with implementation of the Local Hazard Mitigation Plan programs. The entrance to the project site would be located along Yosemite Avenue, which is approximately one mile east of the G Street intersection, which is a designated evacuation route per Figure 11.8 of the City's General Plan (Merced Vision 2030 General Plan, Figure 11.8). The proposed site plan, including the access driveways, would be reviewed and approved by the City, the police department, and the fire department during plan review to ensure that emergency access would be provided at all times. Therefore, implementation of the proposed project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

The California Department of Forestry and Fire Projection (CAL FIRE) identifies the project site and surrounding areas as having a moderate risk for fire danger. The project site is not located within or near a State Responsibility Area, as designated on the Fire Hazard Severity Zones in State Responsibility Areas for Merced County (CAL FIRE 2007a). Further, CAL FIRE has determined that Merced County has no Very High Fire Hazard Severity Zones in the Local Responsibility Area (LRA). The project site is in an LRA unzoned fire hazard severity area while properties to the north are zoned as LRA Moderate fire hazard severity per the CALFIRE Draft Fire Hazard Severity Zones in Local Responsibility Area map (CAL FIRE 2007b). The project site and surrounding areas would be serviced by fire protection agencies, including the City of Merced. Potential impacts associated with the City’s provision of fire protection services to the site are evaluated in Draft EIR Section 3.11.

Development of the site with urban uses would also reduce the opportunity for wildfires to occur onsite. Therefore, the project’s impact associated with exposing people or structures to a significant risk of loss, injury or death involving wildland fires would be **less than significant**. This impact is not evaluated in the Draft EIR.

### 2.10 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>X. HYDROLOGY AND WATER QUALITY – Would the project:</b>				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces , in a manner which would:				
i) result in a substantial erosion or siltation on- or off-site;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

The topography in the region is relatively flat with slopes that are less than 1 percent. Elevation throughout the City ranges from 150 to 200 feet above mean sea level. The project site is located adjacent to the City of Merced and within the San Joaquin Valley drainage basin. The basin stretches from south of Stockton to north of Fresno and from the western Sierra Nevada Range to east of the Coastal Ranges; this watershed encompasses 11,000 square miles of land. The San Joaquin River, the primary river, begins in the Sierra Nevada, runs through Mendota, and ultimately connects to Suisun Bay. Main tributaries to the San Joaquin River include the Stanislaus, Tuolumne, and Merced rivers. In addition, an extensive network of irrigation canals, levees, and ditches characterize the region around Merced, and throughout the Central Valley (City of Merced 2012b).

The City of Merced is located in the Middle San Joaquin-Lower Chowchilla watershed, which in turn is part of the San Joaquin River Groundwater Basin. The larger basin spans 15,200 square miles. Groundwater is a significant source of water for the City. There are four recognized aquifers underneath the City and its proposed annexation area: the Mehrten Formation, the confined aquifer, the intermediate aquifer, and the shallow unconfined aquifer. Groundwater is the main source of drinking water for the City and, therefore, the water quality of groundwater is important (City of Merced 2012b).

Since the project site generally slopes from the northeast to the southwest, it drains to the southwest corner of the parcel at Yosemite Avenue and Gardner Avenue. This drainage is conveyed to the city's storm drain system via a 24-inch storm pipe that crosses under Yosemite Avenue and continues south through a detention basin and pump station which ultimately discharges to Black Rascal Creek.

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### Impact Analysis

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

Development of the project site and conversion of agricultural lands to urban uses has the potential to increase erosion and discharge of sediments that could degrade water quality. Construction activities that disturb one-acre or more of land is required to comply with the Central Valley Regional Water Quality Control Board's NPDES permit, which requires development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must list BMPs to protect stormwater runoff, prevent or reduce erosion, improve sediment control, control run-on and runoff and prevent pollutants from entering stormwater runoff. The proposed project would convert agricultural land to urban uses, which would increase impervious surface area and could generate a new source of water pollution. The addition of impervious surfaces within the project site could result in increased runoff and could violate water quality standards or waste discharge requirements, or substantially degrade surface water or groundwater quality. The project would be required to comply with all applicable state and local standards; however, to confirm that the project-specific impacts can be adequately addressed by existing and planned drainage infrastructure for this area, a drainage report would be prepared. Impacts are considered to be **potentially significant**. This impact is evaluated in the Draft EIR.

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

The proposed project includes annexation of the project site to the City and development of residential and commercial land uses on approximately 28.4 acres of the site. The project would connect to City services for water supply; the City's sole source of potable water is groundwater. Therefore, while the proposed project would directly draw groundwater from wells within the project site, the proposed land uses would be served by groundwater supplies through the City's water supply system. Additionally, conversion of agricultural lands to a developed, urban environment would result in a decrease in permeable surfaces that may reduce groundwater recharge. These impacts are **potentially significant** and are evaluated in the Draft EIR.

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

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

Implementation of the proposed project would result in grading and landform alterations on the project site that would have the potential to result in modifications of the existing drainage patterns within the site. Grading and construction activity could expose soils that could be subject to the effects associated with wind and water erosion unless adequate measures are taken to limit the transport of soils in surface water from the site to downstream locations. This impact is considered **potentially significant** and is evaluated in the Draft EIR.

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

The proposed project has the potential to substantially increase the rate or amount of surface runoff within the project site by constructing residential and mixed-use buildings and new parking areas where no structures or impervious landscapes currently exist. Implementation of the proposed project would alter the existing drainage within the project site and could cause an increase in peak flows and volume discharged due to the increase in impervious surface area. Since the proposed project has the potential to increase surface runoff, this impact is considered **potentially significant** and is evaluated in the Draft EIR. A Storm Drainage Report was prepared for the project to support the EIR analysis; it is provided in EIR Appendix H.

iii) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

As noted above under the environmental setting for hydrology and water quality, construction of the proposed project would include connecting on-site drainage facilities to the City's storm drain system. Currently, drainage from the project site is conveyed to the city's storm drain system via a 24-inch storm pipe that crosses under Yosemite Avenue and continues south through a detention basin and pump station which ultimately discharges to Black Rascal Creek. Because the proposed project would construct new buildings and paved parking lots in areas within the project site where no structures or impervious landscapes currently exist, the

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proposed project could result in the increase of surface water runoff. Thus, runoff conditions within the project site would change as compared to the current condition, and the proposed project could create or contribute runoff water which could exceed the capacity of existing or planned stormwater drainage systems, or could provide substantial additional sources of polluted runoff. This impact is considered **potentially significant** and is evaluated in the Draft EIR.

*iv) Impede or redirect flood flows?*

A Flood Study was prepared for the proposed project and is provided in EIR Appendix G. The project site is not located within a Federal Emergency Management Agency (FEMA) mapped Special Flood Hazard Area subject to inundation by the 1 percent annual chance flood. As shown on FEMA Flood Insurance Rate Map (FIRM) 06047C0429G, the project site is located in Zone X, which is defined as an area determined to be outside of the 0.2 percent annual chance floodplain (FEMA 2008).

The City also requires consideration of potential localized flooding effects. Portions of the project site would be subject to shallow (less than 3 feet deep) flooding from Black Rascal Creek (located south of the project site) and Cottonwood Creek (located north of the project site) in the event of a 200-year storm event. Specifically, flooding of the Black Rascal Creek channel could create flooding of between 0 feet at the northeast corner of the Crossings component of the project site to 1.4 feet at the southwest corner of the Crossings component. Flooding of the Cottonwood Creek channel could add approximately 0.3 feet of flooding depth to the Crossings component of the project site. Additionally, the southeastern portion of the Remainder Area would be subject to shallow (less than one foot) flooding from flooding of the Black Rascal Creek channel (Appendix G).

As demonstrated in the Flood Study Report, implementation of the proposed project would not impede or redirect flood flows. **No impact** would occur. This impact is not evaluated in the Draft EIR.

*d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

The project site is not located within a flood hazard, tsunami, or seiche zone. As shown on FEMA Flood Insurance Rate Map (FIRM) 06047C0429G, the project site is located in Zone X, which is defined as an area determined to be outside of the 0.2 percent annual chance floodplain. In addition, based on the maps provided in the City's General Plan,

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the project site is not within a dam failure inundation area (City of Merced 2012a). The project site is located in the middle of the Central Valley in California, approximately 83 miles from the nearest ocean and 2.5 miles from the nearest large body of water. The site and surrounding land is relatively flat. Therefore, there is no risk of inundation by seiche or tsunami. **No impact** would occur as a result of implementation the proposed project. This impact is not evaluated in the Draft EIR.

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

Because the proposed project would involve the construction of new buildings, would create new impervious surfaces, would involve off-pavement construction operations, and would require ground-disturbing activities, the proposed project has the potential to conflict with existing water quality or groundwater management plans. This impact is considered **potentially significant** and is evaluated in the Draft EIR.

### 2.11 Land Use and Planning

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XI. LAND USE AND PLANNING – Would the project:</b>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Environmental Setting

The City of Merced is the largest city in the County as well as the county seat. The City contains a mix of residential, commercial, industrial and public land uses; it is surrounded by mainly agricultural land. The project site is located within the unincorporated County and is designated as a Rural Residential Center on the Merced County City Planning Area-Merced land use map (County of Merced 2013). The City’s General Plan is the primary planning document that sets forth a vision for future development. The project site is designated for future annexation and development in the City’s General Plan and is within the City’s SOI/SUDP. The project site is designated Rural Residential (RR) in the City’s General Plan (Merced Vision 2030 General Plan, Figure 2-3). The project requires redesignating the site from Rural Residential (RR) to Neighborhood Commercial (CN) and High-Medium Density Residential (HMD). Since the project site is not located within City boundaries, there is no City zoning designation for the site. The

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project would require a pre-zoning to Planned Development (P-D) for The Crossings component of the proposed project, and to Low Density Residential (R-1-10) and Urban Transition (U-T) for the Remainder Area.

### Impact Analysis

*a) Would the project physically divide an established community?*

If approved, the project site would be annexed to the City. The project site is currently located adjacent to the City limits as well as on the border between urban and agricultural uses. Development of the proposed project would not divide an established community because construction of the residential and mixed-use buildings would provide additional housing and local-serving retail/commercial buildings adjacent to existing residential development within the City.

The Remainder Area supports rural residential uses, a church and associated private school, and agricultural uses. The portions of the Remainder Area proposed to be pre-zoned U-T would support only continued operation of the existing land uses and new agricultural uses; the portions of the Remainder Area proposed to be pre-zoned R-1-10 would allow development of single-family residences on minimum 10,000-square-foot lots. The lands surrounding the Remainder Area do not comprise an established community because rural residential/agricultural use exists to the north while a separate area of rural residential exists to the east. Any future development within the Remainder Area subject to the proposed zoning designations would not divide any established communities, and there would be **no impact**. Therefore, this impact is not evaluated in the Draft EIR.

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

As discussed throughout this Initial Study, the proposed project could result in significant environmental effects in a wide range of environmental resource areas. These effects may include conflicts with adopted plans, policies, and regulations that identify standards and requirements related to avoiding or mitigating environmental effects. Therefore, this impact is considered **potentially significant** and is evaluated in the Draft EIR.

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### 2.12 Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XII. MINERAL RESOURCES – Would the project:</b>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Environmental Setting

The Merced Vision 2030 General Plan states that neither the City nor any areas within its SOI/SUDP contain any mineral resources that necessitate management or are areas expected to contain mineral resources (City of Merced 2012a). The General Plan does acknowledge that there is minor aggregate production to the west and north of the City; however, it is not within proximity to the City or its SOI/SUDP and, therefore, not in proximity to the project site.

### Impact Analysis

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

There are no known mineral resources within the project site and no mineral recovery activities have been known to occur on the site. In addition, there are neither known nor expected mineral deposits within the City or its SOI/SUDP. Therefore, future development of the project site would not adversely affect any mineral resources of value to the state or region. The project would have **no impact** related to mineral resources. This impact is not evaluated in the Draft EIR.

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

There are no known mineral resources within the project site and no mineral recovery activities have been known to occur on the site. In addition, there are neither known nor expected mineral deposits within the City or its SOI/SUDP, nor are there any locally important mineral resource recovery sites delineated on a local general plan or other land

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use plan within the City. Therefore, future development of the project site would not adversely affect any mineral resources delineated on a local general plan, specific plan, or other land use plan. The proposed project would have **no impact**. This issue is not evaluated in the Draft EIR.

### 2.13 Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIII. NOISE</b> – Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Environmental Setting

Typical sources of noise include, but are not limited to, vehicle traffic, aircraft overflights, heavy equipment operations, construction activity, loading and unloading operations, commercial activities, dogs barking, birds chirping, wind blowing and people conversing. Potential noise impacts of the proposed project can be categorized as those resulting from construction and those from operational activities. Construction noise would have a short-term effect; operational noise would continue throughout the lifetime of the project. The project site is adjacent to undeveloped agricultural lands to the north and east and residential development to the west and to the south.



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### Impact Analysis

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

It is possible that construction of the project would temporarily increase noise levels in the area during the construction period in excess of standards established by the City. Regarding operation of the proposed project, noise from the residential and mixed-use development would be primarily traffic related. However, there would be added noise from outdoor activities such as loading and unloading of materials and products for the retail uses and possible outdoor activities of the tenants, as well as more frequent refuse collection to serve the site. Thus, operation of the proposed project may result in the exceedance of noise standards and threshold established by the City. The project's impact is considered **potentially significant**. This impact is evaluated in the Draft EIR.

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

Future construction activities could result in disturbance to adjacent residences from groundborne vibration and noise associated with construction equipment. Consistency with the City's Land Use Compatibility Standards would ensure that groundborne vibration is minimized. General Plan policies require the use of noise barriers, setbacks, and control measures that reduce exposure of noise sensitive land uses to construction-related groundborne vibration and noise. The proposed project does not include any pile driving or use of other types of construction equipment that typically generates groundborne vibration. However, as it is possible that the project may have a **potentially significant** impact due to groundborne vibration. This impact is evaluated in the Draft EIR.

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

As discussed in Section 2.9(e), project site is located approximately 4.75 miles to the northeast of the Merced Regional Airport, and approximately 7.25 miles to the southeast of the Merced County Castle Airport. The project site is not located within the Airport Influence Area or Noise Compatibility Zones for either airport, as designated by the Merced County Airport Land Use Compatibility Plans (County of Merced ALUCP 2012). Thus,

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implementation of the proposed project would not expose people residing or working in the project area to excessive noise levels from aviation activity, since the project site is not within the Airport Influence Area or Noise Compatibility Zone a designated by an applicable airport land use plan, and is not within two miles of an existing public or private use airport. Therefore, there would be **no impact**. This impact is not evaluated in the Draft EIR.

### 2.14 Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIV. POPULATION AND HOUSING – Would the project:</b>				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

The City’s General Plan Urban Expansion Element reports on the City’s existing and projected residential population based on data obtained from the Merced Council of Governments in 2010. At that time, the city’s population was projected to be 107,600 people in 2020 (City of Merced 2015). The General Plan also identified a projected population for 2030 of 116,800 residents (City of Merced 2012a). However, growth did not occur as rapidly as anticipated, based on the US Census Quick Facts data, which indicates that there were 83,676 residents in the City of Merced in 2019 (US Census 2020), and the California Department of Finance (DOF) data that reports 88,120 city residents in 2020 (DOF 2020). The US Census data also shows that the City has an average household size of 3.2 persons.

Population data from the California Department of Finance (DOF) also shows that there were approximately 255,793 people in Merced County in 2020, which is projected to increase to 298,184 by 2025 and 314,690 by 2030 (DOF 2021).

A major source of employment in Merced is in the “Educational, Health and Social Services” with UC Merced employing over 2,000 people in 2015, which is expected to increase as UC Merced reaches full student capacity. The second major source of employment is retail, which is expected

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to increase as UC Merced reaches full student capacity, and as students and employees increase their dependence on local goods and services for food, housing, and entertainment (City of Merced 2012b).

### Impact Analysis

- a) *Would the project 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)?*

The project is requesting to be annexed into the City of Merced. The project site is within the City's SOI/SUDP and annexation of this area is anticipated under the Merced Vision 2030 General Plan (City of Merced 2012a). The project proposes to construct a residential and mixed-use project that would include 570 dwelling units which could support 1,824 residents based on the City's current average household size. In addition, the vacant land within the Remainder Area that is proposed to be zoned R-1-10 could support approximately 29 new single-family residences, generating a new population within the City of 93 people. This new population would not exceed the population projections for the City, which are based on planned development within the SUDP, including the Remainder Area.

Given the year 2020 estimated population of 88,120 and the General Plan population projection of up to 116,800 residents by 2030, the addition of up to 1,917 residents within the City as a result of the proposed project would not result in unplanned population growth. Further, the project would not indirectly encourage unplanned population growth because it would not construct any new roadways or offsite public service and utility infrastructure that could support additional development. Therefore, impacts would be **less than significant**. This impact is not evaluated in the project-specific impacts analysis in Draft EIR Chapter 3. However, as required by the CEQA Guidelines, a discussion of the project's potential to induce growth in the project area is presented in Draft EIR Chapter 5, CEQA Considerations.

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

The majority of The Crossings component of the project site is currently undeveloped, with the exception of one farmhouse and associated outbuildings, while the Remainder Area supports nine rural residences and Yosemite Church and associated school. The Crossings component of the proposed project includes the demolition of all existing structures within

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the 28.4-acre portion of the project site and construction of 570 dwelling units and 66,000 square feet of retail. No development is proposed within the Remainder Area of the project site, however the proposed zoning for the Remainder Area would allow development of new single-family residences. There are nine existing single-family residences within the Remainder Area; it is not expected that these would be demolished as a result of the proposed annexation, pre-zoning, and General Plan designations. Thus, the proposed project would not displace a substantial number of people or housing units and would add to the overall availability of housing within the City. Impacts would be **less than significant**. This impact is not evaluated in the Draft EIR.

### 2.15 Public Services

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

### Environmental Setting

This discussion lists the public service providers that would serve residents of the project site under the proposed annexation and development. Draft EIR Section 3.11 provides a detailed discussion of existing public services for City of Merced residents.

Fire protection - City of Merced Fire Department

Law enforcement - City of Merced Police Department

Schools - Merced City School District (elementary and middle schools) and Merced Union High School District (MUHSD)

Parks – City of Merced

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## Impact Analysis

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:*

*Fire protection?*

*Police protection?*

*Schools?*

*Parks?*

*Other governmental facilities?*

The proposed project involves annexation of the project site to the City and development of 570 dwelling units and 66,000 square feet of commercial space. Additional development of single-family residences is also possible in portions of the Remainder Area within the project site. The proposed project is anticipated to introduce up to 1,917 new residents to the City, which would require public services including fire protection, law enforcement, schools, parks, and other public services and facilities such as libraries. Thus, development of the proposed project could impact the maintenance of public facilities and could generate impacts to other governmental services. The project’s impacts are **potentially significant** and are evaluated in the Draft EIR.

## 2.16 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVI. RECREATION</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

The City maintains numerous parks and recreational facilities including approximately 187 acres of active parkland, more than 120 acres of linear parkland where the bike paths are located, and more than 56 acres of undeveloped parkland, for a total of 328 acres of developed, usable parks and open space (City of Merced 2012a). Under the Merced Vision 2030 General Plan, the City establishes a goal of providing five acres of parkland for every 1,000 residents (City of Merced 2012a).

### Impact Analysis

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

As a residential and mixed-use development, the proposed project would increase the City’s population, which would be expected to increase the use of existing recreational facilities. Thus, this impact is **potentially significant** and is evaluated in the Draft EIR.

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

The proposed project does not include any public recreational facilities. It does include a 13,700 square foot clubhouse that is expected to provide recreational facility such as an indoor gymnasium and an outdoor pool area. Because the proposed project would result in potentially significant physical effects, as documented in this Initial Study, this impact is also considered **potentially significant**. The physical effects of development of the recreational facilities included in the project are addressed in the impact analysis presented throughout the Draft EIR and this Initial Study, and mitigation measures are identified in the Draft EIR to address such effects.

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### 2.17 Transportation and Traffic

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

#### Environmental Setting

The City of Merced is served by one major freeway (SR 99) and two major highways (SR 140 and SR 59). SR 99 is a major north-south transportation route that connects the Central Valley and serves as a parallel road to Interstate-5 (I-5). SR 59 connects Route 152, south of El Nido, to Snelling, north of Merced. SR 140 connects I-5 to Yosemite National Park. SR 140 is highly used by those visiting Yosemite, hence Merced’s title of the ‘Gateway of Yosemite.’

The City of Merced maintains a grid system of streets to minimize traffic delays and maximize ease of use. As part of the Merced Vision 2030 General Plan, the City set forth the proposal of a circulation plan of major streets and expressways for the projected growth areas. North-south roads would serve as major traffic arteries whereas east-west streets would serve as connectors (City of Merced 2012b).

The City of Merced is served by a variety of public transit options: local public bus system, inter-regional private bus companies, rail, and air services. The Merced Transit System has served as the City’s public transit since 1974; it maintains several fixed lines as well as connections to County and regional public transit options. The City is currently served by Amtrak and is proposed to include a station for the State’s high-speed rail once it is developed.

The City also maintains and encourages the use of bicycles by providing off-road bicycle/pedestrian trail systems and through planned expansions of these facilities as the population grows and more land is developed. The Merced Bicycle Plan, 2013, is a comprehensive planning document that describes Merced’s existing bikeway system, a vision for its future, and a prioritized list of projects to be constructed (City of Merced 2013).

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A Transportation Impact Study was prepared for the proposed project and is provided in EIR Appendix M.

### Impact Analysis

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

The project site is located along a major roadway (Yosemite Avenue) that provides vehicular access to existing residential, commercial, and public facility land uses west of the site and to UC Merced northeast of the site. The proposed project would not construct or modify any existing offsite roadways and thus would not change the City's circulation system. The project includes provision of a bus stop at the northern edge of the mixed-use portion of The Crossings component of the project and a bus stop on East Yosemite Avenue directly in front of the project site. The proposed project could increase use of transit, bicycle, and pedestrian facilities in the area. This is a **potentially significant** impact that is evaluated in the Draft EIR.

- b) *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)??*

Operation of the proposed project would result in increased traffic in the area because new traffic-generating land uses would be added to a site that is primarily vacant and undeveloped, which could result in increased vehicle miles traveled (VMT) associated with both the residential and commercial land uses included in the proposed project. This is a **potentially significant** impact that is evaluated in the Draft EIR.

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

The proposed project would create two new access driveways on East Yosemite Avenue and two new access driveways on Gardner Avenue. Traffic entering and exiting the project site through these driveways could result in conflicts (safety hazards) with through traffic on both streets. This is a **potentially significant** impact that is evaluated in the Draft EIR.

- d) *Would the project result in inadequate emergency access?*

The project proposes development of a mixed-use area and a multi-family residential area, with four points of access onto existing public roadways, with two driveways onto East



## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

Yosemite Avenue and two driveways onto Gardner Avenue. The sufficiency of the proposed access to meet emergency access needs will be reviewed in the Draft EIR.

### 2.18 Tribal Cultural Resources

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

### Environmental Setting

Native American cultural resources are not limited to physical archaeological resources with scientific significance, but could also include cultural landscapes, tribal cultural resources, and non-unique archaeological resources. The Merced area was part of the ancestral territory of Native Americans, and there is the potential for unrecorded cultural resources to be present in the area.

Specifically, the area around Merced was home to the Yokuts people, who were member of the Penutian language family that dominated the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The historical territory of the Yokuts stretched from the Tehachapis in the south to Stockton in the north. Trade in the region was well-developed and Yokuts had access to shell beads, acorns, and obsidian. Yokut settlements were oriented around waterways and houses varied in size and shape.

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## Impact Analysis

- a) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*
- i) *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or*
  - ii) *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

In accordance with Public Resources Code section 21080.3.1 and Assembly Bill (AB) 52, the City of Merced sent a formal notice of the proposed project to those California Native American tribes that have requested such notice. None of the Native American tribes that were notified requested consultation or identified any Tribal Cultural Resources as being present within the project vicinity. Thus, the proposed project is not expected to affect tribal cultural resources. However, because there is a potential that cultural resources could be discovered during project construction, this impact is considered **potentially significant**. This impact is evaluated in the Draft EIR.

## 2.19 Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:</b>				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

This discussion provides a brief overview of the utilities and service systems that would serve residents of the project site under the proposed annexation and development. Draft EIR Section 3.11 provides a detailed discussion of these utilities and service systems, with the exception of stormwater drainage facilities which are discussed in Draft EIR Section 3.8.

#### *Water*

The City's sole source of water supply is groundwater. The City's system consists of 22 active groundwater wells, and 340 miles of distribution pipeline, as well as other related equipment, such as hydrants, meters, valves, fluoridation and chlorination systems, pumps, and motors, supplying approximately seven billion gallons of water annually (City of Merced 2016).

The City's water system has historically expanded to keep pace with population growth. Water production increased by approximately 2 percent per year, from approximately 16,500 acre-feet per year (AFY) in 1990 to 25,899 AFY in 2012, consistent with the 2 percent annual population growth rate over the same period (City of Merced 2014). In 2012, the average water usage was 23.4 million gallons per day (mgd). The service area population (which includes UC Merced) is projected to grow by approximately 94 percent from 87,575 people in 2012 to 169,585 people by 2030.

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In 2017, the City adopted the Urban Water Management Plan (UWMP), as required by state law, to describe the availability of water and to discuss water use, reclamation, and recycling activities as well as conservation practices (City of Merced 2017). The purpose of the UWMP is to maintain efficient use of urban water supplies, continue to promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during water drought conditions.

Because the project proposes to construct more than 500 dwelling units, a Water Supply Assessment was prepared, as required under Senate Bill 610. The Water Supply Assessment is provided in EIR Appendix L

### *Wastewater*

Wastewater collection and treatment is provided by the City of Merced. The wastewater collection system handles wastewater generated by residential, commercial, and industrial uses within the City. The City's Wastewater Treatment Plant (WWTP) is located in the southwest portion of the City and has been expanded and upgraded to meet the needs of the city. The WWTP has a design capacity of 12 mgd and in 2017 the average dry weather flows were 8 mgd (City of Merced 2017). The WWTP is planned to be expanded to treat 20 mgd by buildout in 2024, which is sufficient to meet the demands from development of the City's SUDP area and UC Merced campus planned wastewater loads that would be generated at that time (City of Merced 2017). The design capacity of 20 mgd could support a population of 150,000 (City of Merced 2012).

### *Stormwater*

In 2002, the City established the City of Merced Storm Drainage Master Plan to manage the collection and disposal of surface water runoff. The plan addresses both the collection and disposal of storm water. Systems of storm drain pipes and catch basins are laid out, sized, and costed in the plan to serve present and projected urban land uses. The City also developed the Storm Water Management Plan (SWMP) to fulfill requirements of storm water discharges from Small Municipal Separate Storm Sewer System (MS4) operators to comply with Section 402 of the Federal Clean Water Act (CWA). The SWMP was implemented to limit, to the maximum extent practicable, the discharge of pollutants from the Merced Storm Water Group's storm sewer systems, as well as to comply with General Permit Number CA000004, Water Quality Order No. 2013-0001 DWQ, which became effective on July 1, 2013. The General Permit requires regulated small Municipal Separate Storm Sewer System (MS4) in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for their stormwater discharges. The proposed project would construct a stormwater detention basin adjacent to the commercial portion on the western half of the project site. Stormwater would be discharged from

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the basin into an existing 24-inch storm drain pipe that crosses under Yosemite Avenue, flows into an existing storm detention basin within the Silverado subdivision, and then flows to a storm pump station that discharges into Black Rascal Creek.

### *Solid Waste and Recycling*

The City is served by the Highway 59 Landfill and Compost Facility, located at 6040 North Highway 59. The City provides all collection services within the city limits.

### **Impact Analysis**

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

The proposed project would increase the intensity of uses on the project site, resulting in increased use of water, wastewater treatment, electric power, natural gas, and telecommunication systems. Further, the proposed project would result in an increase in impervious area within the project site. An increase in runoff from impervious surface can cause alterations to drainage courses, requiring new or expanded stormwater drainage systems. In addition, the proposed project would generate an additional population base within the project site that would require new utility lines to be constructed within the project site in order to serve the proposed development. Therefore, implementation of the proposed project would require construction of new water, wastewater, and stormwater drainage connections. Due to the size of the proposed project, the addition of impervious surface, and the potential for the project to require water and to generate wastewater in quantities beyond those currently handled by the City's existing service infrastructure, impacts are considered **potentially significant**. These impacts are evaluated in the Draft EIR.

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

As discussed above in the environmental setting for utilities and service systems, the City provides water services to serve development within the city. Because the project proposes to construct more than 500 dwelling units, a Water Supply Assessment has been prepared (EIR Appendix L). The increased water demand resulting from the proposed project is considered a **potentially significant** impact. This impact is evaluated in the Draft EIR.

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

As discussed above, the proposed project would be served by the City’s WWTP. The wastewater generated by the proposed project could affect the capacity of the existing wastewater treatment plant and conveyance facilities. This impact is considered **potentially significant** and is evaluated in the Draft EIR.

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

As stated above, the City maintains a contract with the Highway 59 landfill for waste disposal. Construction of the proposed project would result in the generation of solid waste, such as scrap lumber, concrete, residual wastes, packing materials, and plastics. Operation of the proposed project would result in an increase in intensity of uses on the project site, which would likely be associated with increased generation of solid waste, which could contribute to a reduction in the capacity or lifespan of the landfill. Therefore, project’s impact is **potentially significant**. This impact is evaluated in the Draft EIR.

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

The project proposes to construct residential and commercial land uses. There are several state and local regulations that set goals for reducing the amount of solid waste disposed of at landfills, as discussed in Draft EIR Section 3.11. Because it is possible that solid waste generated by the project would not meet these goals, this impact is considered **potentially significant** and is evaluated in the Draft EIR.

### 2.20 Wildfire

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XX. Wildfire</b> – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

As discussed in the Merced Vision 2030 General Plan, the wildland and vegetation fire hazards that exist in Merced County are located mostly outside of urban areas. The area’s long, hot, dry summers and extensive vegetation creates a fire season that extends from late spring to early fall. More than one hundred wildland fires can occur in Merced County on an annual basis. Irrigated agricultural land, however, is less susceptible to wildland fires than grazing areas. The project site is not located within or near a State Responsibility Area, as designated on the Fire Hazard Severity Zones in State Responsibility Areas for Merced County (CAL FIRE 2007a). The project site is located within an unzoned Fire Hazard Severity Zone per the CALFIRE Draft Fire Hazard Severity Zones in Local Responsibility Area map (CAL FIRE 2007b). Thus, the project site is not located within or near a State Responsibility Area or lands classified as a very high fire hazard severity zone.

### Impact Analysis

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

As noted above, the project site is not located within or near a state responsibility area or a very high fire hazard severity zone. The City adopted a Local Hazard Mitigation Plan in March of 2015 in an effort to reduce future loss of life and property resulting from disasters (City of Merced 2015). This plan outlines the implementation programs and strategies needed to prevent risks to occupants and to minimize injury from an unavoidable disaster

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or emergency. Any potential impacts created by the proposed project would be less than significant with implementation of the Local Hazard Mitigation Plan programs. The entrance to the project site would be located along Yosemite Avenue, which is approximately 1 mile east of the G Street intersection, which is a designated evacuation route per Figure 11.8 of the City's General Plan (Merced Vision 2030 General Plan, Figure 11.8). The proposed site plan, including the access driveways, would be reviewed and approved by the City, the police department, and the fire department during plan review to ensure that emergency access would be provided at all times. Therefore, implementation of the proposed project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

As discussed above, the project site is not located within or near a state responsibility area or very high fire hazard severity zone. The areas surrounding the project site are mostly developed with residential uses, intermixed with some agricultural land. There is a low potential for wildland fires within these parameters. Thus, the proposed project would not exacerbate wildfire risks, exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, impacts would be **less than significant**. This impact is not evaluated in the Draft EIR.

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

The proposed project would not require the installation or maintenance of new infrastructure such as roads, fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Additionally, the project site is not located in a very high fire hazard severity zone, as described in the environmental setting for wildfire, above. **No impact** would occur. This issue will not be further evaluated in the EIR.



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

As discussed above, the project site is not located within or near a state responsibility area or very high fire hazard severity zone. Thus, the proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes within or near a local or state responsibility area or very high fire hazard severity zone. The project site and surrounding area is relatively flat with no risk of downslope or downstream flooding or landslides. Although there are existing drainage features traversing the site, given that the site is not located in a designated fire hazard zone, impacts would be **less than significant**. This impact is not evaluated in the Draft EIR.

### 2.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIX. MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

The proposed project has the potential to affect biological resources including special-status species, riparian areas, wetlands and other sensitive natural communities. The project's potential to impact biological resources is considered **potentially significant** and is evaluated in the Draft EIR.

The project site is currently used for agriculture and contains agriculture-related buildings and equipment on site. Though no cultural resources are known to exist within the project site there is potential for cultural resources to be discovered during construction. Thus, the project is considered to have a **potentially significant** impact to cultural resources and this impact is evaluated in the Draft EIR.

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

Future growth in Merced, including the project, could contribute to the cumulatively significant loss of agriculture in the region. This is a **potentially significant** impact and is evaluated in the Draft EIR.

The project could also contribute to significant cumulative impacts in the areas of biological and cultural resources, air quality, greenhouse gas emissions, and provision of public services and utilities. These impacts are considered **potentially significant** and are evaluated in the Draft EIR.

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

The proposed project would generate an increase in air emissions associated with construction and operation that may directly or indirectly have an adverse effect on residents living in the area. This impact is considered **potentially significant** and is evaluated in the Draft EIR.

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### 3.1 References Cited

- 14 CCR 15000–15387 and Appendices A through L. Guidelines for Implementation of the California Environmental Quality Act, as amended.
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## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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## Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

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**Yosemite Avenue – Gardner Avenue to Hatch Road  
Annexation Project**

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# Appendix C

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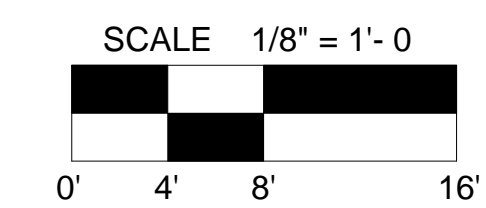
The Crossings Architectural Plans  
Hochhauser Blatter Architecture and Planning, February 2020







1ST FLOOR 1/8" = 1'-0" 1



2ND FLOOR AND 3RD FLOOR PLANS 1/8" = 1'-0" 2

DATE	ISSUANCE OR REVISION

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SHEET CONTENTS  
FLOOR PLANS

PROJECT NO: 9811

SHEET  
A2.1





MAIN VIEW



SIDE VIEW



THE UPPER VIEW

DATE	ISSUANCE OR REVISION
06.29.2016	PRE-APPLICATION
07.14.2016	PLANNING SUBMISSION
08.17.2016	REVISED SITE
09.01.2016	UPDATED PLANS SET
01.06.2017	UPDATED SITE PLAN
02.06.2017	PLANNING SUBMITTAL

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SHEET CONTENTS

3D VIEWS

PROJECT NO: 9811

SHEET

A3.5



Elevation 20 - a 1/16" = 1'-0" 1



Elevation 21 - a 1/16" = 1'-0" 2



Elevation 22 - a 1/16" = 1'-0" 3



Elevation 23 - a 1/16" = 1'-0" 4



Elevation 24 - a 1/16" = 1'-0" 5

Elevation 25 - a 1/16" = 1'-0" 6

DATE	ISSUANCE OR REVISION
06.29.2016	PRE-APPLICATION
07.14.2016	PLANNING SUBMISSION
08.17.2016	REVISED SITE
09.01.2016	UPDATED PLANS SET

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SHEET CONTENTS  
ELEVATIONS

PROJECT NO: 9811

SHEET  
A3.1



Elevation 26 - a 1/16" = 1'-0"

1



Elevation 27 - a 1/16" = 1'-0"

2



Elevation 28 - a 1/16" = 1'-0"

3

Elevation 29 - a 1/16" = 1'-0"

4

DATE	ISSUANCE OR REVISION
06.29.2016	PRE-APPLICATION
07.14.2016	PLANNING SUBMISSION
08.17.2016	REVISED SITE
09.01.2016	UPDATED PLANS SET

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SHEET CONTENTS  
ELEVATIONS

PROJECT NO: 9811

SHEET  
A3.2



UNIVERSITY CAMPUS OVERLOOK



CAMPUS NORTH-WEST VIEW



OVERLOOK ON THE FIRE LINE IN BETWEEN



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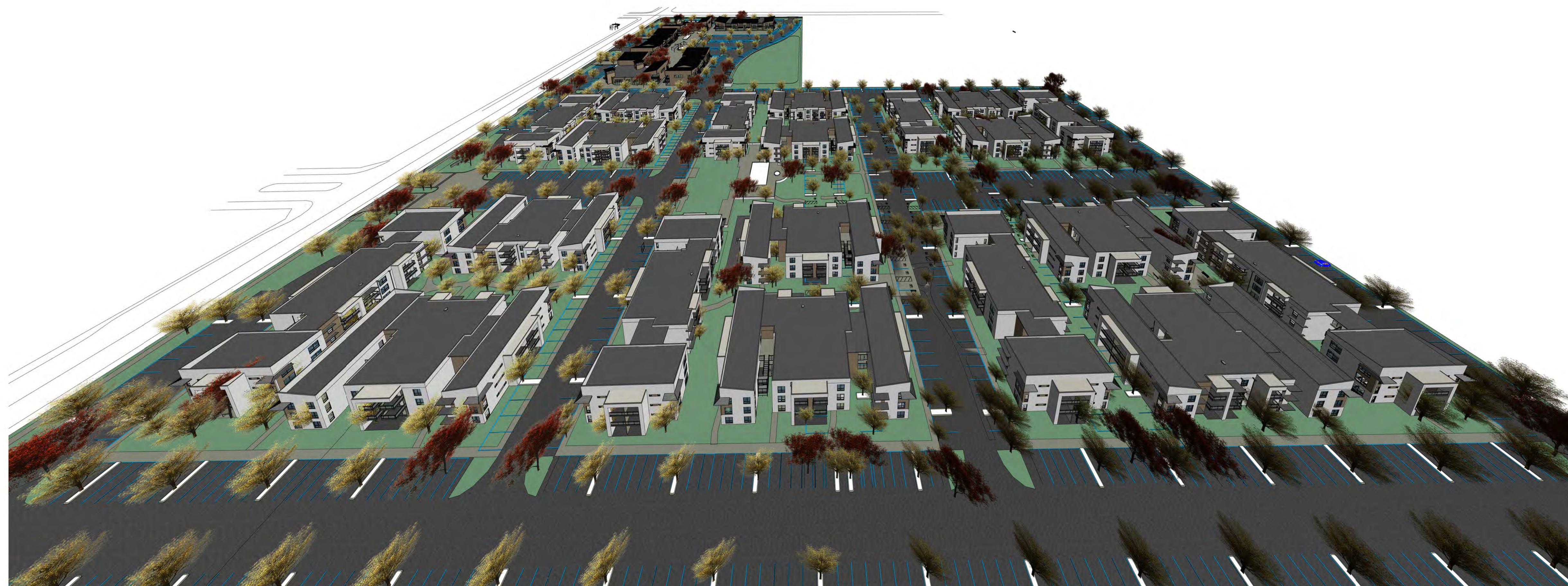
SHEET CONTENTS  
3D VIEWS

PROJECT NO: 9913

SHEET  
A3.5



WEST AREAL VIEW



EAST AREAL VIEW

Hochhauser  
Blatter

ARCHITECTURE  
AND PLANNING

122 E. ARRELLAGA  
SANTA BARBARA  
CALIFORNIA 93101  
805 962 2746

THE CROSSINGS  
MIXED USE DEVELOPMENT  
YOSEMITE AVENUE & GARDNER AVENUE,  
MERCED, CA 95369

DATE	ISSUANCE OR REVISION

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SHEET CONTENTS  
3d view overall

PROJECT NO: 9913

SHEET  
A3.6





# Appendix D

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CalEEMod Output  
Dudek, August 2021

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

**The Crossings**

**San Joaquin Valley Unified APCD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1,223.00	Space	0.00	489,200.00	0
Health Club	13.70	1000sqft	0.00	13,700.00	0
Apartments Low Rise	540.00	Dwelling Unit	28.60	626,280.00	1713
Apartments Mid Rise	30.00	Dwelling Unit	0.00	45,000.00	95
Strip Mall	66.00	1000sqft	0.00	66,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	3			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - a

Construction Phase - a

Trips and VMT - a

Grading -

Architectural Coating - Three phases of AC split evenly

Vehicle Trips - z

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - a

Water And Wastewater - 100 Aerobic. Indoor water residential use provided by WSA for residential buildings. All captured under Low rise.

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix - a

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	40.00
tblConstructionPhase	NumDays	35.00	40.00
tblConstructionPhase	NumDays	35.00	40.00

## The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

tblEnergyUse	T24E	147.91	694.40
tblEnergyUse	T24E	1.75	1.96
tblEnergyUse	T24E	1.91	2.14
tblEnergyUse	T24NG	9,924.02	10,413.46
tblEnergyUse	T24NG	16.86	17.03
tblEnergyUse	T24NG	8.53	8.62
tblFireplaces	NumberGas	297.00	313.50
tblFireplaces	NumberNoFireplace	243.00	256.50
tblLandUse	LandUseSquareFeet	540,000.00	626,280.00
tblLandUse	LandUseSquareFeet	30,000.00	45,000.00
tblLandUse	LotAcreage	11.01	0.00
tblLandUse	LotAcreage	0.31	0.00
tblLandUse	LotAcreage	33.75	28.60
tblLandUse	LotAcreage	0.79	0.00
tblLandUse	LotAcreage	1.52	0.00
tblSolidWaste	SolidWasteGenerationRate	248.40	262.20
tblTripsAndVMT	WorkerTripNumber	643.00	644.00
tblTripsAndVMT	WorkerTripNumber	129.00	130.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblVehicleTrips	ST_TR	8.14	7.14
tblVehicleTrips	ST_TR	4.91	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	SU_TR	6.28	5.66
tblVehicleTrips	SU_TR	4.09	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	WD_TR	7.32	6.39
tblVehicleTrips	WD_TR	5.44	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	44.32	43.08
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	35,183,173.84	26,643,175.00
tblWater	IndoorWaterUseRate	1,954,620.77	0.00
tblWater	OutdoorWaterUseRate	1,232,260.92	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

**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					
2021	1.0163	4.2782	4.3877	0.0111	0.9088	0.1823	1.0910	0.3194	0.1700	0.4894	0.0000	1,006.7578	1,006.7578	0.1251	0.0498	1,024.7210
2022	2.4843	3.3867	4.8966	0.0141	0.8357	0.1240	0.9597	0.2252	0.1169	0.3421	0.0000	1,292.3764	1,292.3764	0.0951	0.0783	1,318.0954
2023	1.2469	0.4472	0.7227	1.7400e-003	0.0877	0.0186	0.1062	0.0235	0.0174	0.0409	0.0000	157.2742	157.2742	0.0195	6.4900e-003	159.6956
<b>Maximum</b>	<b>2.4843</b>	<b>4.2782</b>	<b>4.8966</b>	<b>0.0141</b>	<b>0.9088</b>	<b>0.1823</b>	<b>1.0910</b>	<b>0.3194</b>	<b>0.1700</b>	<b>0.4894</b>	<b>0.0000</b>	<b>1,292.3764</b>	<b>1,292.3764</b>	<b>0.1251</b>	<b>0.0783</b>	<b>1,318.0954</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	1.0163	4.2782	4.3877	0.0111	0.6868	0.1823	0.8690	0.2186	0.1700	0.3886	0.0000	1,006.7573	1,006.7573	0.1251	0.0498	1,024.7205
2022	2.4843	3.3867	4.8966	0.0141	0.8357	0.1240	0.9597	0.2252	0.1169	0.3421	0.0000	1,292.3760	1,292.3760	0.0951	0.0783	1,318.0950
2023	1.2469	0.4472	0.7227	1.7400e-003	0.0877	0.0186	0.1062	0.0235	0.0174	0.0409	0.0000	157.2741	157.2741	0.0195	6.4900e-003	159.6955
<b>Maximum</b>	<b>2.4843</b>	<b>4.2782</b>	<b>4.8966</b>	<b>0.0141</b>	<b>0.8357</b>	<b>0.1823</b>	<b>0.9597</b>	<b>0.2252</b>	<b>0.1700</b>	<b>0.3886</b>	<b>0.0000</b>	<b>1,292.3760</b>	<b>1,292.3760</b>	<b>0.1251</b>	<b>0.0783</b>	<b>1,318.0950</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.12</b>	<b>0.00</b>	<b>10.29</b>	<b>17.74</b>	<b>0.00</b>	<b>11.55</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-12-2021	4-11-2021	1.3281	1.3281
2	4-12-2021	7-11-2021	1.3639	1.3639
3	7-12-2021	10-11-2021	1.1234	1.1234
4	10-12-2021	1-11-2022	1.7818	1.7818
5	1-12-2022	4-11-2022	1.4955	1.4955
6	4-12-2022	7-11-2022	1.1415	1.1415
7	7-12-2022	10-11-2022	1.9852	1.9852
8	10-12-2022	1-11-2023	0.9801	0.9801
9	1-12-2023	4-11-2023	0.8585	0.8585
10	4-12-2023	7-11-2023	0.7412	0.7412
		<b>Highest</b>	<b>1.9852</b>	<b>1.9852</b>

**2.2 Overall Operational**  
**Unmitigated Operational**

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.6653	0.2943	6.3792	4.8900e-003		0.3212	0.3212		0.3212	0.3212	24.9247	266.8611	291.7858	0.0117	6.9600e-003	294.1531
Energy	0.0484	0.4167	0.1975	2.6400e-003		0.0335	0.0335		0.0335	0.0335	0.0000	800.6077	800.6077	0.0612	0.0151	806.6337
Mobile	2.7911	4.6127	24.3060	0.0554	5.2683	0.0501	5.3185	1.4101	0.0471	1.4571	0.0000	5,129.3382	5,129.3382	0.2968	0.3021	5,226.7905
Waste						0.0000	0.0000		0.0000	0.0000	85.9443	0.0000	85.9443	5.0792	0.0000	212.9235
Water						0.0000	0.0000		0.0000	0.0000	11.4427	24.5060	35.9487	0.0434	0.0254	44.5912
<b>Total</b>	<b>8.5048</b>	<b>5.3236</b>	<b>30.8827</b>	<b>0.0629</b>	<b>5.2683</b>	<b>0.4048</b>	<b>5.6731</b>	<b>1.4101</b>	<b>0.4017</b>	<b>1.8118</b>	<b>122.3117</b>	<b>6,221.3130</b>	<b>6,343.6247</b>	<b>5.4922</b>	<b>0.3495</b>	<b>6,585.0919</b>

**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	3.7886	0.0489	4.2425	2.2000e-004		0.0235	0.0235		0.0235	0.0235	0.0000	6.9367	6.9367	6.6900e-003	0.0000	7.1040
Energy	0.0484	0.4167	0.1975	2.6400e-003		0.0335	0.0335		0.0335	0.0335	0.0000	800.6077	800.6077	0.0612	0.0151	806.6337
Mobile	2.7911	4.6127	24.3060	0.0554	5.2683	0.0501	5.3185	1.4101	0.0471	1.4571	0.0000	5,129.3382	5,129.3382	0.2968	0.3021	5,226.7905
Waste						0.0000	0.0000		0.0000	0.0000	85.9443	0.0000	85.9443	5.0792	0.0000	212.9235
Water						0.0000	0.0000		0.0000	0.0000	9.1542	20.7604	29.9146	0.0349	0.0203	36.8400
<b>Total</b>	<b>6.6280</b>	<b>5.0782</b>	<b>28.7460</b>	<b>0.0583</b>	<b>5.2683</b>	<b>0.1071</b>	<b>5.3754</b>	<b>1.4101</b>	<b>0.1040</b>	<b>1.5141</b>	<b>95.0985</b>	<b>5,957.6430</b>	<b>6,052.7415</b>	<b>5.4787</b>	<b>0.3375</b>	<b>6,290.2917</b>



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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	22.07	4.61	6.92	7.42	0.00	73.55	5.25	0.00	74.11	16.43	22.25	4.24	4.59	0.25	3.44	4.48

**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	1/12/2021	2/22/2021	5	30	
2	Site Preparation	Site Preparation	2/23/2021	3/22/2021	5	20	
3	Grading	Grading	3/23/2021	5/24/2021	5	45	
4	Building Construction	Building Construction	5/25/2021	1/30/2023	5	440	
5	Architectural Coating 1	Architectural Coating	12/13/2021	2/4/2022	5	40	
6	Architectural Coating 2	Architectural Coating	7/4/2022	8/26/2022	5	40	
7	Paving	Paving	1/31/2023	3/20/2023	5	35	
8	Architectual Coating 3	Architectural Coating	3/21/2023	5/15/2023	5	40	

**Acres of Grading (Site Preparation Phase): 30**

**Acres of Grading (Grading Phase): 135**

**Acres of Paving: 0**

**Residential Indoor: 453,114; Residential Outdoor: 151,038; Non-Residential Indoor: 39,850; Non-Residential Outdoor: 13,283; Striped Parking Area: 9,784**

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

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

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating 1	Air Compressors	1	6.00	78	0.48
Architectural Coating 2	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectual Coating 3	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	644.00	154.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 1	1	130.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 2	1	129.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectual Coating 3	1	129.00	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 - 2021**

**Unmitigated Construction On-Site**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
<b>Total</b>	<b>0.0475</b>	<b>0.4716</b>	<b>0.3235</b>	<b>5.8000e-004</b>		<b>0.0233</b>	<b>0.0233</b>		<b>0.0216</b>	<b>0.0216</b>	<b>0.0000</b>	<b>51.0012</b>	<b>51.0012</b>	<b>0.0144</b>	<b>0.0000</b>	<b>51.3601</b>

**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	8.4000e-004	6.2000e-004	6.7600e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5340	1.5340	6.0000e-005	5.0000e-005	1.5505
<b>Total</b>	<b>8.4000e-004</b>	<b>6.2000e-004</b>	<b>6.7600e-003</b>	<b>2.0000e-005</b>	<b>1.8000e-003</b>	<b>1.0000e-005</b>	<b>1.8100e-003</b>	<b>4.8000e-004</b>	<b>1.0000e-005</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.5340</b>	<b>1.5340</b>	<b>6.0000e-005</b>	<b>5.0000e-005</b>	<b>1.5505</b>

**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	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
<b>Total</b>	<b>0.0475</b>	<b>0.4716</b>	<b>0.3235</b>	<b>5.8000e-004</b>		<b>0.0233</b>	<b>0.0233</b>		<b>0.0216</b>	<b>0.0216</b>	<b>0.0000</b>	<b>51.0011</b>	<b>51.0011</b>	<b>0.0144</b>	<b>0.0000</b>	<b>51.3600</b>

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

**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	8.4000e-004	6.2000e-004	6.7600e-003	2.0000e-005	1.8000e-003	1.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.5340	1.5340	6.0000e-005	5.0000e-005	1.5505
<b>Total</b>	<b>8.4000e-004</b>	<b>6.2000e-004</b>	<b>6.7600e-003</b>	<b>2.0000e-005</b>	<b>1.8000e-003</b>	<b>1.0000e-005</b>	<b>1.8100e-003</b>	<b>4.8000e-004</b>	<b>1.0000e-005</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.5340</b>	<b>1.5340</b>	<b>6.0000e-005</b>	<b>5.0000e-005</b>	<b>1.5505</b>

**3.3 Site Preparation - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
<b>Total</b>	<b>0.0389</b>	<b>0.4050</b>	<b>0.2115</b>	<b>3.8000e-004</b>	<b>0.1966</b>	<b>0.0204</b>	<b>0.2170</b>	<b>0.1010</b>	<b>0.0188</b>	<b>0.1198</b>	<b>0.0000</b>	<b>33.4357</b>	<b>33.4357</b>	<b>0.0108</b>	<b>0.0000</b>	<b>33.7061</b>

**Unmitigated Construction Off-Site**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	5.0000e-004	5.4100e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2272	1.2272	5.0000e-005	4.0000e-005	1.2404
<b>Total</b>	<b>6.7000e-004</b>	<b>5.0000e-004</b>	<b>5.4100e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4500e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.2272</b>	<b>1.2272</b>	<b>5.0000e-005</b>	<b>4.0000e-005</b>	<b>1.2404</b>

**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					0.0885	0.0000	0.0885	0.0455	0.0000	0.0455	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
<b>Total</b>	<b>0.0389</b>	<b>0.4050</b>	<b>0.2115</b>	<b>3.8000e-004</b>	<b>0.0885</b>	<b>0.0204</b>	<b>0.1089</b>	<b>0.0455</b>	<b>0.0188</b>	<b>0.0643</b>	<b>0.0000</b>	<b>33.4357</b>	<b>33.4357</b>	<b>0.0108</b>	<b>0.0000</b>	<b>33.7060</b>

**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					

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	5.0000e-004	5.4100e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2272	1.2272	5.0000e-005	4.0000e-005	1.2404
<b>Total</b>	<b>6.7000e-004</b>	<b>5.0000e-004</b>	<b>5.4100e-003</b>	<b>1.0000e-005</b>	<b>1.4400e-003</b>	<b>1.0000e-005</b>	<b>1.4500e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.2272</b>	<b>1.2272</b>	<b>5.0000e-005</b>	<b>4.0000e-005</b>	<b>1.2404</b>

**3.4 Grading - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2071	0.0000	0.2071	0.0822	0.0000	0.0822	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0943	1.0440	0.6948	1.4000e-003		0.0447	0.0447		0.0411	0.0411	0.0000	122.6137	122.6137	0.0397	0.0000	123.6051
<b>Total</b>	<b>0.0943</b>	<b>1.0440</b>	<b>0.6948</b>	<b>1.4000e-003</b>	<b>0.2071</b>	<b>0.0447</b>	<b>0.2518</b>	<b>0.0822</b>	<b>0.0411</b>	<b>0.1233</b>	<b>0.0000</b>	<b>122.6137</b>	<b>122.6137</b>	<b>0.0397</b>	<b>0.0000</b>	<b>123.6051</b>

**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	1.6800e-003	1.2500e-003	0.0135	3.0000e-005	3.6000e-003	2.0000e-005	3.6200e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	3.0680	3.0680	1.1000e-004	1.0000e-004	3.1010

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<b>Total</b>	1.6800e-003	1.2500e-003	0.0135	3.0000e-005	3.6000e-003	2.0000e-005	3.6200e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	3.0680	3.0680	1.1000e-004	1.0000e-004	3.1010
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**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					0.0932	0.0000	0.0932	0.0370	0.0000	0.0370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0943	1.0440	0.6948	1.4000e-003		0.0447	0.0447		0.0411	0.0411	0.0000	122.6136	122.6136	0.0397	0.0000	123.6050
<b>Total</b>	<b>0.0943</b>	<b>1.0440</b>	<b>0.6948</b>	<b>1.4000e-003</b>	<b>0.0932</b>	<b>0.0447</b>	<b>0.1379</b>	<b>0.0370</b>	<b>0.0411</b>	<b>0.0781</b>	<b>0.0000</b>	<b>122.6136</b>	<b>122.6136</b>	<b>0.0397</b>	<b>0.0000</b>	<b>123.6050</b>

**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	1.6800e-003	1.2500e-003	0.0135	3.0000e-005	3.6000e-003	2.0000e-005	3.6200e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	3.0680	3.0680	1.1000e-004	1.0000e-004	3.1010
<b>Total</b>	<b>1.6800e-003</b>	<b>1.2500e-003</b>	<b>0.0135</b>	<b>3.0000e-005</b>	<b>3.6000e-003</b>	<b>2.0000e-005</b>	<b>3.6200e-003</b>	<b>9.6000e-004</b>	<b>2.0000e-005</b>	<b>9.8000e-004</b>	<b>0.0000</b>	<b>3.0680</b>	<b>3.0680</b>	<b>1.1000e-004</b>	<b>1.0000e-004</b>	<b>3.1010</b>

**3.5 Building Construction - 2021**

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

**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	0.1511	1.3859	1.3177	2.1400e-003		0.0762	0.0762		0.0717	0.0717	0.0000	184.1516	184.1516	0.0444	0.0000	185.2623
<b>Total</b>	<b>0.1511</b>	<b>1.3859</b>	<b>1.3177</b>	<b>2.1400e-003</b>		<b>0.0762</b>	<b>0.0762</b>		<b>0.0717</b>	<b>0.0717</b>	<b>0.0000</b>	<b>184.1516</b>	<b>184.1516</b>	<b>0.0444</b>	<b>0.0000</b>	<b>185.2623</b>

**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	0.0434	0.8134	0.2337	2.6300e-003	0.0812	0.0144	0.0956	0.0235	0.0138	0.0373	0.0000	252.1103	252.1103	2.3400e-003	0.0379	263.4473
Worker	0.1915	0.1419	1.5378	3.8100e-003	0.4093	2.4500e-003	0.4118	0.1088	2.2600e-003	0.1111	0.0000	349.0539	349.0539	0.0129	0.0115	352.8112
<b>Total</b>	<b>0.2349</b>	<b>0.9553</b>	<b>1.7715</b>	<b>6.4400e-003</b>	<b>0.4905</b>	<b>0.0169</b>	<b>0.5074</b>	<b>0.1323</b>	<b>0.0161</b>	<b>0.1483</b>	<b>0.0000</b>	<b>601.1642</b>	<b>601.1642</b>	<b>0.0153</b>	<b>0.0494</b>	<b>616.2585</b>

**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					



The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

Off-Road	0.1511	1.3859	1.3177	2.1400e-003		0.0762	0.0762		0.0717	0.0717	0.0000	184.1514	184.1514	0.0444	0.0000	185.2621
<b>Total</b>	<b>0.1511</b>	<b>1.3859</b>	<b>1.3177</b>	<b>2.1400e-003</b>		<b>0.0762</b>	<b>0.0762</b>		<b>0.0717</b>	<b>0.0717</b>	<b>0.0000</b>	<b>184.1514</b>	<b>184.1514</b>	<b>0.0444</b>	<b>0.0000</b>	<b>185.2621</b>

**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	0.0434	0.8134	0.2337	2.6300e-003	0.0812	0.0144	0.0956	0.0235	0.0138	0.0373	0.0000	252.1103	252.1103	2.3400e-003	0.0379	263.4473
Worker	0.1915	0.1419	1.5378	3.8100e-003	0.4093	2.4500e-003	0.4118	0.1088	2.2600e-003	0.1111	0.0000	349.0539	349.0539	0.0129	0.0115	352.8112
<b>Total</b>	<b>0.2349</b>	<b>0.9553</b>	<b>1.7715</b>	<b>6.4400e-003</b>	<b>0.4905</b>	<b>0.0169</b>	<b>0.5074</b>	<b>0.1323</b>	<b>0.0161</b>	<b>0.1483</b>	<b>0.0000</b>	<b>601.1642</b>	<b>601.1642</b>	<b>0.0153</b>	<b>0.0494</b>	<b>616.2585</b>

**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	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
<b>Total</b>	<b>0.2218</b>	<b>2.0300</b>	<b>2.1272</b>	<b>3.5000e-003</b>		<b>0.1052</b>	<b>0.1052</b>		<b>0.0990</b>	<b>0.0990</b>	<b>0.0000</b>	<b>301.2428</b>	<b>301.2428</b>	<b>0.0722</b>	<b>0.0000</b>	<b>303.0471</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

**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	0.0433	1.0990	0.3163	4.1900e-003	0.1328	0.0122	0.1450	0.0384	0.0117	0.0500	0.0000	402.0083	402.0083	2.6000e-003	0.0603	420.0333
Worker	0.2864	0.2018	2.2796	6.0300e-003	0.6693	3.7600e-003	0.6731	0.1779	3.4600e-003	0.1814	0.0000	553.0492	553.0492	0.0189	0.0172	558.6444
<b>Total</b>	<b>0.3297</b>	<b>1.3008</b>	<b>2.5959</b>	<b>0.0102</b>	<b>0.8021</b>	<b>0.0160</b>	<b>0.8181</b>	<b>0.2163</b>	<b>0.0152</b>	<b>0.2314</b>	<b>0.0000</b>	<b>955.0575</b>	<b>955.0575</b>	<b>0.0215</b>	<b>0.0775</b>	<b>978.6777</b>

**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	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
<b>Total</b>	<b>0.2218</b>	<b>2.0300</b>	<b>2.1272</b>	<b>3.5000e-003</b>		<b>0.1052</b>	<b>0.1052</b>		<b>0.0990</b>	<b>0.0990</b>	<b>0.0000</b>	<b>301.2425</b>	<b>301.2425</b>	<b>0.0722</b>	<b>0.0000</b>	<b>303.0467</b>

**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					

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

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	0.0433	1.0990	0.3163	4.1900e-003	0.1328	0.0122	0.1450	0.0384	0.0117	0.0500	0.0000	402.0083	402.0083	2.6000e-003	0.0603	420.0333
Worker	0.2864	0.2018	2.2796	6.0300e-003	0.6693	3.7600e-003	0.6731	0.1779	3.4600e-003	0.1814	0.0000	553.0492	553.0492	0.0189	0.0172	558.6444
<b>Total</b>	<b>0.3297</b>	<b>1.3008</b>	<b>2.5959</b>	<b>0.0102</b>	<b>0.8021</b>	<b>0.0160</b>	<b>0.8181</b>	<b>0.2163</b>	<b>0.0152</b>	<b>0.2314</b>	<b>0.0000</b>	<b>955.0575</b>	<b>955.0575</b>	<b>0.0215</b>	<b>0.0775</b>	<b>978.6777</b>

**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	0.0165	0.1510	0.1706	2.8000e-004		7.3500e-003	7.3500e-003		6.9100e-003	6.9100e-003	0.0000	24.3395	24.3395	5.7900e-003	0.0000	24.4843
<b>Total</b>	<b>0.0165</b>	<b>0.1510</b>	<b>0.1706</b>	<b>2.8000e-004</b>		<b>7.3500e-003</b>	<b>7.3500e-003</b>		<b>6.9100e-003</b>	<b>6.9100e-003</b>	<b>0.0000</b>	<b>24.3395</b>	<b>24.3395</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>24.4843</b>

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7800e-003	0.0715	0.0219	3.3000e-004	0.0107	4.6000e-004	0.0112	3.1000e-003	4.4000e-004	3.5400e-003	0.0000	31.2593	31.2593	1.3000e-004	4.6800e-003	32.6564
Worker	0.0212	0.0142	0.1678	4.7000e-004	0.0541	2.9000e-004	0.0544	0.0144	2.6000e-004	0.0146	0.0000	43.2354	43.2354	1.3600e-003	1.2700e-003	43.6490
<b>Total</b>	<b>0.0230</b>	<b>0.0857</b>	<b>0.1897</b>	<b>8.0000e-004</b>	<b>0.0648</b>	<b>7.5000e-004</b>	<b>0.0655</b>	<b>0.0175</b>	<b>7.0000e-004</b>	<b>0.0182</b>	<b>0.0000</b>	<b>74.4947</b>	<b>74.4947</b>	<b>1.4900e-003</b>	<b>5.9500e-003</b>	<b>76.3054</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

**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	0.0165	0.1510	0.1706	2.8000e-004		7.3500e-003	7.3500e-003		6.9100e-003	6.9100e-003	0.0000	24.3395	24.3395	5.7900e-003	0.0000	24.4842
<b>Total</b>	<b>0.0165</b>	<b>0.1510</b>	<b>0.1706</b>	<b>2.8000e-004</b>		<b>7.3500e-003</b>	<b>7.3500e-003</b>		<b>6.9100e-003</b>	<b>6.9100e-003</b>	<b>0.0000</b>	<b>24.3395</b>	<b>24.3395</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>24.4842</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7800e-003	0.0715	0.0219	3.3000e-004	0.0107	4.6000e-004	0.0112	3.1000e-003	4.4000e-004	3.5400e-003	0.0000	31.2593	31.2593	1.3000e-004	4.6800e-003	32.6564
Worker	0.0212	0.0142	0.1678	4.7000e-004	0.0541	2.9000e-004	0.0544	0.0144	2.6000e-004	0.0146	0.0000	43.2354	43.2354	1.3600e-003	1.2700e-003	43.6490
<b>Total</b>	<b>0.0230</b>	<b>0.0857</b>	<b>0.1897</b>	<b>8.0000e-004</b>	<b>0.0648</b>	<b>7.5000e-004</b>	<b>0.0655</b>	<b>0.0175</b>	<b>7.0000e-004</b>	<b>0.0182</b>	<b>0.0000</b>	<b>74.4947</b>	<b>74.4947</b>	<b>1.4900e-003</b>	<b>5.9500e-003</b>	<b>76.3054</b>

**3.6 Architectural Coating 1 - 2021**

**Unmitigated Construction On-Site**



The Crossings - San Joaquin Valley Unified APCD Air District, Annual

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

Off-Road	1.6400e-003	0.0115	0.0136	2.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	1.9149	1.9149	1.3000e-004	0.0000	1.9182
<b>Total</b>	<b>0.4428</b>	<b>0.0115</b>	<b>0.0136</b>	<b>2.0000e-005</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>1.9149</b>	<b>1.9149</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.9182</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6500e-003	2.7000e-003	0.0293	7.0000e-005	7.7900e-003	5.0000e-005	7.8400e-003	2.0700e-003	4.0000e-005	2.1100e-003	0.0000	6.6473	6.6473	2.5000e-004	2.2000e-004	6.7188
<b>Total</b>	<b>3.6500e-003</b>	<b>2.7000e-003</b>	<b>0.0293</b>	<b>7.0000e-005</b>	<b>7.7900e-003</b>	<b>5.0000e-005</b>	<b>7.8400e-003</b>	<b>2.0700e-003</b>	<b>4.0000e-005</b>	<b>2.1100e-003</b>	<b>0.0000</b>	<b>6.6473</b>	<b>6.6473</b>	<b>2.5000e-004</b>	<b>2.2000e-004</b>	<b>6.7188</b>

**3.6 Architectural Coating 1 - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7353					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0176	0.0227	4.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	3.1916	3.1916	2.1000e-004	0.0000	3.1968
<b>Total</b>	<b>0.7378</b>	<b>0.0176</b>	<b>0.0227</b>	<b>4.0000e-005</b>		<b>1.0200e-003</b>	<b>1.0200e-003</b>		<b>1.0200e-003</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>3.1916</b>	<b>3.1916</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>3.1968</b>

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

**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	5.5600e-003	3.9200e-003	0.0443	1.2000e-004	0.0130	7.0000e-005	0.0131	3.4500e-003	7.0000e-005	3.5200e-003	0.0000	10.7347	10.7347	3.7000e-004	3.3000e-004	10.8433
<b>Total</b>	<b>5.5600e-003</b>	<b>3.9200e-003</b>	<b>0.0443</b>	<b>1.2000e-004</b>	<b>0.0130</b>	<b>7.0000e-005</b>	<b>0.0131</b>	<b>3.4500e-003</b>	<b>7.0000e-005</b>	<b>3.5200e-003</b>	<b>0.0000</b>	<b>10.7347</b>	<b>10.7347</b>	<b>3.7000e-004</b>	<b>3.3000e-004</b>	<b>10.8433</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7353					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0176	0.0227	4.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	3.1916	3.1916	2.1000e-004	0.0000	3.1968
<b>Total</b>	<b>0.7378</b>	<b>0.0176</b>	<b>0.0227</b>	<b>4.0000e-005</b>		<b>1.0200e-003</b>	<b>1.0200e-003</b>		<b>1.0200e-003</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>3.1916</b>	<b>3.1916</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>3.1968</b>

**Mitigated Construction Off-Site**





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

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	8.8300e-003	6.2200e-003	0.0703	1.9000e-004	0.0206	1.2000e-004	0.0207	5.4800e-003	1.1000e-004	5.5900e-003	0.0000	17.0433	17.0433	5.8000e-004	5.3000e-004	17.2158
<b>Total</b>	<b>8.8300e-003</b>	<b>6.2200e-003</b>	<b>0.0703</b>	<b>1.9000e-004</b>	<b>0.0206</b>	<b>1.2000e-004</b>	<b>0.0207</b>	<b>5.4800e-003</b>	<b>1.1000e-004</b>	<b>5.5900e-003</b>	<b>0.0000</b>	<b>17.0433</b>	<b>17.0433</b>	<b>5.8000e-004</b>	<b>5.3000e-004</b>	<b>17.2158</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0900e-003	0.0282	0.0363	6.0000e-005		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	5.1065	5.1065	3.3000e-004	0.0000	5.1148
<b>Total</b>	<b>1.1805</b>	<b>0.0282</b>	<b>0.0363</b>	<b>6.0000e-005</b>		<b>1.6300e-003</b>	<b>1.6300e-003</b>		<b>1.6300e-003</b>	<b>1.6300e-003</b>	<b>0.0000</b>	<b>5.1065</b>	<b>5.1065</b>	<b>3.3000e-004</b>	<b>0.0000</b>	<b>5.1148</b>

**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	8.8300e-003	6.2200e-003	0.0703	1.9000e-004	0.0206	1.2000e-004	0.0207	5.4800e-003	1.1000e-004	5.5900e-003	0.0000	17.0433	17.0433	5.8000e-004	5.3000e-004	17.2158
<b>Total</b>	<b>8.8300e-003</b>	<b>6.2200e-003</b>	<b>0.0703</b>	<b>1.9000e-004</b>	<b>0.0206</b>	<b>1.2000e-004</b>	<b>0.0207</b>	<b>5.4800e-003</b>	<b>1.1000e-004</b>	<b>5.5900e-003</b>	<b>0.0000</b>	<b>17.0433</b>	<b>17.0433</b>	<b>5.8000e-004</b>	<b>5.3000e-004</b>	<b>17.2158</b>

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

**3.8 Paving - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0181	0.1784	0.2552	4.0000e-004		8.9300e-003	8.9300e-003		8.2100e-003	8.2100e-003	0.0000	35.0470	35.0470	0.0113	0.0000	35.3304
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0181</b>	<b>0.1784</b>	<b>0.2552</b>	<b>4.0000e-004</b>		<b>8.9300e-003</b>	<b>8.9300e-003</b>		<b>8.2100e-003</b>	<b>8.2100e-003</b>	<b>0.0000</b>	<b>35.0470</b>	<b>35.0470</b>	<b>0.0113</b>	<b>0.0000</b>	<b>35.3304</b>

**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	8.8000e-004	5.9000e-004	6.9500e-003	2.0000e-005	2.2400e-003	1.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7903	1.7903	6.0000e-005	5.0000e-005	1.8074
<b>Total</b>	<b>8.8000e-004</b>	<b>5.9000e-004</b>	<b>6.9500e-003</b>	<b>2.0000e-005</b>	<b>2.2400e-003</b>	<b>1.0000e-005</b>	<b>2.2500e-003</b>	<b>5.9000e-004</b>	<b>1.0000e-005</b>	<b>6.1000e-004</b>	<b>0.0000</b>	<b>1.7903</b>	<b>1.7903</b>	<b>6.0000e-005</b>	<b>5.0000e-005</b>	<b>1.8074</b>

**Mitigated Construction On-Site**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0181	0.1784	0.2552	4.0000e-004		8.9300e-003	8.9300e-003		8.2100e-003	8.2100e-003	0.0000	35.0470	35.0470	0.0113	0.0000	35.3304
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0181</b>	<b>0.1784</b>	<b>0.2552</b>	<b>4.0000e-004</b>		<b>8.9300e-003</b>	<b>8.9300e-003</b>		<b>8.2100e-003</b>	<b>8.2100e-003</b>	<b>0.0000</b>	<b>35.0470</b>	<b>35.0470</b>	<b>0.0113</b>	<b>0.0000</b>	<b>35.3304</b>

**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	8.8000e-004	5.9000e-004	6.9500e-003	2.0000e-005	2.2400e-003	1.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7903	1.7903	6.0000e-005	5.0000e-005	1.8074
<b>Total</b>	<b>8.8000e-004</b>	<b>5.9000e-004</b>	<b>6.9500e-003</b>	<b>2.0000e-005</b>	<b>2.2400e-003</b>	<b>1.0000e-005</b>	<b>2.2500e-003</b>	<b>5.9000e-004</b>	<b>1.0000e-005</b>	<b>6.1000e-004</b>	<b>0.0000</b>	<b>1.7903</b>	<b>1.7903</b>	<b>6.0000e-005</b>	<b>5.0000e-005</b>	<b>1.8074</b>

**3.9 Architectual Coating 3 - 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					

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

Archit. Coating	1.1765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	3.8300e-003	0.0261	0.0362	6.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	5.1065	5.1065	3.1000e-004	0.0000	5.1142
<b>Total</b>	<b>1.1803</b>	<b>0.0261</b>	<b>0.0362</b>	<b>6.0000e-005</b>		<b>1.4200e-003</b>	<b>1.4200e-003</b>		<b>1.4200e-003</b>	<b>1.4200e-003</b>	<b>0.0000</b>	<b>5.1065</b>	<b>5.1065</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>5.1142</b>

**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	8.0900e-003	5.4300e-003	0.0640	1.8000e-004	0.0206	1.1000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003	0.0000	16.4962	16.4962	5.2000e-004	4.9000e-004	16.6540
<b>Total</b>	<b>8.0900e-003</b>	<b>5.4300e-003</b>	<b>0.0640</b>	<b>1.8000e-004</b>	<b>0.0206</b>	<b>1.1000e-004</b>	<b>0.0207</b>	<b>5.4800e-003</b>	<b>1.0000e-004</b>	<b>5.5800e-003</b>	<b>0.0000</b>	<b>16.4962</b>	<b>16.4962</b>	<b>5.2000e-004</b>	<b>4.9000e-004</b>	<b>16.6540</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.1765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8300e-003	0.0261	0.0362	6.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	5.1065	5.1065	3.1000e-004	0.0000	5.1141
<b>Total</b>	<b>1.1803</b>	<b>0.0261</b>	<b>0.0362</b>	<b>6.0000e-005</b>		<b>1.4200e-003</b>	<b>1.4200e-003</b>		<b>1.4200e-003</b>	<b>1.4200e-003</b>	<b>0.0000</b>	<b>5.1065</b>	<b>5.1065</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>5.1141</b>

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

**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	8.0900e-003	5.4300e-003	0.0640	1.8000e-004	0.0206	1.1000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003	0.0000	16.4962	16.4962	5.2000e-004	4.9000e-004	16.6540
<b>Total</b>	<b>8.0900e-003</b>	<b>5.4300e-003</b>	<b>0.0640</b>	<b>1.8000e-004</b>	<b>0.0206</b>	<b>1.1000e-004</b>	<b>0.0207</b>	<b>5.4800e-003</b>	<b>1.0000e-004</b>	<b>5.5800e-003</b>	<b>0.0000</b>	<b>16.4962</b>	<b>16.4962</b>	<b>5.2000e-004</b>	<b>4.9000e-004</b>	<b>16.6540</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.7911	4.6127	24.3060	0.0554	5.2683	0.0501	5.3185	1.4101	0.0471	1.4571	0.0000	5,129.3382	5,129.3382	0.2968	0.3021	5,226.7905
Unmitigated	2.7911	4.6127	24.3060	0.0554	5.2683	0.0501	5.3185	1.4101	0.0471	1.4571	0.0000	5,129.3382	5,129.3382	0.2968	0.3021	5,226.7905

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,450.60	3,855.60	3056.40	10,003,677	10,003,677
Apartments Mid Rise	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	2,843.28	2,774.64	1348.38	4,034,759	4,034,759
<b>Total</b>	<b>6,293.88</b>	<b>6,630.24</b>	<b>4,404.78</b>	<b>14,038,436</b>	<b>14,038,436</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Apartments Mid Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Apartments Mid Rise	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Health Club	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Parking Lot	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Strip Mall	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	321.4423	321.4423	0.0520	6.3000e-003	324.6207
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	321.4423	321.4423	0.0520	6.3000e-003	324.6207
NaturalGas Mitigated	0.0484	0.4167	0.1975	2.6400e-003		0.0335	0.0335		0.0335	0.0335	0.0000	479.1655	479.1655	9.1800e-003	8.7800e-003	482.0129
NaturalGas Unmitigated	0.0484	0.4167	0.1975	2.6400e-003		0.0335	0.0335		0.0335	0.0335	0.0000	479.1655	479.1655	9.1800e-003	8.7800e-003	482.0129

**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					
Apartments Low Rise	7.63369e+006	0.0412	0.3518	0.1497	2.2500e-003		0.0284	0.0284		0.0284	0.0284	0.0000	407.3627	407.3627	7.8100e-003	7.4700e-003	409.7834
Apartments Mid Rise	353415	1.9100e-003	0.0163	6.9300e-003	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	18.8596	18.8596	3.6000e-004	3.5000e-004	18.9716
Health Club	285919	1.5400e-003	0.0140	0.0118	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.2577	15.2577	2.9000e-004	2.8000e-004	15.3484
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	706200	3.8100e-003	0.0346	0.0291	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	37.6855	37.6855	7.2000e-004	6.9000e-004	37.9095
<b>Total</b>		<b>0.0484</b>	<b>0.4167</b>	<b>0.1975</b>	<b>2.6400e-003</b>		<b>0.0335</b>	<b>0.0335</b>		<b>0.0335</b>	<b>0.0335</b>	<b>0.0000</b>	<b>479.1655</b>	<b>479.1655</b>	<b>9.1800e-003</b>	<b>8.7900e-003</b>	<b>482.0129</b>

Mitigated

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

	Natural Gas 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					
Apartments Low Rise	7.63369e+006	0.0412	0.3518	0.1497	2.2500e-003		0.0284	0.0284		0.0284	0.0284	0.0000	407.3627	407.3627	7.8100e-003	7.4700e-003	409.7834
Apartments Mid Rise	353415	1.9100e-003	0.0163	6.9300e-003	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003	0.0000	18.8596	18.8596	3.6000e-004	3.5000e-004	18.9716
Health Club	285919	1.5400e-003	0.0140	0.0118	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.2577	15.2577	2.9000e-004	2.8000e-004	15.3484
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	706200	3.8100e-003	0.0346	0.0291	2.1000e-004		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	37.6855	37.6855	7.2000e-004	6.9000e-004	37.9095
<b>Total</b>		<b>0.0484</b>	<b>0.4167</b>	<b>0.1975</b>	<b>2.6400e-003</b>		<b>0.0335</b>	<b>0.0335</b>		<b>0.0335</b>	<b>0.0335</b>	<b>0.0000</b>	<b>479.1655</b>	<b>479.1655</b>	<b>9.1800e-003</b>	<b>8.7900e-003</b>	<b>482.0129</b>

**5.3 Energy by Land Use - Electricity**

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.52586e+006	233.7022	0.0378	4.5800e-003	236.0131
Apartments Mid Rise	118344	10.9496	1.7700e-003	2.1000e-004	11.0579
Health Club	120834	11.1800	1.8100e-003	2.2000e-004	11.2906
Parking Lot	171220	15.8419	2.5600e-003	3.1000e-004	15.9986
Strip Mall	537900	49.7685	8.0500e-003	9.8000e-004	50.2607
<b>Total</b>		<b>321.4423</b>	<b>0.0520</b>	<b>6.3000e-003</b>	<b>324.6208</b>

Mitigated



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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.52586e+006	233.7022	0.0378	4.5800e-003	236.0131
Apartments Mid Rise	118344	10.9496	1.7700e-003	2.1000e-004	11.0579
Health Club	120834	11.1800	1.8100e-003	2.2000e-004	11.2906
Parking Lot	171220	15.8419	2.5600e-003	3.1000e-004	15.9986
Strip Mall	537900	49.7685	8.0500e-003	9.8000e-004	50.2607
<b>Total</b>		<b>321.4423</b>	<b>0.0520</b>	<b>6.3000e-003</b>	<b>324.6208</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Use only Natural Gas Hearths

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.7886	0.0489	4.2425	2.2000e-004		0.0235	0.0235		0.0235	0.0235	0.0000	6.9367	6.9367	6.6900e-003	0.0000	7.1040
Unmitigated	5.6653	0.2943	6.3792	4.8900e-003		0.3212	0.3212		0.3212	0.3212	24.9247	266.8611	291.7858	0.0117	6.9600e-003	294.1531

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9646					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.8768	0.2455	2.1367	4.6600e-003		0.2977	0.2977		0.2977	0.2977	24.9247	259.9244	284.8491	4.9800e-003	6.9600e-003	287.0491
Landscaping	0.1283	0.0489	4.2425	2.2000e-004		0.0235	0.0235		0.0235	0.0235	0.0000	6.9367	6.9367	6.6900e-003	0.0000	7.1040
<b>Total</b>	<b>5.6653</b>	<b>0.2943</b>	<b>6.3792</b>	<b>4.8800e-003</b>		<b>0.3212</b>	<b>0.3212</b>		<b>0.3212</b>	<b>0.3212</b>	<b>24.9247</b>	<b>266.8611</b>	<b>291.7858</b>	<b>0.0117</b>	<b>6.9600e-003</b>	<b>294.1531</b>

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	0.6957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9646					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1283	0.0489	4.2425	2.2000e-004		0.0235	0.0235		0.0235	0.0235	0.0000	6.9367	6.9367	6.6900e-003	0.0000	7.1040
<b>Total</b>	<b>3.7886</b>	<b>0.0489</b>	<b>4.2425</b>	<b>2.2000e-004</b>		<b>0.0235</b>	<b>0.0235</b>		<b>0.0235</b>	<b>0.0235</b>	<b>0.0000</b>	<b>6.9367</b>	<b>6.9367</b>	<b>6.6900e-003</b>	<b>0.0000</b>	<b>7.1040</b>

7.0 Water Detail

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

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**7.1 Mitigation Measures Water**

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

**The Crossings**

**San Joaquin Valley Unified APCD Air District, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1,223.00	Space	0.00	489,200.00	0
Health Club	13.70	1000sqft	0.00	13,700.00	0
Apartments Low Rise	540.00	Dwelling Unit	28.60	626,280.00	1713
Apartments Mid Rise	30.00	Dwelling Unit	0.00	45,000.00	95
Strip Mall	66.00	1000sqft	0.00	66,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	3			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - a

Construction Phase - a

Trips and VMT - a

Grading -

Architectural Coating - Three phases of AC split evenly

Vehicle Trips - z

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - a

Water And Wastewater - 100 Aerobic. Indoor water residential use provided by WSA for residential buildings. All captured under Low rise.

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix - a

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	40.00
tblConstructionPhase	NumDays	35.00	40.00
tblConstructionPhase	NumDays	35.00	40.00

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

tblEnergyUse	T24E	147.91	694.40
tblEnergyUse	T24E	1.75	1.96
tblEnergyUse	T24E	1.91	2.14
tblEnergyUse	T24NG	9,924.02	10,413.46
tblEnergyUse	T24NG	16.86	17.03
tblEnergyUse	T24NG	8.53	8.62
tblFireplaces	NumberGas	297.00	313.50
tblFireplaces	NumberNoFireplace	243.00	256.50
tblLandUse	LandUseSquareFeet	540,000.00	626,280.00
tblLandUse	LandUseSquareFeet	30,000.00	45,000.00
tblLandUse	LotAcreage	11.01	0.00
tblLandUse	LotAcreage	0.31	0.00
tblLandUse	LotAcreage	33.75	28.60
tblLandUse	LotAcreage	0.79	0.00
tblLandUse	LotAcreage	1.52	0.00
tblSolidWaste	SolidWasteGenerationRate	248.40	262.20
tblTripsAndVMT	WorkerTripNumber	643.00	644.00
tblTripsAndVMT	WorkerTripNumber	129.00	130.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblVehicleTrips	ST_TR	8.14	7.14
tblVehicleTrips	ST_TR	4.91	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	SU_TR	6.28	5.66
tblVehicleTrips	SU_TR	4.09	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	WD_TR	7.32	6.39
tblVehicleTrips	WD_TR	5.44	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	44.32	43.08
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

tbiWater	AerobicPercent	87.46	100.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	IndoorWaterUseRate	35,183,173.84	26,643,175.00
tbiWater	IndoorWaterUseRate	1,954,620.77	0.00
tbiWater	OutdoorWaterUseRate	1,232,260.92	0.00
tbiWater	SepticTankPercent	10.33	0.00
tbiWater	SepticTankPercent	10.33	0.00
tbiWater	SepticTankPercent	10.33	0.00
tbiWater	SepticTankPercent	10.33	0.00
tbiWater	SepticTankPercent	10.33	0.00

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	64.8515	46.4513	48.3159	0.1256	19.8049	2.0453	21.8502	10.1417	1.8817	12.0234	0.0000	12,658.0483	12,658.0483	1.9482	0.7073	12,890.7308
2022	64.1367	26.8427	44.9925	0.1228	7.4023	1.0194	8.4217	1.9872	0.9647	2.9519	0.0000	12,373.2140	12,373.2140	0.8382	0.6775	12,596.0696
2023	59.4823	22.1539	36.7651	0.1068	6.3344	0.7709	7.1053	1.7039	0.7255	2.4294	0.0000	10,769.4589	10,769.4589	0.7597	0.6178	10,972.5533
<b>Maximum</b>	<b>64.8515</b>	<b>46.4513</b>	<b>48.3159</b>	<b>0.1256</b>	<b>19.8049</b>	<b>2.0453</b>	<b>21.8502</b>	<b>10.1417</b>	<b>1.8817</b>	<b>12.0234</b>	<b>0.0000</b>	<b>12,658.0483</b>	<b>12,658.0483</b>	<b>1.9482</b>	<b>0.7073</b>	<b>12,890.7308</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	64.8515	46.4513	48.3159	0.1256	8.9935	2.0453	11.0388	4.5853	1.8817	6.4670	0.0000	12,658.0483	12,658.0483	1.9482	0.7073	12,890.7308
2022	64.1387	26.8427	44.9925	0.1228	7.4023	1.0194	8.4217	1.9872	0.9647	2.9519	0.0000	12,373.2140	12,373.2140	0.8382	0.6775	12,596.0696
2023	59.4823	22.1539	36.7651	0.1068	6.3344	0.7709	7.1053	1.7039	0.7255	2.4294	0.0000	10,769.4589	10,769.4589	0.7597	0.6178	10,972.5533
Maximum	64.8515	46.4513	48.3159	0.1256	8.9935	2.0453	11.0388	4.5853	1.8817	6.4670	0.0000	12,658.0483	12,658.0483	1.9482	0.7073	12,890.7308

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	32.23	0.00	28.93	40.17	0.00	31.92	0.00	0.00	0.00	0.00	0.00	0.00

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.2566	6.5294	99.2538	0.1163		7.5230	7.5230		7.5230	7.5230	670.1151	7,073.1952	7,743.3103	0.2159	0.1873	7,804.5077
Energy	0.2653	2.2831	1.0820	0.0145		0.1833	0.1833		0.1833	0.1833		2,894.1892	2,894.1892	0.0555	0.0531	2,911.3880
Mobile	20.6215	26.3895	157.2307	0.3583	32.9375	0.3052	33.2426	8.7964	0.2866	9.0829		36,532.6055	36,532.6055	1.8847	1.9719	37,167.3483
Total	88.1434	35.2019	257.5665	0.4890	32.9375	8.0115	40.9489	8.7964	7.9929	16.7892	670.1151	46,499.9899	47,170.1051	2.1561	2.2122	47,883.2440



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

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	21.4818	0.5428	47.1387	2.4900e-003		0.2610	0.2610		0.2610	0.2610	0.0000	84.9599	84.9599	0.0820	0.0000	87.0096
Energy	0.2653	2.2831	1.0820	0.0145		0.1833	0.1833		0.1833	0.1833		2,894.1892	2,894.1892	0.0555	0.0531	2,911.3880
Mobile	20.6215	26.3895	157.2307	0.3583	32.9375	0.3052	33.2426	8.7964	0.2866	9.0829		36,532.6055	36,532.6055	1.8847	1.9719	37,167.3483
<b>Total</b>	<b>42.3686</b>	<b>29.2154</b>	<b>205.4515</b>	<b>0.3752</b>	<b>32.9375</b>	<b>0.7495</b>	<b>33.6869</b>	<b>8.7964</b>	<b>0.7309</b>	<b>9.5273</b>	<b>0.0000</b>	<b>39,511.7546</b>	<b>39,511.7546</b>	<b>2.0221</b>	<b>2.0250</b>	<b>40,165.7459</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>51.93</b>	<b>17.01</b>	<b>20.23</b>	<b>23.27</b>	<b>0.00</b>	<b>90.65</b>	<b>17.73</b>	<b>0.00</b>	<b>90.86</b>	<b>43.25</b>	<b>100.00</b>	<b>15.03</b>	<b>16.24</b>	<b>6.21</b>	<b>8.46</b>	<b>16.12</b>

**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	1/12/2021	2/22/2021	5	30	
2	Site Preparation	Site Preparation	2/23/2021	3/22/2021	5	20	
3	Grading	Grading	3/23/2021	5/24/2021	5	45	
4	Building Construction	Building Construction	5/25/2021	1/30/2023	5	440	
5	Architectural Coating 1	Architectural Coating	12/13/2021	2/4/2022	5	40	
6	Architectural Coating 2	Architectural Coating	7/4/2022	8/26/2022	5	40	
7	Paving	Paving	1/31/2023	3/20/2023	5	35	
8	Architectual Coating 3	Architectural Coating	3/21/2023	5/15/2023	5	40	

**Acres of Grading (Site Preparation Phase): 30**

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

**Acres of Grading (Grading Phase): 135**

**Acres of Paving: 0**

**Residential Indoor: 453,114; Residential Outdoor: 151,038; Non-Residential Indoor: 39,850; Non-Residential Outdoor: 13,283; Striped Parking Area: 9,784**

**OffRoad Equipment**

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

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	644.00	154.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 1	1	130.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 2	1	129.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 3	1	129.00	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 - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>		<b>1.5513</b>	<b>1.5513</b>		<b>1.4411</b>	<b>1.4411</b>		<b>3,747.9449</b>	<b>3,747.9449</b>	<b>1.0549</b>		<b>3,774.3174</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Worker	0.0651	0.0386	0.5237	1.2100e-003	0.1232	7.2000e-004	0.1239	0.0327	6.6000e-004	0.0333		122.6428	122.6428	4.0500e-003	3.5500e-003	123.8005
<b>Total</b>	<b>0.0651</b>	<b>0.0386</b>	<b>0.5237</b>	<b>1.2100e-003</b>	<b>0.1232</b>	<b>7.2000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.6000e-004</b>	<b>0.0333</b>		<b>122.6428</b>	<b>122.6428</b>	<b>4.0500e-003</b>	<b>3.5500e-003</b>	<b>123.8005</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>		<b>1.5513</b>	<b>1.5513</b>		<b>1.4411</b>	<b>1.4411</b>	<b>0.0000</b>	<b>3,747.9449</b>	<b>3,747.9449</b>	<b>1.0549</b>		<b>3,774.3174</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0651	0.0386	0.5237	1.2100e-003	0.1232	7.2000e-004	0.1239	0.0327	6.6000e-004	0.0333		122.6428	122.6428	4.0500e-003	3.5500e-003	123.8005
<b>Total</b>	<b>0.0651</b>	<b>0.0386</b>	<b>0.5237</b>	<b>1.2100e-003</b>	<b>0.1232</b>	<b>7.2000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.6000e-004</b>	<b>0.0333</b>		<b>122.6428</b>	<b>122.6428</b>	<b>4.0500e-003</b>	<b>3.5500e-003</b>	<b>123.8005</b>

**3.3 Site Preparation - 2021**

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>19.6570</b>	<b>2.0445</b>	<b>21.7015</b>	<b>10.1025</b>	<b>1.8809</b>	<b>11.9834</b>		<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0781	0.0463	0.6284	1.4600e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		147.1714	147.1714	4.8600e-003	4.2500e-003	148.5605
<b>Total</b>	<b>0.0781</b>	<b>0.0463</b>	<b>0.6284</b>	<b>1.4600e-003</b>	<b>0.1479</b>	<b>8.6000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.9000e-004</b>	<b>0.0400</b>		<b>147.1714</b>	<b>147.1714</b>	<b>4.8600e-003</b>	<b>4.2500e-003</b>	<b>148.5605</b>

**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
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The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>8.8457</b>	<b>2.0445</b>	<b>10.8901</b>	<b>4.5461</b>	<b>1.8809</b>	<b>6.4270</b>	<b>0.0000</b>	<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0781	0.0463	0.6284	1.4600e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		147.1714	147.1714	4.8600e-003	4.2500e-003	148.5605
<b>Total</b>	<b>0.0781</b>	<b>0.0463</b>	<b>0.6284</b>	<b>1.4600e-003</b>	<b>0.1479</b>	<b>8.6000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.9000e-004</b>	<b>0.0400</b>		<b>147.1714</b>	<b>147.1714</b>	<b>4.8600e-003</b>	<b>4.2500e-003</b>	<b>148.5605</b>

**3.4 Grading - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Total	4.1912	46.3998	30.8785	0.0620	9.2036	1.9853	11.1889	3.6538	1.8265	5.4803		6,007.0434	6,007.0434	1.9428		6,055.6134
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**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0868	0.0515	0.6982	1.6200e-003	0.1643	9.6000e-004	0.1653	0.0436	8.8000e-004	0.0445		163.5238	163.5238	5.4000e-003	4.7300e-003	165.0673
<b>Total</b>	<b>0.0868</b>	<b>0.0515</b>	<b>0.6982</b>	<b>1.6200e-003</b>	<b>0.1643</b>	<b>9.6000e-004</b>	<b>0.1653</b>	<b>0.0436</b>	<b>8.8000e-004</b>	<b>0.0445</b>		<b>163.5238</b>	<b>163.5238</b>	<b>5.4000e-003</b>	<b>4.7300e-003</b>	<b>165.0673</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
<b>Total</b>	<b>4.1912</b>	<b>46.3998</b>	<b>30.8785</b>	<b>0.0620</b>	<b>4.1416</b>	<b>1.9853</b>	<b>6.1270</b>	<b>1.6442</b>	<b>1.8265</b>	<b>3.4707</b>	<b>0.0000</b>	<b>6,007.0434</b>	<b>6,007.0434</b>	<b>1.9428</b>		<b>6,055.6134</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0868	0.0515	0.6982	1.6200e-003	0.1643	9.6000e-004	0.1653	0.0436	8.8000e-004	0.0445		163.5238	163.5238	5.4000e-003	4.7300e-003	165.0673
<b>Total</b>	<b>0.0868</b>	<b>0.0515</b>	<b>0.6982</b>	<b>1.6200e-003</b>	<b>0.1643</b>	<b>9.6000e-004</b>	<b>0.1653</b>	<b>0.0436</b>	<b>8.8000e-004</b>	<b>0.0445</b>		<b>163.5238</b>	<b>163.5238</b>	<b>5.4000e-003</b>	<b>4.7300e-003</b>	<b>165.0673</b>

**3.5 Building Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>		<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					



The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

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	0.5512	9.7791	2.9027	0.0331	1.0441	0.1812	1.2252	0.3007	0.1733	0.4740		3,494.8671	3,494.8671	0.0326	0.5243	3,651.9325
Worker	2.7938	1.6575	22.4821	0.0521	5.2903	0.0308	5.3211	1.4032	0.0284	1.4316		5,265.4648	5,265.4648	0.1738	0.1522	5,315.1659
<b>Total</b>	<b>3.3450</b>	<b>11.4366</b>	<b>25.3848</b>	<b>0.0852</b>	<b>6.3344</b>	<b>0.2120</b>	<b>6.5464</b>	<b>1.7039</b>	<b>0.2017</b>	<b>1.9056</b>		<b>8,760.3319</b>	<b>8,760.3319</b>	<b>0.2064</b>	<b>0.6765</b>	<b>8,967.0984</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>0.0000</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5512	9.7791	2.9027	0.0331	1.0441	0.1812	1.2252	0.3007	0.1733	0.4740		3,494.8671	3,494.8671	0.0326	0.5243	3,651.9325
Worker	2.7938	1.6575	22.4821	0.0521	5.2903	0.0308	5.3211	1.4032	0.0284	1.4316		5,265.4648	5,265.4648	0.1738	0.1522	5,315.1659
<b>Total</b>	<b>3.3450</b>	<b>11.4366</b>	<b>25.3848</b>	<b>0.0852</b>	<b>6.3344</b>	<b>0.2120</b>	<b>6.5464</b>	<b>1.7039</b>	<b>0.2017</b>	<b>1.9056</b>		<b>8,760.3319</b>	<b>8,760.3319</b>	<b>0.2064</b>	<b>0.6765</b>	<b>8,967.0984</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

**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	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.3387	8.0852	2.3972	0.0323	1.0441	0.0939	1.1380	0.3007	0.0898	0.3905		3,407.4755	3,407.4755	0.0222	0.5106	3,560.1760
Worker	2.5515	1.4422	20.3170	0.0505	5.2903	0.0289	5.3192	1.4032	0.0266	1.4299		5,100.3776	5,100.3776	0.1545	0.1389	5,145.6392
<b>Total</b>	<b>2.8901</b>	<b>9.5275</b>	<b>22.7142</b>	<b>0.0827</b>	<b>6.3344</b>	<b>0.1228</b>	<b>6.4572</b>	<b>1.7039</b>	<b>0.1164</b>	<b>1.8203</b>		<b>8,507.8531</b>	<b>8,507.8531</b>	<b>0.1767</b>	<b>0.6495</b>	<b>8,705.8152</b>

**Mitigated Construction On-Site**

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.3387	8.0852	2.3972	0.0323	1.0441	0.0939	1.1380	0.3007	0.0898	0.3905		3,407.4755	3,407.4755	0.0222	0.5106	3,560.1760
Worker	2.5515	1.4422	20.3170	0.0505	5.2903	0.0289	5.3192	1.4032	0.0266	1.4299		5,100.3776	5,100.3776	0.1545	0.1389	5,145.6392
<b>Total</b>	<b>2.8901</b>	<b>9.5275</b>	<b>22.7142</b>	<b>0.0827</b>	<b>6.3344</b>	<b>0.1228</b>	<b>6.4572</b>	<b>1.7039</b>	<b>0.1164</b>	<b>1.8203</b>		<b>8,507.8531</b>	<b>8,507.8531</b>	<b>0.1767</b>	<b>0.6495</b>	<b>8,705.8152</b>

**3.5 Building Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>		<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

## The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1759	6.5088	2.0551	0.0310	1.0441	0.0440	1.0880	0.3007	0.0420	0.3427		3,278.9789	3,278.9789	0.0142	0.4903	3,425.4522
Worker	2.3359	1.2602	18.4661	0.0488	5.2903	0.0272	5.3175	1.4032	0.0250	1.4283		4,935.2701	4,935.2701	0.1377	0.1275	4,976.6951
<b>Total</b>	<b>2.5117</b>	<b>7.7690</b>	<b>20.5211</b>	<b>0.0799</b>	<b>6.3344</b>	<b>0.0712</b>	<b>6.4055</b>	<b>1.7039</b>	<b>0.0671</b>	<b>1.7710</b>		<b>8,214.2490</b>	<b>8,214.2490</b>	<b>0.1519</b>	<b>0.6178</b>	<b>8,402.1472</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>	<b>0.0000</b>	<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Mitigated Construction Off-Site**

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1759	6.5088	2.0551	0.0310	1.0441	0.0440	1.0880	0.3007	0.0420	0.3427		3,278.9789	3,278.9789	0.0142	0.4903	3,425.4522
Worker	2.3359	1.2602	18.4661	0.0488	5.2903	0.0272	5.3175	1.4032	0.0250	1.4283		4,935.2701	4,935.2701	0.1377	0.1275	4,976.6951
<b>Total</b>	<b>2.5117</b>	<b>7.7690</b>	<b>20.5211</b>	<b>0.0799</b>	<b>6.3344</b>	<b>0.0712</b>	<b>6.4055</b>	<b>1.7039</b>	<b>0.0671</b>	<b>1.7710</b>		<b>8,214.2490</b>	<b>8,214.2490</b>	<b>0.1519</b>	<b>0.6178</b>	<b>8,402.1472</b>

**3.6 Architectural Coating 1 - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>59.0416</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.5640	0.3346	4.5383	0.0105	1.0679	6.2200e-003	1.0741	0.2833	5.7300e-003	0.2890		1,062.9044	1,062.9044	0.0351	0.0307	1,072.9372
<b>Total</b>	<b>0.5640</b>	<b>0.3346</b>	<b>4.5383</b>	<b>0.0105</b>	<b>1.0679</b>	<b>6.2200e-003</b>	<b>1.0741</b>	<b>0.2833</b>	<b>5.7300e-003</b>	<b>0.2890</b>		<b>1,062.9044</b>	<b>1,062.9044</b>	<b>0.0351</b>	<b>0.0307</b>	<b>1,072.9372</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>59.0416</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.5640	0.3346	4.5383	0.0105	1.0679	6.2200e-003	1.0741	0.2833	5.7300e-003	0.2890		1,062.9044	1,062.9044	0.0351	0.0307	1,072.9372
<b>Total</b>	<b>0.5640</b>	<b>0.3346</b>	<b>4.5383</b>	<b>0.0105</b>	<b>1.0679</b>	<b>6.2200e-003</b>	<b>1.0741</b>	<b>0.2833</b>	<b>5.7300e-003</b>	<b>0.2890</b>		<b>1,062.9044</b>	<b>1,062.9044</b>	<b>0.0351</b>	<b>0.0307</b>	<b>1,072.9372</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

**3.6 Architectural Coating 1 - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>59.0273</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.5151	0.2911	4.1013	0.0102	1.0679	5.8400e-003	1.0738	0.2833	5.3700e-003	0.2886		1,029.5793	1,029.5793	0.0312	0.0280	1,038.7160
<b>Total</b>	<b>0.5151</b>	<b>0.2911</b>	<b>4.1013</b>	<b>0.0102</b>	<b>1.0679</b>	<b>5.8400e-003</b>	<b>1.0738</b>	<b>0.2833</b>	<b>5.3700e-003</b>	<b>0.2886</b>		<b>1,029.5793</b>	<b>1,029.5793</b>	<b>0.0312</b>	<b>0.0280</b>	<b>1,038.7160</b>

**Mitigated Construction On-Site**

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>59.0273</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.5151	0.2911	4.1013	0.0102	1.0679	5.8400e-003	1.0738	0.2833	5.3700e-003	0.2886		1,029.5793	1,029.5793	0.0312	0.0280	1,038.7160
<b>Total</b>	<b>0.5151</b>	<b>0.2911</b>	<b>4.1013</b>	<b>0.0102</b>	<b>1.0679</b>	<b>5.8400e-003</b>	<b>1.0738</b>	<b>0.2833</b>	<b>5.3700e-003</b>	<b>0.2886</b>		<b>1,029.5793</b>	<b>1,029.5793</b>	<b>0.0312</b>	<b>0.0280</b>	<b>1,038.7160</b>

**3.7 Architectural Coating 2 - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					



The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>59.0273</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.5111	0.2889	4.0697	0.0101	1.0597	5.7900e-003	1.0655	0.2811	5.3300e-003	0.2864		1,021.6595	1,021.6595	0.0310	0.0278	1,030.7259
<b>Total</b>	<b>0.5111</b>	<b>0.2889</b>	<b>4.0697</b>	<b>0.0101</b>	<b>1.0597</b>	<b>5.7900e-003</b>	<b>1.0655</b>	<b>0.2811</b>	<b>5.3300e-003</b>	<b>0.2864</b>		<b>1,021.6595</b>	<b>1,021.6595</b>	<b>0.0310</b>	<b>0.0278</b>	<b>1,030.7259</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>59.0273</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

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

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.5111	0.2889	4.0697	0.0101	1.0597	5.7900e-003	1.0655	0.2811	5.3300e-003	0.2864		1,021.6595	1,021.6595	0.0310	0.0278	1,030.7259
<b>Total</b>	<b>0.5111</b>	<b>0.2889</b>	<b>4.0697</b>	<b>0.0101</b>	<b>1.0597</b>	<b>5.7900e-003</b>	<b>1.0655</b>	<b>0.2811</b>	<b>5.3300e-003</b>	<b>0.2864</b>		<b>1,021.6595</b>	<b>1,021.6595</b>	<b>0.0310</b>	<b>0.0278</b>	<b>1,030.7259</b>

**3.8 Paving - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0327</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

**Unmitigated Construction Off-Site**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0580	0.0313	0.4588	1.2100e-003	0.1314	6.8000e-004	0.1321	0.0349	6.2000e-004	0.0355		122.6154	122.6154	3.4200e-003	3.1700e-003	123.6446
<b>Total</b>	<b>0.0580</b>	<b>0.0313</b>	<b>0.4588</b>	<b>1.2100e-003</b>	<b>0.1314</b>	<b>6.8000e-004</b>	<b>0.1321</b>	<b>0.0349</b>	<b>6.2000e-004</b>	<b>0.0355</b>		<b>122.6154</b>	<b>122.6154</b>	<b>3.4200e-003</b>	<b>3.1700e-003</b>	<b>123.6446</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0327</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>	<b>0.0000</b>	<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0580	0.0313	0.4588	1.2100e-003	0.1314	6.8000e-004	0.1321	0.0349	6.2000e-004	0.0355		122.6154	122.6154	3.4200e-003	3.1700e-003	123.6446
<b>Total</b>	<b>0.0580</b>	<b>0.0313</b>	<b>0.4588</b>	<b>1.2100e-003</b>	<b>0.1314</b>	<b>6.8000e-004</b>	<b>0.1321</b>	<b>0.0349</b>	<b>6.2000e-004</b>	<b>0.0355</b>		<b>122.6154</b>	<b>122.6154</b>	<b>3.4200e-003</b>	<b>3.1700e-003</b>	<b>123.6446</b>

**3.9 Architectural Coating 3 - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>59.0144</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4679	0.2524	3.6989	9.7800e-003	1.0597	5.4500e-003	1.0652	0.2811	5.0100e-003	0.2861		988.5867	988.5867	0.0276	0.0255	996.8846

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

<b>Total</b>	<b>0.4679</b>	<b>0.2524</b>	<b>3.6989</b>	<b>9.7800e-003</b>	<b>1.0597</b>	<b>5.4500e-003</b>	<b>1.0652</b>	<b>0.2811</b>	<b>5.0100e-003</b>	<b>0.2861</b>		<b>988.5867</b>	<b>988.5867</b>	<b>0.0276</b>	<b>0.0255</b>	<b>996.8846</b>
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**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>59.0144</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4679	0.2524	3.6989	9.7800e-003	1.0597	5.4500e-003	1.0652	0.2811	5.0100e-003	0.2861		988.5867	988.5867	0.0276	0.0255	996.8846
<b>Total</b>	<b>0.4679</b>	<b>0.2524</b>	<b>3.6989</b>	<b>9.7800e-003</b>	<b>1.0597</b>	<b>5.4500e-003</b>	<b>1.0652</b>	<b>0.2811</b>	<b>5.0100e-003</b>	<b>0.2861</b>		<b>988.5867</b>	<b>988.5867</b>	<b>0.0276</b>	<b>0.0255</b>	<b>996.8846</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	20.6215	26.3895	157.2307	0.3583	32.9375	0.3052	33.2426	8.7964	0.2866	9.0829		36,532.6055	36,532.605	1.8847	1.9719	37,167.3483
Unmitigated	20.6215	26.3895	157.2307	0.3583	32.9375	0.3052	33.2426	8.7964	0.2866	9.0829		36,532.6055	36,532.605	1.8847	1.9719	37,167.3483

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Apartments Low Rise	3,450.60	3,855.60	3056.40	10,003,677	10,003,677
Apartments Mid Rise	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	2,843.28	2,774.64	1348.38	4,034,759	4,034,759
Total	6,293.88	6,630.24	4,404.78	14,038,436	14,038,436

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Apartments Mid Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Apartments Mid Rise	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

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

Health Club	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Parking Lot	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Strip Mall	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2653	2.2831	1.0820	0.0145		0.1833	0.1833		0.1833	0.1833		2,894.1892	2,894.1892	0.0555	0.0531	2,911.3880
NaturalGas Unmitigated	0.2653	2.2831	1.0820	0.0145		0.1833	0.1833		0.1833	0.1833		2,894.1892	2,894.1892	0.0555	0.0531	2,911.3880

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	20914.2	0.2256	1.9274	0.8202	0.0123		0.1558	0.1558		0.1558	0.1558		2,460.4959	2,460.4959	0.0472	0.0451	2,475.1174
Apartments Mid Rise	968.259	0.0104	0.0892	0.0380	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003		113.9129	113.9129	2.1800e-003	2.0900e-003	114.5898
Health Club	783.34	8.4500e-003	0.0768	0.0645	4.6000e-004		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003		92.1576	92.1576	1.7700e-003	1.6900e-003	92.7053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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

Strip Mall	1934.79	0.0209	0.1897	0.1593	1.1400e-003		0.0144	0.0144		0.0144	0.0144		227.6229	227.6229	4.3600e-003	4.1700e-003	228.9755
<b>Total</b>		<b>0.2653</b>	<b>2.2831</b>	<b>1.0820</b>	<b>0.0145</b>		<b>0.1833</b>	<b>0.1833</b>		<b>0.1833</b>	<b>0.1833</b>		<b>2,894.1892</b>	<b>2,894.1892</b>	<b>0.0555</b>	<b>0.0531</b>	<b>2,911.3879</b>

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	20.9142	0.2256	1.9274	0.8202	0.0123		0.1558	0.1558		0.1558	0.1558		2,460.4959	2,460.4959	0.0472	0.0451	2,475.1174
Apartments Mid Rise	0.968259	0.0104	0.0892	0.0380	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003		113.9129	113.9129	2.1800e-003	2.0900e-003	114.5898
Health Club	0.78334	8.4500e-003	0.0768	0.0645	4.6000e-004		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003		92.1576	92.1576	1.7700e-003	1.6900e-003	92.7053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.93479	0.0209	0.1897	0.1593	1.1400e-003		0.0144	0.0144		0.0144	0.0144		227.6229	227.6229	4.3600e-003	4.1700e-003	228.9755
<b>Total</b>		<b>0.2653</b>	<b>2.2831</b>	<b>1.0820</b>	<b>0.0145</b>		<b>0.1833</b>	<b>0.1833</b>		<b>0.1833</b>	<b>0.1833</b>		<b>2,894.1892</b>	<b>2,894.1892</b>	<b>0.0555</b>	<b>0.0531</b>	<b>2,911.3879</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Use only Natural Gas Hearths

No Hearths Installed



The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	21.4818	0.5428	47.1387	2.4900e-003		0.2610	0.2610		0.2610	0.2610	0.0000	84.9599	84.9599	0.0820	0.0000	87.0096
Unmitigated	67.2566	6.5294	99.2538	0.1163		7.5230	7.5230		7.5230	7.5230	670.1151	7,073.1952	7,743.3103	0.2159	0.1873	7,804.5077

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.8119					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.2443					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	45.7748	5.9866	52.1150	0.1138		7.2620	7.2620		7.2620	7.2620	670.1151	6,988.2353	7,658.3504	0.1339	0.1873	7,717.4981
Landscaping	1.4256	0.5428	47.1387	2.4900e-003		0.2610	0.2610		0.2610	0.2610		84.9599	84.9599	0.0820		87.0096
<b>Total</b>	<b>67.2566</b>	<b>6.5294</b>	<b>99.2538</b>	<b>0.1163</b>		<b>7.5230</b>	<b>7.5230</b>		<b>7.5230</b>	<b>7.5230</b>	<b>670.1151</b>	<b>7,073.1952</b>	<b>7,743.3103</b>	<b>0.2159</b>	<b>0.1873</b>	<b>7,804.5077</b>

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.8119					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

Consumer Products	16.2443					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4256	0.5428	47.1387	2.4900e-003		0.2610	0.2610		0.2610	0.2610		84.9599	84.9599	0.0820		87.0096
<b>Total</b>	<b>21.4818</b>	<b>0.5428</b>	<b>47.1387</b>	<b>2.4900e-003</b>		<b>0.2610</b>	<b>0.2610</b>		<b>0.2610</b>	<b>0.2610</b>	<b>0.0000</b>	<b>84.9599</b>	<b>84.9599</b>	<b>0.0820</b>	<b>0.0000</b>	<b>87.0096</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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The Crossings - San Joaquin Valley Unified APCD Air District, Summer

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

## **11.0 Vegetation**

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The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**The Crossings**

**San Joaquin Valley Unified APCD Air District, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1,223.00	Space	0.00	489,200.00	0
Health Club	13.70	1000sqft	0.00	13,700.00	0
Apartments Low Rise	540.00	Dwelling Unit	28.60	626,280.00	1713
Apartments Mid Rise	30.00	Dwelling Unit	0.00	45,000.00	95
Strip Mall	66.00	1000sqft	0.00	66,000.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	45
<b>Climate Zone</b>	3			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	203.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - a

Construction Phase - a

Trips and VMT - a

Grading -

Architectural Coating - Three phases of AC split evenly

Vehicle Trips - z

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - a

Water And Wastewater - 100 Aerobic. Indoor water residential use provided by WSA for residential buildings. All captured under Low rise.

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix - a

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	39,850.00	13,283.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	119,550.00	39,850.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Parking	29,352.00	9,784.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	453,114.00	151,038.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	ConstArea_Residential_Interior	1,359,342.00	453,114.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	40.00
tblConstructionPhase	NumDays	35.00	40.00
tblConstructionPhase	NumDays	35.00	40.00

## The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

tblEnergyUse	T24E	147.91	694.40
tblEnergyUse	T24E	1.75	1.96
tblEnergyUse	T24E	1.91	2.14
tblEnergyUse	T24NG	9,924.02	10,413.46
tblEnergyUse	T24NG	16.86	17.03
tblEnergyUse	T24NG	8.53	8.62
tblFireplaces	NumberGas	297.00	313.50
tblFireplaces	NumberNoFireplace	243.00	256.50
tblLandUse	LandUseSquareFeet	540,000.00	626,280.00
tblLandUse	LandUseSquareFeet	30,000.00	45,000.00
tblLandUse	LotAcreage	11.01	0.00
tblLandUse	LotAcreage	0.31	0.00
tblLandUse	LotAcreage	33.75	28.60
tblLandUse	LotAcreage	0.79	0.00
tblLandUse	LotAcreage	1.52	0.00
tblSolidWaste	SolidWasteGenerationRate	248.40	262.20
tblTripsAndVMT	WorkerTripNumber	643.00	644.00
tblTripsAndVMT	WorkerTripNumber	129.00	130.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblVehicleTrips	ST_TR	8.14	7.14
tblVehicleTrips	ST_TR	4.91	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	SU_TR	6.28	5.66
tblVehicleTrips	SU_TR	4.09	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	WD_TR	7.32	6.39
tblVehicleTrips	WD_TR	5.44	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	44.32	43.08
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

tbiWater	AerobicPercent	87.46	100.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tbiWater	IndoorWaterUseRate	35,183,173.84	26,643,175.00
tbiWater	IndoorWaterUseRate	1,954,620.77	0.00
tbiWater	OutdoorWaterUseRate	1,232,260.92	0.00
tbiWater	SepticTankPercent	10.33	0.00
tbiWater	SepticTankPercent	10.33	0.00
tbiWater	SepticTankPercent	10.33	0.00
tbiWater	SepticTankPercent	10.33	0.00
tbiWater	SepticTankPercent	10.33	0.00

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	64.4628	46.4607	44.2568	0.1187	19.8049	2.0453	21.8502	10.1417	1.8817	12.0234	0.0000	11,958.1437	11,958.1437	1.9487	0.7298	12,198.0396
2022	63.7898	27.7072	41.4488	0.1161	7.4023	1.0196	8.4219	1.9872	0.9649	2.9521	0.0000	11,698.7338	11,698.7338	0.8573	0.6982	11,928.2153
2023	59.4317	22.8457	34.1743	0.1015	6.3344	0.7710	7.1054	1.7039	0.7256	2.4295	0.0000	10,232.0570	10,232.0570	0.7746	0.6342	10,440.4008
<b>Maximum</b>	<b>64.4628</b>	<b>46.4607</b>	<b>44.2568</b>	<b>0.1187</b>	<b>19.8049</b>	<b>2.0453</b>	<b>21.8502</b>	<b>10.1417</b>	<b>1.8817</b>	<b>12.0234</b>	<b>0.0000</b>	<b>11,958.1437</b>	<b>11,958.1437</b>	<b>1.9487</b>	<b>0.7298</b>	<b>12,198.0396</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	64.4628	46.4607	44.2568	0.1187	8.9935	2.0453	11.0388	4.5853	1.8817	6.4670	0.0000	11,958.1437	11,958.1437	1.9487	0.7298	12,198.0395
2022	63.7898	27.7072	41.4488	0.1161	7.4023	1.0196	8.4219	1.9872	0.9649	2.9521	0.0000	11,698.7338	11,698.7338	0.8573	0.6982	11,928.2153
2023	59.4317	22.8457	34.1743	0.1015	6.3344	0.7710	7.1054	1.7039	0.7256	2.4295	0.0000	10,232.0570	10,232.0570	0.7746	0.6342	10,440.4007
Maximum	64.4628	46.4607	44.2568	0.1187	8.9935	2.0453	11.0388	4.5853	1.8817	6.4670	0.0000	11,958.1437	11,958.1437	1.9487	0.7298	12,198.0395

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	32.23	0.00	28.92	40.17	0.00	31.92	0.00	0.00	0.00	0.00	0.00	0.00

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	67.2566	6.5294	99.2538	0.1163		7.5230	7.5230		7.5230	7.5230	670.1151	7,073.1952	7,743.3103	0.2159	0.1873	7,804.5077
Energy	0.2653	2.2831	1.0820	0.0145		0.1833	0.1833		0.1833	0.1833		2,894.1892	2,894.1892	0.0555	0.0531	2,911.3880
Mobile	16.0578	29.5027	154.6685	0.3302	32.9375	0.3055	33.2430	8.7964	0.2869	9.0832		33,692.7611	33,692.7611	2.1342	2.0944	34,370.2343
Total	83.5796	38.3152	255.0043	0.4609	32.9375	8.0118	40.9493	8.7964	7.9932	16.7895	670.1151	43,660.1456	44,330.2607	2.4056	2.3347	45,086.1300



The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	21.4818	0.5428	47.1387	2.4900e-003		0.2610	0.2610		0.2610	0.2610	0.0000	84.9599	84.9599	0.0820	0.0000	87.0096
Energy	0.2653	2.2831	1.0820	0.0145		0.1833	0.1833		0.1833	0.1833		2,894.1892	2,894.1892	0.0555	0.0531	2,911.3880
Mobile	16.0578	29.5027	154.6685	0.3302	32.9375	0.3055	33.2430	8.7964	0.2869	9.0832		33,692.7611	33,692.7611	2.1342	2.0944	34,370.2343
<b>Total</b>	<b>37.8048</b>	<b>32.3286</b>	<b>202.8892</b>	<b>0.3471</b>	<b>32.9375</b>	<b>0.7498</b>	<b>33.6873</b>	<b>8.7964</b>	<b>0.7312</b>	<b>9.5276</b>	<b>0.0000</b>	<b>36,671.9103</b>	<b>36,671.9103</b>	<b>2.2717</b>	<b>2.1474</b>	<b>37,368.6319</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>54.77</b>	<b>15.62</b>	<b>20.44</b>	<b>24.69</b>	<b>0.00</b>	<b>90.64</b>	<b>17.73</b>	<b>0.00</b>	<b>90.85</b>	<b>43.25</b>	<b>100.00</b>	<b>16.01</b>	<b>17.28</b>	<b>5.57</b>	<b>8.02</b>	<b>17.12</b>

**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	1/12/2021	2/22/2021	5	30	
2	Site Preparation	Site Preparation	2/23/2021	3/22/2021	5	20	
3	Grading	Grading	3/23/2021	5/24/2021	5	45	
4	Building Construction	Building Construction	5/25/2021	1/30/2023	5	440	
5	Architectural Coating 1	Architectural Coating	12/13/2021	2/4/2022	5	40	
6	Architectural Coating 2	Architectural Coating	7/4/2022	8/26/2022	5	40	
7	Paving	Paving	1/31/2023	3/20/2023	5	35	
8	Architectual Coating 3	Architectural Coating	3/21/2023	5/15/2023	5	40	

**Acres of Grading (Site Preparation Phase): 30**

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**Acres of Grading (Grading Phase): 135**

**Acres of Paving: 0**

**Residential Indoor: 453,114; Residential Outdoor: 151,038; Non-Residential Indoor: 39,850; Non-Residential Outdoor: 13,283; Striped Parking Area: 9,784**

**OffRoad Equipment**

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

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	644.00	154.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 1	1	130.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 2	1	129.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 3	1	129.00	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 - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>		<b>1.5513</b>	<b>1.5513</b>		<b>1.4411</b>	<b>1.4411</b>		<b>3,747.9449</b>	<b>3,747.9449</b>	<b>1.0549</b>		<b>3,774.3174</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Worker	0.0577	0.0456	0.4433	1.0800e-003	0.1232	7.2000e-004	0.1239	0.0327	6.6000e-004	0.0333		109.0424	109.0424	4.4400e-003	3.9700e-003	110.3351
<b>Total</b>	<b>0.0577</b>	<b>0.0456</b>	<b>0.4433</b>	<b>1.0800e-003</b>	<b>0.1232</b>	<b>7.2000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.6000e-004</b>	<b>0.0333</b>		<b>109.0424</b>	<b>109.0424</b>	<b>4.4400e-003</b>	<b>3.9700e-003</b>	<b>110.3351</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>		<b>1.5513</b>	<b>1.5513</b>		<b>1.4411</b>	<b>1.4411</b>	<b>0.0000</b>	<b>3,747.9449</b>	<b>3,747.9449</b>	<b>1.0549</b>		<b>3,774.3174</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0577	0.0456	0.4433	1.0800e-003	0.1232	7.2000e-004	0.1239	0.0327	6.6000e-004	0.0333		109.0424	109.0424	4.4400e-003	3.9700e-003	110.3351
<b>Total</b>	<b>0.0577</b>	<b>0.0456</b>	<b>0.4433</b>	<b>1.0800e-003</b>	<b>0.1232</b>	<b>7.2000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.6000e-004</b>	<b>0.0333</b>		<b>109.0424</b>	<b>109.0424</b>	<b>4.4400e-003</b>	<b>3.9700e-003</b>	<b>110.3351</b>

**3.3 Site Preparation - 2021**

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>19.6570</b>	<b>2.0445</b>	<b>21.7015</b>	<b>10.1025</b>	<b>1.8809</b>	<b>11.9834</b>		<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0692	0.0548	0.5319	1.2900e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		130.8509	130.8509	5.3300e-003	4.7600e-003	132.4022
<b>Total</b>	<b>0.0692</b>	<b>0.0548</b>	<b>0.5319</b>	<b>1.2900e-003</b>	<b>0.1479</b>	<b>8.6000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.9000e-004</b>	<b>0.0400</b>		<b>130.8509</b>	<b>130.8509</b>	<b>5.3300e-003</b>	<b>4.7600e-003</b>	<b>132.4022</b>

**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
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The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
<b>Total</b>	<b>3.8882</b>	<b>40.4971</b>	<b>21.1543</b>	<b>0.0380</b>	<b>8.8457</b>	<b>2.0445</b>	<b>10.8901</b>	<b>4.5461</b>	<b>1.8809</b>	<b>6.4270</b>	<b>0.0000</b>	<b>3,685.6569</b>	<b>3,685.6569</b>	<b>1.1920</b>		<b>3,715.4573</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0692	0.0548	0.5319	1.2900e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		130.8509	130.8509	5.3300e-003	4.7600e-003	132.4022
<b>Total</b>	<b>0.0692</b>	<b>0.0548</b>	<b>0.5319</b>	<b>1.2900e-003</b>	<b>0.1479</b>	<b>8.6000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.9000e-004</b>	<b>0.0400</b>		<b>130.8509</b>	<b>130.8509</b>	<b>5.3300e-003</b>	<b>4.7600e-003</b>	<b>132.4022</b>

**3.4 Grading - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

<b>Total</b>	4.1912	46.3998	30.8785	0.0620	9.2036	1.9853	11.1889	3.6538	1.8265	5.4803		6,007.0434	6,007.0434	1.9428		6,055.6134
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**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0769	0.0608	0.5910	1.4400e-003	0.1643	9.6000e-004	0.1653	0.0436	8.8000e-004	0.0445		145.3898	145.3898	5.9300e-003	5.2900e-003	147.1135
<b>Total</b>	<b>0.0769</b>	<b>0.0608</b>	<b>0.5910</b>	<b>1.4400e-003</b>	<b>0.1643</b>	<b>9.6000e-004</b>	<b>0.1653</b>	<b>0.0436</b>	<b>8.8000e-004</b>	<b>0.0445</b>		<b>145.3898</b>	<b>145.3898</b>	<b>5.9300e-003</b>	<b>5.2900e-003</b>	<b>147.1135</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
<b>Total</b>	<b>4.1912</b>	<b>46.3998</b>	<b>30.8785</b>	<b>0.0620</b>	<b>4.1416</b>	<b>1.9853</b>	<b>6.1270</b>	<b>1.6442</b>	<b>1.8265</b>	<b>3.4707</b>	<b>0.0000</b>	<b>6,007.0434</b>	<b>6,007.0434</b>	<b>1.9428</b>		<b>6,055.6134</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0769	0.0608	0.5910	1.4400e-003	0.1643	9.6000e-004	0.1653	0.0436	8.8000e-004	0.0445		145.3898	145.3898	5.9300e-003	5.2900e-003	147.1135
<b>Total</b>	<b>0.0769</b>	<b>0.0608</b>	<b>0.5910</b>	<b>1.4400e-003</b>	<b>0.1643</b>	<b>9.6000e-004</b>	<b>0.1653</b>	<b>0.0436</b>	<b>8.8000e-004</b>	<b>0.0445</b>		<b>145.3898</b>	<b>145.3898</b>	<b>5.9300e-003</b>	<b>5.2900e-003</b>	<b>147.1135</b>

**3.5 Building Construction - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>		<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					



The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

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	0.5432	10.4382	2.9908	0.0331	1.0441	0.1815	1.2256	0.3007	0.1737	0.4743		3,496.7454	3,496.7454	0.0322	0.5252	3,654.0519
Worker	2.4770	1.9590	19.0315	0.0463	5.2903	0.0308	5.3211	1.4032	0.0284	1.4316		4,681.5525	4,681.5525	0.1908	0.1702	4,737.0547
<b>Total</b>	<b>3.0202</b>	<b>12.3972</b>	<b>22.0222</b>	<b>0.0794</b>	<b>6.3344</b>	<b>0.2124</b>	<b>6.5468</b>	<b>1.7039</b>	<b>0.2021</b>	<b>1.9059</b>		<b>8,178.2979</b>	<b>8,178.2979</b>	<b>0.2230</b>	<b>0.6954</b>	<b>8,391.1066</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>0.0000</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5432	10.4382	2.9908	0.0331	1.0441	0.1815	1.2256	0.3007	0.1737	0.4743		3,496.7454	3,496.7454	0.0322	0.5252	3,654.0519
Worker	2.4770	1.9590	19.0315	0.0463	5.2903	0.0308	5.3211	1.4032	0.0284	1.4316		4,681.5525	4,681.5525	0.1908	0.1702	4,737.0547
<b>Total</b>	<b>3.0202</b>	<b>12.3972</b>	<b>22.0222</b>	<b>0.0794</b>	<b>6.3344</b>	<b>0.2124</b>	<b>6.5468</b>	<b>1.7039</b>	<b>0.2021</b>	<b>1.9059</b>		<b>8,178.2979</b>	<b>8,178.2979</b>	<b>0.2230</b>	<b>0.6954</b>	<b>8,391.1066</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**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	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>		<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.3297	8.6354	2.4808	0.0323	1.0441	0.0941	1.1382	0.3007	0.0901	0.3907		3,410.5416	3,410.5416	0.0218	0.5115	3,563.5186
Worker	2.2686	1.7037	17.2991	0.0449	5.2903	0.0289	5.3192	1.4032	0.0266	1.4299		4,536.6310	4,536.6310	0.1708	0.1553	4,587.1757
<b>Total</b>	<b>2.5983</b>	<b>10.3392</b>	<b>19.7798</b>	<b>0.0772</b>	<b>6.3344</b>	<b>0.1231</b>	<b>6.4574</b>	<b>1.7039</b>	<b>0.1167</b>	<b>1.8206</b>		<b>7,947.1726</b>	<b>7,947.1726</b>	<b>0.1925</b>	<b>0.6668</b>	<b>8,150.6942</b>

**Mitigated Construction On-Site**

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.3297	8.6354	2.4808	0.0323	1.0441	0.0941	1.1382	0.3007	0.0901	0.3907		3,410.5416	3,410.5416	0.0218	0.5115	3,563.5186
Worker	2.2686	1.7037	17.2991	0.0449	5.2903	0.0289	5.3192	1.4032	0.0266	1.4299		4,536.6310	4,536.6310	0.1708	0.1553	4,587.1757
<b>Total</b>	<b>2.5983</b>	<b>10.3392</b>	<b>19.7798</b>	<b>0.0772</b>	<b>6.3344</b>	<b>0.1231</b>	<b>6.4574</b>	<b>1.7039</b>	<b>0.1167</b>	<b>1.8206</b>		<b>7,947.1726</b>	<b>7,947.1726</b>	<b>0.1925</b>	<b>0.6668</b>	<b>8,150.6942</b>

**3.5 Building Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>		<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1651	6.9730	2.1241	0.0311	1.0441	0.0441	1.0882	0.3007	0.0422	0.3428		3,285.3923	3,285.3923	0.0137	0.4918	3,432.2815
Worker	2.0833	1.4878	15.8061	0.0435	5.2903	0.0272	5.3175	1.4032	0.0250	1.4283		4,391.4548	4,391.4548	0.1531	0.1424	4,437.7132
<b>Total</b>	<b>2.2485</b>	<b>8.4608</b>	<b>17.9303</b>	<b>0.0745</b>	<b>6.3344</b>	<b>0.0713</b>	<b>6.4057</b>	<b>1.7039</b>	<b>0.0672</b>	<b>1.7711</b>		<b>7,676.8470</b>	<b>7,676.8470</b>	<b>0.1668</b>	<b>0.6342</b>	<b>7,869.9947</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>	<b>0.0000</b>	<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**Mitigated Construction Off-Site**

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1651	6.9730	2.1241	0.0311	1.0441	0.0441	1.0882	0.3007	0.0422	0.3428		3,285.3923	3,285.3923	0.0137	0.4918	3,432.2815
Worker	2.0833	1.4878	15.8061	0.0435	5.2903	0.0272	5.3175	1.4032	0.0250	1.4283		4,391.4548	4,391.4548	0.1531	0.1424	4,437.7132
<b>Total</b>	<b>2.2485</b>	<b>8.4608</b>	<b>17.9303</b>	<b>0.0745</b>	<b>6.3344</b>	<b>0.0713</b>	<b>6.4057</b>	<b>1.7039</b>	<b>0.0672</b>	<b>1.7711</b>		<b>7,676.8470</b>	<b>7,676.8470</b>	<b>0.1668</b>	<b>0.6342</b>	<b>7,869.9947</b>

**3.6 Architectural Coating 1 - 2021**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>59.0416</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.5000	0.3955	3.8418	9.3500e-003	1.0679	6.2200e-003	1.0741	0.2833	5.7300e-003	0.2890		945.0339	945.0339	0.0385	0.0344	956.2378
<b>Total</b>	<b>0.5000</b>	<b>0.3955</b>	<b>3.8418</b>	<b>9.3500e-003</b>	<b>1.0679</b>	<b>6.2200e-003</b>	<b>1.0741</b>	<b>0.2833</b>	<b>5.7300e-003</b>	<b>0.2890</b>		<b>945.0339</b>	<b>945.0339</b>	<b>0.0385</b>	<b>0.0344</b>	<b>956.2378</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
<b>Total</b>	<b>59.0416</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>		<b>0.0941</b>	<b>0.0941</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.5000	0.3955	3.8418	9.3500e-003	1.0679	6.2200e-003	1.0741	0.2833	5.7300e-003	0.2890		945.0339	945.0339	0.0385	0.0344	956.2378
<b>Total</b>	<b>0.5000</b>	<b>0.3955</b>	<b>3.8418</b>	<b>9.3500e-003</b>	<b>1.0679</b>	<b>6.2200e-003</b>	<b>1.0741</b>	<b>0.2833</b>	<b>5.7300e-003</b>	<b>0.2890</b>		<b>945.0339</b>	<b>945.0339</b>	<b>0.0385</b>	<b>0.0344</b>	<b>956.2378</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**3.6 Architectural Coating 1 - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>59.0273</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4580	0.3439	3.4920	9.0600e-003	1.0679	5.8400e-003	1.0738	0.2833	5.3700e-003	0.2886		915.7795	915.7795	0.0345	0.0314	925.9827
<b>Total</b>	<b>0.4580</b>	<b>0.3439</b>	<b>3.4920</b>	<b>9.0600e-003</b>	<b>1.0679</b>	<b>5.8400e-003</b>	<b>1.0738</b>	<b>0.2833</b>	<b>5.3700e-003</b>	<b>0.2886</b>		<b>915.7795</b>	<b>915.7795</b>	<b>0.0345</b>	<b>0.0314</b>	<b>925.9827</b>

**Mitigated Construction On-Site**

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>59.0273</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4580	0.3439	3.4920	9.0600e-003	1.0679	5.8400e-003	1.0738	0.2833	5.3700e-003	0.2886		915.7795	915.7795	0.0345	0.0314	925.9827
<b>Total</b>	<b>0.4580</b>	<b>0.3439</b>	<b>3.4920</b>	<b>9.0600e-003</b>	<b>1.0679</b>	<b>5.8400e-003</b>	<b>1.0738</b>	<b>0.2833</b>	<b>5.3700e-003</b>	<b>0.2886</b>		<b>915.7795</b>	<b>915.7795</b>	<b>0.0345</b>	<b>0.0314</b>	<b>925.9827</b>

**3.7 Architectural Coating 2 - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					



The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>59.0273</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4544	0.3413	3.4652	8.9900e-003	1.0597	5.7900e-003	1.0655	0.2811	5.3300e-003	0.2864		908.7351	908.7351	0.0342	0.0311	918.8597
<b>Total</b>	<b>0.4544</b>	<b>0.3413</b>	<b>3.4652</b>	<b>8.9900e-003</b>	<b>1.0597</b>	<b>5.7900e-003</b>	<b>1.0655</b>	<b>0.2811</b>	<b>5.3300e-003</b>	<b>0.2864</b>		<b>908.7351</b>	<b>908.7351</b>	<b>0.0342</b>	<b>0.0311</b>	<b>918.8597</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>59.0273</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4544	0.3413	3.4652	8.9900e-003	1.0597	5.7900e-003	1.0655	0.2811	5.3300e-003	0.2864		908.7351	908.7351	0.0342	0.0311	918.8597
<b>Total</b>	<b>0.4544</b>	<b>0.3413</b>	<b>3.4652</b>	<b>8.9900e-003</b>	<b>1.0597</b>	<b>5.7900e-003</b>	<b>1.0655</b>	<b>0.2811</b>	<b>5.3300e-003</b>	<b>0.2864</b>		<b>908.7351</b>	<b>908.7351</b>	<b>0.0342</b>	<b>0.0311</b>	<b>918.8597</b>

**3.8 Paving - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0327</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

**Unmitigated Construction Off-Site**

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0518	0.0370	0.3927	1.0800e-003	0.1314	6.8000e-004	0.1321	0.0349	6.2000e-004	0.0355		109.1045	109.1045	3.8000e-003	3.5400e-003	110.2537
<b>Total</b>	<b>0.0518</b>	<b>0.0370</b>	<b>0.3927</b>	<b>1.0800e-003</b>	<b>0.1314</b>	<b>6.8000e-004</b>	<b>0.1321</b>	<b>0.0349</b>	<b>6.2000e-004</b>	<b>0.0355</b>		<b>109.1045</b>	<b>109.1045</b>	<b>3.8000e-003</b>	<b>3.5400e-003</b>	<b>110.2537</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0327</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>	<b>0.0000</b>	<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0518	0.0370	0.3927	1.0800e-003	0.1314	6.8000e-004	0.1321	0.0349	6.2000e-004	0.0355		109.1045	109.1045	3.8000e-003	3.5400e-003	110.2537
<b>Total</b>	<b>0.0518</b>	<b>0.0370</b>	<b>0.3927</b>	<b>1.0800e-003</b>	<b>0.1314</b>	<b>6.8000e-004</b>	<b>0.1321</b>	<b>0.0349</b>	<b>6.2000e-004</b>	<b>0.0355</b>		<b>109.1045</b>	<b>109.1045</b>	<b>3.8000e-003</b>	<b>3.5400e-003</b>	<b>110.2537</b>

**3.9 Architectural Coating 3 - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>59.0144</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4173	0.2980	3.1661	8.7000e-003	1.0597	5.4500e-003	1.0652	0.2811	5.0100e-003	0.2861		879.6548	879.6548	0.0307	0.0285	888.9208

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

<b>Total</b>	<b>0.4173</b>	<b>0.2980</b>	<b>3.1661</b>	<b>8.7000e-003</b>	<b>1.0597</b>	<b>5.4500e-003</b>	<b>1.0652</b>	<b>0.2811</b>	<b>5.0100e-003</b>	<b>0.2861</b>		<b>879.6548</b>	<b>879.6548</b>	<b>0.0307</b>	<b>0.0285</b>	<b>888.9208</b>
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**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	58.8227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>59.0144</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4173	0.2980	3.1661	8.7000e-003	1.0597	5.4500e-003	1.0652	0.2811	5.0100e-003	0.2861		879.6548	879.6548	0.0307	0.0285	888.9208
<b>Total</b>	<b>0.4173</b>	<b>0.2980</b>	<b>3.1661</b>	<b>8.7000e-003</b>	<b>1.0597</b>	<b>5.4500e-003</b>	<b>1.0652</b>	<b>0.2811</b>	<b>5.0100e-003</b>	<b>0.2861</b>		<b>879.6548</b>	<b>879.6548</b>	<b>0.0307</b>	<b>0.0285</b>	<b>888.9208</b>

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	16.0578	29.5027	154.6685	0.3302	32.9375	0.3055	33.2430	8.7964	0.2869	9.0832		33,692.7611	33,692.761	2.1342	2.0944	34,370.2343
Unmitigated	16.0578	29.5027	154.6685	0.3302	32.9375	0.3055	33.2430	8.7964	0.2869	9.0832		33,692.7611	33,692.761	2.1342	2.0944	34,370.2343

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,450.60	3,855.60	3056.40	10,003,677	10,003,677
Apartments Mid Rise	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	2,843.28	2,774.64	1348.38	4,034,759	4,034,759
Total	6,293.88	6,630.24	4,404.78	14,038,436	14,038,436

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Apartments Mid Rise	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Apartments Mid Rise	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Health Club	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Parking Lot	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552
Strip Mall	0.511221	0.052103	0.170611	0.160645	0.028932	0.007649	0.013284	0.025916	0.000654	0.000315	0.023645	0.001472	0.003552

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2653	2.2831	1.0820	0.0145		0.1833	0.1833		0.1833	0.1833		2,894.1892	2,894.1892	0.0555	0.0531	2,911.3880
NaturalGas Unmitigated	0.2653	2.2831	1.0820	0.0145		0.1833	0.1833		0.1833	0.1833		2,894.1892	2,894.1892	0.0555	0.0531	2,911.3880

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	20914.2	0.2256	1.9274	0.8202	0.0123		0.1558	0.1558		0.1558	0.1558		2,460.4959	2,460.4959	0.0472	0.0451	2,475.1174
Apartments Mid Rise	968.259	0.0104	0.0892	0.0380	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003		113.9129	113.9129	2.1800e-003	2.0900e-003	114.5898
Health Club	783.34	8.4500e-003	0.0768	0.0645	4.6000e-004		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003		92.1576	92.1576	1.7700e-003	1.6900e-003	92.7053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Strip Mall	1934.79	0.0209	0.1897	0.1593	1.1400e-003		0.0144	0.0144		0.0144	0.0144		227.6229	227.6229	4.3600e-003	4.1700e-003	228.9755
<b>Total</b>		<b>0.2653</b>	<b>2.2831</b>	<b>1.0820</b>	<b>0.0145</b>		<b>0.1833</b>	<b>0.1833</b>		<b>0.1833</b>	<b>0.1833</b>		<b>2,894.1892</b>	<b>2,894.1892</b>	<b>0.0555</b>	<b>0.0531</b>	<b>2,911.3879</b>

**Mitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	20.9142	0.2256	1.9274	0.8202	0.0123		0.1558	0.1558		0.1558	0.1558		2,460.4959	2,460.4959	0.0472	0.0451	2,475.1174
Apartments Mid Rise	0.968259	0.0104	0.0892	0.0380	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003		113.9129	113.9129	2.1800e-003	2.0900e-003	114.5898
Health Club	0.78334	8.4500e-003	0.0768	0.0645	4.6000e-004		5.8400e-003	5.8400e-003		5.8400e-003	5.8400e-003		92.1576	92.1576	1.7700e-003	1.6900e-003	92.7053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.93479	0.0209	0.1897	0.1593	1.1400e-003		0.0144	0.0144		0.0144	0.0144		227.6229	227.6229	4.3600e-003	4.1700e-003	228.9755
<b>Total</b>		<b>0.2653</b>	<b>2.2831</b>	<b>1.0820</b>	<b>0.0145</b>		<b>0.1833</b>	<b>0.1833</b>		<b>0.1833</b>	<b>0.1833</b>		<b>2,894.1892</b>	<b>2,894.1892</b>	<b>0.0555</b>	<b>0.0531</b>	<b>2,911.3879</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Use only Natural Gas Hearths  
 No Hearths Installed



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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	21.4818	0.5428	47.1387	2.4900e-003		0.2610	0.2610		0.2610	0.2610	0.0000	84.9599	84.9599	0.0820	0.0000	87.0096
Unmitigated	67.2566	6.5294	99.2538	0.1163		7.5230	7.5230		7.5230	7.5230	670.1151	7,073.1952	7,743.3103	0.2159	0.1873	7,804.5077

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.8119					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.2443					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	45.7748	5.9866	52.1150	0.1138		7.2620	7.2620		7.2620	7.2620	670.1151	6,988.2353	7,658.3504	0.1339	0.1873	7,717.4981
Landscaping	1.4256	0.5428	47.1387	2.4900e-003		0.2610	0.2610		0.2610	0.2610		84.9599	84.9599	0.0820		87.0096
<b>Total</b>	<b>67.2566</b>	<b>6.5294</b>	<b>99.2538</b>	<b>0.1163</b>		<b>7.5230</b>	<b>7.5230</b>		<b>7.5230</b>	<b>7.5230</b>	<b>670.1151</b>	<b>7,073.1952</b>	<b>7,743.3103</b>	<b>0.2159</b>	<b>0.1873</b>	<b>7,804.5077</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.8119					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

Consumer Products	16.2443					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4256	0.5428	47.1387	2.4900e-003		0.2610	0.2610		0.2610	0.2610		84.9599	84.9599	0.0820		87.0096
<b>Total</b>	<b>21.4818</b>	<b>0.5428</b>	<b>47.1387</b>	<b>2.4900e-003</b>		<b>0.2610</b>	<b>0.2610</b>		<b>0.2610</b>	<b>0.2610</b>	<b>0.0000</b>	<b>84.9599</b>	<b>84.9599</b>	<b>0.0820</b>	<b>0.0000</b>	<b>87.0096</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

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

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

**User Defined Equipment**

Equipment Type	Number
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The Crossings - San Joaquin Valley Unified APCD Air District, Winter

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

## **11.0 Vegetation**

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**Pacific Gas & Electric**  
**Effect of 31% RPS**  
**Based on 2008 Baseline Data**

2008 Emission Factor <sup>1</sup>	641.35 lb CO <sub>2</sub> /MWh	
2008 Renewables <sup>2</sup>	14%	
Without RPS	745.76 lb CO <sub>2</sub> /MWh	
Future Renewables	31%	(by Dec 31 2016)
With Future RPS	514.57 lb CO <sub>2</sub> /MWh	
Reduction from 14% RPS	19.8%	

All renewable energy is assumed to be carbon neutral (i.e., no GHG emissions or from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. PG&E 2008 Corporate Responsibility Report  
[http://www.pgecorp.com/corp\\_responsibility/reports/2008/img/pge\\_cr\\_r\\_summary\\_2008.pdf](http://www.pgecorp.com/corp_responsibility/reports/2008/img/pge_cr_r_summary_2008.pdf).

**Pacific Gas & Electric**  
**Effect of 33% RPS**  
**Based on 2008 Baseline Data**

2008 Emission Factor <sup>1</sup>	641.35 lb CO <sub>2</sub> /MWh
2008 Renewables <sup>2</sup>	14%
Without RPS	745.76 lb CO <sub>2</sub> /MWh
Future Renewables	33%
With Future RPS	499.66 lb CO <sub>2</sub> /MWh
Reduction from 14% RPS	22.1%
Reduction from 31% RPS	2.9%

Notes:

All renewable energy is assumed to be carbon neutral (i.e., no GHG emissions or from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. PG&E 2008 Corporate Responsibility Report  
[http://www.pgecorp.com/corp\\_responsibility/reports/2008/img/pge\\_cr\\_r\\_summary\\_2008.pdf](http://www.pgecorp.com/corp_responsibility/reports/2008/img/pge_cr_r_summary_2008.pdf).

**Pacific Gas & Electric**  
**Effect of 50% RPS**  
**Based on 2008 Baseline Data**

2008 Emission Factor <sup>1</sup>	641.35 lb CO2/MWh	
2008 Renewables <sup>2</sup>	14%	
Without RPS	745.76 lb CO2/MWh	
Future Renewables	50%	
With Future RPS	<table border="1"><tr><td>372.88</td></tr></table> lb CO2/MWh	372.88
372.88		
Reduction from 14% RPS	41.9%	
Reduction from 33% RPS	25.4%	

Notes:

All renewable energy is assumed to be carbon neutral (i.e., no GHG emissions or from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. PG&E 2008 Corporate Responsibility Report

[http://www.pgecorp.com/corp\\_responsibility/reports/2008/img/pge\\_cr\\_r\\_summary\\_2008.pdf](http://www.pgecorp.com/corp_responsibility/reports/2008/img/pge_cr_r_summary_2008.pdf).

# Appendix E

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Biological Resources Assessment  
Dudek, August 2021

August 27, 2021

10049

Julie Nelson  
City of Merced  
678 West 18th Street  
Merced, California 95340

***Subject: Biological Resources Assessment for the Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project in Merced County, California***

Dear Ms. Nelson:

This biological resources assessment (BRA) describes the existing conditions at the proposed Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project (project) site in Merced, California (Figure 1, Regional Map). This report provides a preliminary assessment of the biological resources observed or potentially present in the project area, potential constraints associated with development of the project, and related regulatory requirements.

## **1. SITE LOCATION AND DESCRIPTION**

The project site is approximately 2 miles southwest of the University of California, Merced campus (Figure 2, Vicinity Map), located in Section 9, Township 7 South, and Range 14 East of the U.S. Geological Survey (USGS) Merced 7.5' quadrangle. The approximate center of the site corresponds to 38°20'00.12" north latitude and 120°26'53.61" west longitude (Figure 3, Project Location Map). The 70-acre project area is divided into two sections: an approximately 30-acre section that would be developed as The Crossings, which is proposed as a mixed-use residential and commercial development, and an additional annexation area of approximately 40 acres located to the northwest and east of the 30-acre section. Future development of this area is anticipated, but no development is proposed at this time. Therefore, this portion of the project area was not included in the field survey (Figure 3). Henceforth, the term "70-acre project area" will refer to the entire 70 acres, the term "survey area" will refer to the 30-acre parcel that was surveyed on foot during the biological reconnaissance survey and the term "annexation area" will refer to the 40-acre annexation area. This BRA intends to describe existing conditions and recommendations regarding biological resources related to developing the 30-acre survey area in the context of the California Environmental Quality Act (CEQA); however, the annexation area would require an additional biological reconnaissance survey should plans to develop the property proceed in the future.



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The 70-acre project area is characterized as developed/disturbed rural residential and agricultural land and is relatively flat, situated at an elevation of about 185 feet above mean sea level (AMSL). The 70-acre project area is bounded on the north by an irrigation canal immediately north of the site and rural residential development and agriculture north of the canal, on the east by Hatch Road, on the south by Yosemite Avenue and on the west by North Gardner Avenue (Figure 3). At the time of the field survey, the survey area was comprised mostly of a disked agricultural field that contains a residence and three other structures, as well as a variety of heavy equipment, tires and other debris in the south central portion of the parcel. The survey area is routinely used for agricultural production (row crops).

According to the Natural Resources Conservation Service (USDA 2016), three soil types are mapped within the 70-acre project area and include: Ryer clay loam, 0-2% slopes; Wyman clay loam (deep over hardpan), 0-1% slopes; and Yokohl clay loam, 0-3% slopes. Ryer clay loam and Wyman clay loam are well-drained alluvium soils derived from igneous rock. Yokohl clay loam is well-drained, non-saline to very slightly saline alluvium derived from igneous rock (Figure 4, Potentially Jurisdictional Features and Soils Map).

## **2. PROJECT DESCRIPTION**

The Crossings residential and retail component would be constructed within the 30-acre study area described above. The facility would include 20 3-story apartment buildings containing 540 two- to four-bedroom units and a 13,700 square-foot clubhouse as well as a network of pedestrian and bike trails and a community bus stop; an approximately 66,000-square foot commercial/retail village; a retention basin; and an estimated 1,223 parking spaces distributed throughout the survey area. Site preparation prior to construction would be limited to the 30-acre survey area and would include demolition of existing structures, clearing vegetation and grading, trenching for installation of utilities, and cutting and filling the site, including excavating the detention basin.

## **3. REGULATORY SETTING**

### **3.1 Federal**

#### **Federal Endangered Species Act**

The federal Endangered Species Act (FESA) prohibits the taking, possession, sale or transport of endangered species. Pursuant to the requirements of FESA, a federal agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species could be present in the project site and determine the extent to which the project will

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have an effect on such species. In addition, federal agencies are required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA, or if it would result in the destruction or adverse modification of critical habitat designated for such species (16 USC 1536[3]–[4]). Projects that would result in “take” of any federally listed threatened or endangered species are required to obtain authorization from the National Marine Fisheries Service and/or U.S. Fish and Wildlife Service (USFWS) through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project.

### **Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50, Section 10.13 of the Code of Federal Regulations. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country, and is enforced in the United States by the USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50, Section 20 of the Code of Federal Regulations. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors).

### **Clean Water Act – Section 404**

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation’s waters. Under Section 404 of the CWA, the U.S. Army Corps of Engineers (ACOE) has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The ACOE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

### **Clean Water Act – Section 401**

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state’s water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. The San Francisco Bay Regional Water Quality Control Board has

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authority for Section 401 compliance in the project area. A request for certification is submitted to the regional board at the same time that an application is filed with the ACOE.

### **3.2 State**

#### **California Endangered Species Act**

Under the California Endangered Species Act, the California Fish and Wildlife Commission has the responsibility of maintaining a list of threatened species and endangered species. The California Department of Fish and Wildlife (CDFW) also maintains lists of species of special concern. A Species of Special Concern is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role
- Is listed as threatened or endangered federally, but not by the state
- Meets the state definition of threatened or endangered, but has not formally been listed
- Is experiencing, or formerly experienced, serious noncyclical population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for threatened or endangered status by the state
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for threatened or endangered status by the state

The California Endangered Species Act prohibits the take of state-listed animals and plants in most cases, but CDFW may issue incidental take permits under special conditions. Pursuant to the requirements of the California Endangered Species Act, a state agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present on the property and determine whether the project would have a potentially significant impact on such species.

#### **Fish and Game Code Section 1600 – Lake and Streambed Alteration Agreement**

Under Sections 1600–1616 of the California Fish and Game Code, CDFW regulates activities that would substantially alter the flow, bed, channel, or bank of streams and lakes. Such activities

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require a 1602 Lake and Streambed Alteration Agreement from CDFW. The California Code of Regulations defines a stream as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (Cal. Code Regs. tit. 14 § 1.72). The term “stream” includes rivers, creeks, ephemeral streams, dry washes, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Removal of riparian vegetation also requires a Section 1602 Lake and Stream Alteration Agreement from CDFW.

### **California Department of Fish and Wildlife Wetlands Protection Regulations**

CDFW derives its authority to oversee activities that affect wetlands from state legislation. This authority includes Sections 1600–1616 of the Fish and Game Code (lake and streambed alteration agreements), the California Endangered Species Act (protection of state-listed species and their habitats, which could include wetlands), and the Keene–Nejedly California Wetlands Preservation Act of 1976 (states a need for an affirmative and sustained public policy program directed at wetlands preservation, restoration, and enhancement). In general, the CDFW asserts authority over wetlands within the state through any of the following: review and comment on ACOE Section 404 permits, review and comment on California Environmental Quality Act (CEQA) documents, preservation of state-listed species, or through lake and streambed alteration agreements.

### **Fish and Game Code Section 1940 – Sensitive Natural Communities**

Section 1940 of the California Fish and Game Code requires CDFW to develop and maintain a vegetation mapping standard for the state. More than half of the vegetation communities in the state have been mapped through the Vegetation Classification and Mapping Program.

Natural vegetation communities are evaluated by CDFW and are assigned global (G) and state (S) ranks based on rarity of and threats to these vegetation communities in California. Natural communities with ranks of S1–S3 are considered sensitive natural communities to be addressed in the environmental review processes of CEQA and its equivalents. Sensitive natural communities are defined by CDFW as vegetation alliances with state ranks of S1–S3 (S1: critically imperiled; S2: imperiled; S3: vulnerable), as identified in the List of Vegetation Alliances and Associations (CDFG 2010) and subsequent updates. Additionally, all vegetation associations within the alliances with ranks of S1–S3 are considered sensitive habitats. CEQA

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requires that impacts to sensitive natural communities be evaluated and mitigated to the extent feasible.

Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain special-status species or their habitats. For purposes of this assessment, sensitive natural communities are considered to include vegetation communities listed in CDFW’s California Natural Diversity Database and communities listed in the Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

### **Fish and Game Code – Sections 3503, 3511, 3513**

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

### **Fish and Game Code – Section 4150**

California Fish and Game Code Section 4150 states a mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a non-game mammal. A non-game mammal may not be taken or possessed under this code. All bat species occurring naturally in California are considered non-game mammals and are therefore prohibited from take as stated in California Fish and Game Code Section 4150.

### **Porter–Cologne Water Quality Control Act**

The Porter–Cologne Water Quality Control Act established the State Water Resources Control Board and each Regional Water Quality Control Board (RWQCB) as the principal state agencies responsible for the protection of water quality in California. The Porter–Cologne Water Quality Control Act provides that “All discharges of waste into the waters of the State are privileges, not rights.” Waters of the state are defined in Section 13050(e) of the Porter–Cologne Water Quality Control Act as “...any surface water or groundwater, including saline waters, within the boundaries of the state.” All dischargers are subject to regulation under the Porter–Cologne Water Quality Control Act, including both point and nonpoint source dischargers.

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## **California Native Plant Protection Act**

The California Native Plant Protection Act (California Fish and Game Code Sections 1900-1913) and the Natural Communities Conservation Planning Act provide guidance on the preservation of plant resources. Vascular plants which have no designated status or protection under state or federal endangered species legislation, but are listed as rare or endangered by the CNPS, are defined as follows:

- Rank 1A: Plants presumed extinct
- Rank 1B: Plants rare, threatened or endangered in California and elsewhere
- Rank 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere
- Rank 3: Plants about which more information is needed – a review list
- Rank 4: Plants of limited distribution – a watch list

Plants with CNPS Ranks 1A, 1B, or 2 are generally considered to meet the criteria for endangered, threatened, or rare species as outlined by Section 15380 of the CEQA Guidelines. These plants also meet the definition of Section 1901, Chapter 10 (Native Plant Protection Act) and Sections 2062 and 2067 (CESA) of the California Fish and Game Code. Plants with CNPS Ranks 3 or and 4 generally do not meet these criteria or definitions unless they meet one or more of the following: a) the project area is considered a type locality (i.e., the area from which the plant was originally described) for that species; b) populations are at the periphery of a species range; c) occurrences are in areas where taxon is especially uncommon or has sustained heavy losses; or d) populations exhibit unusual morphology or occur on unusual substrates.

## **California Environmental Quality Act**

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals, and allows a public agency to undertake a review to determine if a significant effect on a species that has not yet been listed by either the USFWS or CDFW (i.e., species of concern) would occur. Whether a species is rare, threatened, or endangered can be legally significant because, under CEQA Guidelines Section 15065, an agency must find an impact to be significant if a project would “substantially reduce the number or restrict the range of an endangered, rare, or threatened

species.” Thus, CEQA provides an agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

### **3.3 Local**

#### **2030 Merced County General Plan**

The 2030 Merced County General Plan, Natural Resources Element, includes policies designed to protect biological resources (Merced County 2013). Relevant policies are listed below.

**Goal NR-1:** Preserve and protect, through coordination with the public and private sections, the biological resources of the County.

**Policy NR-1.1** Habitat Protection: Identify areas that have significant long-term habitat and wetland values including riparian corridors, wetlands, grasslands, rivers and waterways, oak woodlands, vernal pools, and wildlife movement and migration corridors, and provide information to landowners.

**Policy NR-1.2** Protected Natural Lands (Regulation and Development Review (RDR)/ Planning Studies and Reports (PSR)): Identify and support methods to increase the acreage of protected natural lands and special habitats, including, but not limited to, wetlands, grasslands, vernal pools, and wildlife movement and migration corridors, potentially through the use of conservation easements.

**Policy NR-1.5** Wetland and Riparian Habitat Buffer (PSR/RDR): Identify wetlands and riparian habitat areas and designate a buffer zone around each area sufficient to protect them from degradation, encroachment, or loss.

**Policy NR-1.6** Terrestrial Wildlife Mobility (County Services and Operations (SO)): Encourage property owners within or adjacent to designated habitat connectivity corridors that have been mapped or otherwise identified by the CDFW or USFWS to manage their lands in accordance with such mapping programs. In the planning and development of public works projects that could physically interfere with wildlife mobility, the County shall consult with the CDFW and USFWS to determine the potential for such effects and implement any feasible mitigation measures.

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- Policy NR-1.8** Use of Native Plant Species for Landscaping (SO): Encourage the use of native plant species in landscaping, and, where the County has discretion, require the use of native plant species for landscaping.
- Policy NR-1.20** Conservation Easements (SO/IGC/Joint Partnerships with the Private Sector (JP)): Encourage property owners to work with land trusts and State and federal agencies to pursue voluntary conservation easements.
- Policy NR-1.21** Special-Status Species Surveys and Mitigation (RDR/SO/IGC): Incorporate the survey standards and mitigation requirements of State and federal resource management agencies for use in the County’s review processes for both private and public projects.

### **Merced Vision 2030 General Plan**

The City of Merced General Plan, Chapter 7 Open Space, Conservation, and Recreation, provides guidance for new development and focuses on the protection of natural areas which provide habitat and cover for wildlife and vegetation. The City provides specific protection for biological resources, as described in the following policies and implementing actions (City of Merced 2012).

- OS-1.1** Identify and mitigate impacts to wildlife habitats which support rare, endangered, or threatened species.

#### **Implementing Actions:**

- 1.1.a** Identify, and recognize as significant wetlands and critical habitat areas which meet the appropriate legal definition under Federal and State law. Wetlands, as defined by statute, have special regulations which must be followed as opposed to other riparian or “water” areas of the community. This policy provides for the identification of those lands subject to special Federal and State rules and standards and those which are solely subject to local policies and standards. Development applications will be reviewed to determine if potential wetland habitats exist on-site, and wetland delineation may be required in accordance with current U.S. Army Corps of Engineers guidelines.

“Wetlands” containing sensitive plant and/or animal species should be protected according to law. Specific protection policies should include: a) protection of wetland watershed areas; b) establishment of minimum setback areas around “wetlands” in accordance with the recommendations of California Department of Fish and Game, U.S.



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Fish and Wildlife Service, or a qualified wildlife biologist. c) Provision of compensation or wildlife mitigation banks if a site is not protected. The City, in cooperation with the County, may consider establishing a mitigation “banking” program in accordance with state and federal guidelines for vernal pools and other types of wetland habitats. Vernal pool preserves may be incorporated into other open space preserves (i.e. parks and trails) that would not be directly impacted by urban development.

- 1.1.b** Urban development should occur away from identified sensitive species critical habitats areas unless specific provisions to ensure adequate protection and monitoring exist. When, as a result of specific site studies, it is determined that “potential” habitats actually contain sensitive or endangered species, development rules, policies and standards should be applied to assure that further degradation of these species does not occur. These policies should emphasize “avoidance” as a desirable mitigation alternative. In instances where open space areas are established to protect a sensitive wildlife species, those areas shall be subject to appropriate management principles as approved by the City upon recommendation of the California Department of Fish & Game or the U. S. Fish and Wildlife Service.

### **City of Merced Municipal Code**

The City of Merced Street Tree Division requires property owners to water City trees (trees planted within 8-10 feet of City streets). If the project site is annexed to the City, removal or trimming of any City trees would require consultation with the City.

## **4. METHODS**

Data regarding biological and jurisdictional resources potentially present in the survey area were obtained through a review of pertinent literature and field reconnaissance. Data for resources present within the annexation area were obtained primarily through literature review, although some field reconnaissance of the annexation area was possible using binoculars. The preliminary review and field methods are provided below.

### **4.1 Preliminary Review**

Special-status biological resources present or potentially present on the project site were identified through an online literature search using the following sources: U.S. Fish and Wildlife Service (USFWS) Information, Planning and Conservation (IPaC) Trust Resource Report; California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB); and the California Native Plant Society (CNPS) online Inventory of Rare and

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Endangered Vascular Plants. The database searches for the CNDDDB and CNPS included Merced and the surrounding eight USGS 7.5 minute quadrangles, and the IPaC search included the project site. California Rare Plant Rank (CRPR) 1 and 2 plant species were included in the CNPS search. Following review of these resources, Dudek determined the potential for each species to occur within or adjacent to the project site based on a review of vegetation communities and available land cover types, habitat types, soils, and elevation preferences, as well as the known geographic range of each species. Species were not expected to occur in instances where the project site was clearly outside the known geographic range of the species or if no suitable habitat for the species is present either on or adjacent to the site.

The initial literature search was conducted for the project in December 2016. An updated literature search of the above resources was conducted in September 2019 to account for any changes in species protection status or occurrence data. Results of the updated literature searches are incorporated into this BRA.

## **4.2 Field Assessment**

Dudek wildlife biologist Lisa Achter conducted a field assessment of the 30-acre survey area on December 1, 2016. The field assessment involved walking transects throughout the survey area and around its periphery, and included mapping vegetation communities and land cover types onsite. The survey area was evaluated for the potential to support jurisdictional wetlands or other waters and special-status plant and wildlife species. The 40-acre annexation area was observed from the survey area and perimeter roadways and evaluated on the same basis, where possible.

A review of multiple aerial images taken between 2016 and 2019 suggests that the environmental setting has not changed since the initial field survey.

### **Vegetation Communities and Land Cover Types**

The field survey was conducted on foot to visually cover the 30-acre survey area, as well as the visible portions of the 40-acre annexation area. An aerial photograph (Google Earth 2016) with an overlay of the 70-acre project site, and surrounding buffer was utilized to map vegetation communities and land cover types present, as well as record any special-status or sensitive biological resources while in the field.

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## **Flora and Fauna**

All plant species encountered during the field survey were identified and recorded in a field notebook. Common and scientific names for plant species with a CRPR follow the CNPS On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2019).

The survey area was visually scanned with and without binoculars to aid in the identification of wildlife. The annexation area was scanned with binoculars when possible. In addition, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded in a field notebook.

## **Jurisdictional Wetlands and Other Waters**

Dudek performed a constraints-level wetland assessment on the 30-acre survey area, reviewed current and historical aerial photography for the 70-acre project area, and identified any potential jurisdictional features based on aerial signatures and field observations.

The analysis of potentially jurisdictional waters and wetlands was based on criteria provided by the following agencies:

- Waters of the U.S., including wetlands, under the jurisdiction of the U.S. Army Corps of Engineers (ACOE) pursuant to Section 404 of the federal Clean Water Act (CWA).
- Wetlands under the jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA and the Porter-Cologne Act.
- Wetlands under the jurisdiction of CDFW, pursuant to Section 1602 of the California Fish and Game Code.

Pursuant to the federal CWA, ACOE and RWQCB, jurisdictional areas include those supporting all three wetlands criteria described in the ACOE manual: hydric soils, hydrology, and hydrophytic vegetation. Areas regulated by the RWQCB are generally coincident with the ACOE, but may also include isolated features that have evidence of surface water inundation pursuant to the state Porter-Cologne Act. These areas generally support at least one of the three ACOE wetlands indicators, but are considered isolated through the lack of surface water hydrology/connectivity downstream. The extent of CDFW-regulated areas typically include areas supporting a predominance of hydrophytic vegetation (i.e., 50% cover or greater) where associated with a stream channel that has a defined bed and bank.

## 5. RESULTS

The description of biological resources in this section pertains to habitats and species present within the 70-acre project site. The annexation area was evaluated based on limited observations made during the field survey, database searches, and a review of aerial photography.

### 5.1 Vegetation Communities and Land Cover Types

Agriculture and developed/rural residential are the two land cover types mapped in the 30-acre survey area. These land cover types are not considered sensitive by CDFW. There are no natural vegetation communities in the study area.

At the time of the field survey, most of the survey area was disked agricultural land, except for some ruderal vegetation along the margins of the project site (Figure 5, Site Photos). The survey area is routinely used for agricultural production (row crops). One residence and three other structures (that resembled a barn or shop and two sheds), along with several pieces of heavy equipment, tires, and other items occurs along the southern boundary of the survey area, adjacent to Yosemite Avenue.

Based on limited observations from the survey area and surrounding roadways, and a review of aerial photography, the 40-acre annexation area is composed of rural residences and agriculture, along with the Yosemite Church and a private school complex located in the southeastern corner of the annexation area.

### 5.2 Flora and Fauna

The survey area was essentially devoid of vegetation; however, ruderal species were observed along the margin of the site and include species such as telegraphweed (*Heterotheca grandiflora*), horseweed (*Erigeron* spp.), wild oat (*Avena* spp.), mustard (*Brassica* spp.), and yellow star thistle (*Centaurea solstitialis*). A row of mature olive (*Olea europaea*) trees exists along the eastern boundary of the survey area (within the annexation area). Several mature trees also exist in scattered patches near the residence in the central portion of the survey area, as well as near the residences in the annexation area and around Yosemite Church. Aerial imagery shows what appears to be another row of olive trees between the eastern boundary of the 30-acre survey area and Yosemite Church.

Four wildlife species, specifically birds, were observed on the survey area: American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), Say's phoebe (*Sayornis saya*), and California scrub-jay (*Aphelocoma californica*). Due to limited observations of the annexation

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area, only one wildlife species was detected there during the field survey: white-crowned sparrow (*Zonotrichia leucophrys*).

### 5.3 Jurisdictional Wetlands and Other Waters

There are two potentially jurisdictional drainages in the 30-acre study area (Figure 4, Potentially Jurisdictional Features and Soils Map). These are primarily agricultural or roadside drainages and are discussed below.

**Drainage 1.** There is one drainage located along Yosemite Avenue on the southern boundary of the 70-acre project site that terminates underground at Gardner Avenue to the west and at Yosemite Church to the east. This drainage functions as a roadside and agricultural ditch, constructed in an upland to collect runoff from Yosemite Avenue and the adjacent agricultural land.

**Drainage 2.** There is one drainage located along the northern boundary of the 70-acre project site. The drainage enters the project site from the east and appears to terminate in the northwest portion of the project site. This drainage functions as an agricultural ditch, constructed in an upland to collect runoff from the adjacent agricultural land.

Based on a review of aerial imagery, there may be potential wetlands or other waters present in the annexation area. Specifically, there are aerial signatures indicating seasonally wet areas visible on the four residential parcels in the northwestern corner of the study area, as well as primarily in the northern portion of the annexation area, including on undeveloped areas between the 30-acre study area and the parcel that supports Stoneridge Christian School and Yosemite Church. In addition, there are three agricultural ditches northwest of the site. However, these features are excluded from the 70-acre project site.

### 5.4 Special-Status Species

#### Special-Status Wildlife

Based on the literature and database review previously described, twenty-seven (27) special-status wildlife species are known to occur within the USGS quadrangles included in the database search. Of these, thirteen (13) species were removed from consideration based on lack of suitable habitat or because the site is outside of the known geographic or elevation range for the species (Appendix A). Conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), California tiger salamander (*Ambystoma californiense*), western spadefoot (*Spea hammondi*), burrowing owl

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(*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), loggerhead shrike (*Lanius ludovicianus*), pallid bat (*Antrozous pallidus*), Townsend's big eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), western mastiff bat (*Eumops perotis californicus*), American badger (*Taxidea taxus*), and San Joaquin kit fox (*Vulpes macrotis mutica*) have a low to moderate potential to occur in the vicinity of the project site. These species are discussed in further detail below.

**Conservancy fairy shrimp.** Conservancy fairy shrimp is federally listed as endangered with the potential to occur in seasonally wet areas in the northeastern and northwestern portions of the site (CDFW 2019a). This species is adapted to seasonally inundated features and primarily occurs in vernal pools and seasonal wetlands.

**Vernal pool fairy shrimp.** Vernal pool fairy shrimp is federally listed as threatened with the potential to occur in seasonally wet areas in the northeastern and northwestern portions of the site (CDFW 2019a). Vernal pool fairy shrimp is adapted to seasonally inundated features and occur primarily in vernal pools and seasonal wetlands.

**Vernal pool tadpole shrimp.** Vernal pool tadpole shrimp is federally listed as endangered with the potential to occur in seasonally wet areas in the northeastern and northwestern portions of the site (CDFW 2019a). This species is associated with seasonal pools in unplowed grasslands. The vernal pool tadpole shrimp is found only in ephemeral freshwater habitats, including vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California.

**California tiger salamander.** The California tiger salamander is listed as threatened at both the federal and state level, and is a CDFW Watch List Species with a potential to occur in seasonally wet areas in the northeastern and northwestern portions of the site (CDFW 2019a). California tiger salamanders are found in riparian and wet meadow habitats, as well as in grasslands. Most of their life cycle is spent underground in adjacent valley oak woodland or grassland habitat, primarily in rodent burrows. Temporary or permanent freshwater pools or slowly flowing streams are required for egg-laying and larval development.

**Western spadefoot.** The western spadefoot is a CDFW Species of Special Concern with the potential to occur in seasonally wet areas in the northeastern and northwestern portions of the site (CDFW 2019a). This species inhabits areas with slightly moist, friable soils in mostly treeless habitats, and requires rain pools for spawning with little to no vegetation.

**Burrowing Owl.** Burrowing owl is a CDFW Species of Special Concern with a low potential to occur on the 70-acre project site (CDFW 2019a). Burrowing owls utilize small mammal burrows

for nesting and cover year-round (CDFW 2019c). Although no California ground squirrels (*Otospermophilus beechyi*) or associated burrows were observed during the field survey, the project site contains potential nesting and foraging habitat for this species. The nearest documented occurrence is for burrowing owls and occupied burrows observed in grazed grassland, vernal pool habitat, approximately 2 miles north-northeast of the project site (CDFW 2019b).

**Swainson’s Hawk.** Swainson’s hawk is a state-listed threatened species with a moderate potential to occur on the 70-acre project site (CDFW 2019a). This species typically nests in isolated large trees located in open woodland, savanna, or riparian habitats, and foraging occurs in nearby grasslands and agricultural areas (CDFW 2019c). Within the project site, large trees provide potential nesting habitat and open agricultural areas provide potential foraging habitat for Swainson’s hawk. There are at least five documented occurrences of this species within 5 miles of the project site (CDFW 2019b). The site is used for annual row crop production, which can provide foraging habitat for Swainson’s hawk, depending on the specific crop grown onsite.

**Loggerhead Shrike.** Loggerhead shrike is a CDFW Species of Special Concern with a low potential to occur on the 70-acre project site (CDFW 2019a). This species occurs in grasslands, open areas, orchards and areas with scattered trees, shrubs, fences, and other perching options. The highest densities are found in more complex habitat types, such as open-canopied valley foothill hardwood, valley foothill hardwood-conifer, and valley foothill riparian (CDFW 2019c). The project site provides poor quality nesting habitat as the site frequently disturbed by disking activities and residential dwellings, and lacks scattered perching options. There are no documented occurrences of this species with 25 miles of the project site (CDFW 2019b).

**Pallid Bat.** Pallid Bat is a CDFW Species of Special Concern with a low potential to occur on the 70-acre project site (CDFW 2019a). This species primarily roosts in caves, mines, and crevices, but may also utilize hollow trees or buildings for roosting. Foraging generally occurs in open habitats. Pallid bat are extremely sensitive to their roosting sites (CDFW 2019c). Although the project site provides potential foraging and roosting habitat, the level of existing human disturbance onsite likely precludes this species from utilizing the site. The nearest documented occurrence is for bats detected near the Merced River in 1999, approximately 9.6 miles north-northwest of the site (CDFW 2019b).

**Townsend’s Big Eared Bat.** Townsend’s big-eared bat is a CDFW Species of Special Concern with a low potential to occur on the 70-acre project site (CDFW 2019a). This species primarily roosts in limestone caves and lava tubes, man-made structures, and tunnels located in mesic habitat types. Foraging generally occurs along habitat edges. Townsend’s big-eared bat are

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extremely sensitive to their roosting sites (CDFW 2019c). Although the project site provides potential foraging and roosting habitat, the level of existing human disturbance onsite likely precludes this species from utilizing the site. The nearest documented occurrence is for one bat observed near Merced Falls Diversion Dam, approximately 14.4 miles northeast of the site (CDFW 2019b).

**Western Red Bat.** Western red bat is a CDFW Species of Special Concern with a low potential to occur on the 70-acre project site (CDFW 2019a). This species primarily roosts in rock crevices and shallow caves on cliff sides, but may occasionally roosts in buildings. Their preferred habitat contains abundant roost sites in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and urban (CDFW 2019c). Although the project site provides potential foraging and roosting habitat, roosting opportunities within the project site are few and limited to occupied residential dwellings. The nearest documented occurrence, based on a 1991 collection, is mapped as in the vicinity of Merced, approximately 1.3 miles southwest of the site (CDFW 2019b).

**Western Mastiff Bat.** Western mastiff bat is a CDFW Species of Special Concern with a low potential to occur on the 70-acre project site (CDFW 2019a). This species primarily roosts in trees within riparian habitats of the Central Valley and lower reaches of Sierra Nevada streams (CDFW 2019c). Although the project site provides potential foraging and roosting habitat, roosting opportunities within the project site are few and limited to non-riparian areas. The nearest documented occurrence is for bats detected along the Merced River, approximately 9.5 miles north-northwest of the site (CDFW 2019b).

**American Badger.** American badger is a CDFW Species of Special Concern with a low potential to occur on the 70-acre project site (CDFW 2019a). This species utilizes dry, open, treeless areas, such as grasslands, coastal scrub, agriculture, and pastures, especially with friable soils (CDFW 2019c). The project site provides marginal habitat due to the level of existing disturbance, including regular disking. No potential dens were observed onsite during the field survey. The nearest documented occurrence is 6 to 11 badgers detected at or near an active den site in 2016, 2017, and 2018, approximately 10.5 miles south-southeast of the site (CDFW 2019b).

**San Joaquin Kit Fox.** San Joaquin kit fox is a federal and state listed species with a low potential to occur on the 70-acre project site (CDFW 2019a). This species typically occurs in grassland and agricultural areas (CDFW 2019c). The project site provides marginal habitat due to the lack of open, native habitat and movement corridors onsite. No potential dens were



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observed onsite during the field survey. The nearest documented occurrence is for one adult kit fox observed approximately 3.7 miles east-northeast of the site (CDFW 2019b).

### **Special-Status Plants**

Based on the literature and database review previously described, twenty-five (25) special-status plant species are known to occur within the USGS quadrangles included in the database search. Of these, thirteen (13) species were removed from consideration due to lack of suitable habitat (Appendix B).

Of the twenty five (25) special-status plant species, thirteen (13) species do not have the potential to occur on the site due to a lack of preferred soil types, such as alkaline, rocky, and serpentine soils not present on the project site lack of specific habitat types, such as marshes and swamps, cismontane woodland, valley and foothill grassland, and/or chenopod scrub, and/or the project site is located outside of the species' known geographic range.

Aerial imagery of the site indicates there is the potential for wetlands and vernal pools in the northeastern portion of the site, which may provide habitat for twelve (12) of the twenty-five (25) special-status plant species known to occur within the USGS quadrangles included in the database search. Vernal pool smallscale (*Atriplex persistens*), succulent owl's clover (*Castilleja campestris* var. *succulenta*), dwarf downingia (*Downingia pusilla*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), shining navarretia (*Navarretia nigelliformis* ssp. *radians*), Colusa grass (*Neostapfia colusana*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), hairy Orcutt grass (*Orcuttia pilosa*), California alkali grass (*Puccinellia simplex*), Sanford's arrowhead (*Sagittaria sanfordii*), and Greene's tuctoria (*Tuctoria greenei*) (Appendix B).

No special-status plant species were identified in the 30-acre study area during the field survey; however the survey did not involve a botanical inventory and was conducted outside of the blooming period for many common and special-status plants. As stated previously, the project site supports a dominance or non-native and/or ruderal species common to disturbed sites. In addition, the 30-acre study area is disked annually and used for row crops.

The 40-acre annexation area was not covered in detail during the 2016 field survey. Therefore, determinations for special-status plant potential to occur on the 40-acre site are preliminary and subject to change. Subsequent field surveys could indicate presence of land cover types and natural vegetation communities that support special-status plants. As discussed above, based on the observance of aerial signatures of potential seasonal wetlands and vernal pools within the

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annexation area, this Biological Resources Assessment identifies the special-status plants commonly found in wetlands or other mesic habitats as having a potential to occur within that portion of the project site.

## **5.5 Sensitive Natural Communities**

There are no natural vegetation communities considered sensitive by CDFW in the project site.

## **5.6 Wildlife Corridors and Habitat Linkages**

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for wildlife migration. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping stones for wildlife dispersal.

Because the 70-acre project site is a non-linear feature and bound by existing roads and development, it has little value as a potential wildlife corridor or habitat linkage. However, common urban wildlife species such as raccoon (*Procyon lotor*), coyote (*Canis latrans*), and Virginia opossum (*Didelphis virginiana*) are likely move through the project site on a regular basis in search of food and cover habitat.

## **6. POTENTIAL BIOLOGICAL CONSTRAINTS**

This section addresses potential impacts to sensitive biological resources that would result from construction of the University Village Merced student housing and retail component on the 30-acre survey area. For the purposes of this analysis, it is assumed that the entirety of the 30-acre survey area will be impacted by the project. When possible, potential impacts associated with future development of the 40-acre annexation area are discussed; however, any development of that area would be subject to further surveys and investigation and any conclusions regarding impacts to that area are preliminary.

### **6.1 Trees and Other Vegetation**

The project would impact all land cover types present in the 30-acre survey area. No sensitive vegetation communities were observed during the field survey. If the Merced Local Agency Formation Commission (LAFCO) approves the City's request to annex the project site, street trees would be under the jurisdiction of the city. The City of Merced Street Tree Division requires maintenance of City trees (trees planted within 8-10 feet of City streets). If the project site is annexed to the City, removal of any City trees would require consultation with the City.

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## 6.2 Jurisdictional Wetlands and Other Waters

A jurisdictional delineation of the project site has not performed to date. Based on the 2016 field survey, there are two drainages in the 30-acre survey area. These drainages function primarily as agricultural ditches and may be considered jurisdictional waters of the State, under the joint regulation of the RWQCB and CDFW.

Agricultural ditches are not considered jurisdictional waters of the U.S. [33 CFR 328.3(b)(3)]. These features are human-made structures excavated in uplands and are primarily used for irrigation purposes. The hydrology of these ditches is solely reliant on artificial inputs and therefore, would revert to dry land if artificial inputs ceased. In accordance with *Regulatory Guidance Letter No. 07-02 - Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches under Section 404 of Clean Water Act*, even if the ditches were determined to be waters of the U.S., they would be exempt from regulation under Section 404 of the CWA.

Based on a review of aerial imagery, potentially jurisdictional wetlands and other waters may exist in the 40-acre annexation area; however the annexation area could not be accessed during the 2016 field survey. If development within the annexation area is proposed, Dudek recommends that a qualified biologist or wetland scientist perform a formal jurisdictional delineation of the site. The delineation would be verified by the appropriate regulatory agencies before preparing final development plans.

Impacts to jurisdictional features would require authorization from the resource agencies listed above in the form of wetland permits (e.g., CWA 404 Nationwide Permit, CWA 401 Water Quality Certification, and CDFW Section 1602 Streambed Alteration Agreement). Authorization typically requires a combination of impact avoidance and minimization and compensatory mitigation. Compensatory mitigation may be necessary for no net loss of wetland functionality. Examples of potential compensatory mitigation may include the purchase of mitigation credits from an agency-approved mitigation bank, or alternatively, payment into an in-lieu fee could be arranged with the relevant resource agencies.

## 6.3 Special-Status Species

**Nesting Birds (including Loggerhead Shrike).** The project site could support nesting birds, including raptors and ground nesting birds, protected by California Fish and Game Code and the federal Migratory Bird Treaty Act. No active nests or evidence of breeding was observed during the field survey; however, the survey was conducted outside of the generally-recognized

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breeding season and did not focus on this resource. Project construction has a potential to impact nesting birds, especially if conducted during the breeding season. Dudek recommends the following mitigation measure, or similar, to avoid and/or minimize project-related impacts to nesting birds:

- Within 2 weeks prior to the initiation of any construction during the nesting season (February 1–September 30), a qualified biologist shall conduct a nesting bird survey to determine if any native birds are nesting on or near the site (including a 500-foot buffer for raptors). If any active nests are observed during surveys, a suitable avoidance buffer from the nests will be determined and flagged by the qualified biologist based on species, location, and planned construction activity. Consultation with CDFW may be required to determine appropriate buffer distances. These nests would be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. Dudek also recommends removing potential nesting habitat (i.e., trees and shrubs) outside of the nesting season.

**Burrowing Owl.** To avoid and/or minimize potential impacts to burrowing owl, Dudek recommends conducting a habitat assessment of the project site for this species prior to project construction. Ideally, the assessment should be conducted prior to the breeding season to allow time for protocol surveys and/or passive relocation, should any suitable burrows and/or burrows with owl sign be detected during the survey. Protocol surveys (if needed) should be conducted in accordance with the CDFW 2012 *Staff Report on Burrowing Owl Mitigation*, and passive relocation (if needed) should be conducted in coordination with CDFW. A habitat assessment and subsequent surveys are only necessary if project construction would occur during the burrowing owl breeding season (February 1 through August 31).

**Swainson’s Hawk.** To avoid and/or minimize potential impacts to Swainson’s hawk, Dudek recommends that a qualified biologist conduct a preconstruction survey for Swainson’s hawk within 2 weeks prior to project construction. Should any active Swainson’s hawk nests be detected in the survey area (project site plus a 500-foot buffer), full-time nest monitoring, in coordination with CDFW, may be necessary. The preconstruction survey is only necessary if project construction would occur during the Swainson’s hawk breeding season (March 1 through August 31).

**Native Bats (including Pallid Bat, Townsend’s Big-Eared Bat, Western Mastiff Bat, and Western Red Bat).** To avoid and/or minimize potential impacts to native and special-status bat species, Dudek recommends that a qualified biologist conduct a preconstruction within 2 weeks prior to construction to assess whether bats are roosting onsite. If bats (individuals or colonies)

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are detected, CDFW shall be notified immediately. If a bat roosting or maternity colony cannot be completely avoided, the permittee and qualified biologist shall prepare a bat mitigation and monitoring plan for CDFW review and approval.

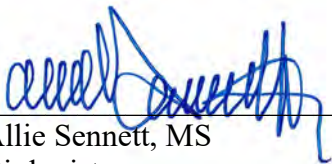
**American Badger and San Joaquin Kit Fox.** The project site provides marginal habitat for American badger and San Joaquin kit fox due to existing development and disturbances, such as frequent disking, in the area. No potential burrow sites were observed during the field survey. Based on a review of aerial imagery, the 40-acre annexation area provides marginal habitat for American badger and San Joaquin kit fox for similar reasons as the 30-acre study area. Therefore, these species have a low potential to occur onsite and are not expected to be impacted by the project. Dudek does not recommend mitigation measures for these species.

**Special-Status Plants.** No special-status plants were observed during the field survey; however, the field survey was conducted in December, which is outside of the blooming period for most special-status plants. As stated previously, the 30-acre study area supports a dominance of non-native and/or ruderal species common to disturbed sites. In addition, the study area lacks natural vegetation communities, such as woodland, riparian, grassland, and vernal pools, or appropriate soils required by many special-status plant species.

The 40-acre annexation area was not surveyed for special-status plants. Therefore, Dudek recommends that a biologist conduct a field survey of the 40-acre annexation area to determine the potential for special-status plant and wildlife species to occur within the annexation area if development within the annexation area is proposed in the future.

If you have any questions or concerns regarding the content of this report, please contact me at 760.936.7969 or [asennett@dudek.com](mailto:asennett@dudek.com).

Sincerely,



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Allie Sennett, MS  
Biologist

Att.: *Figures 1-5*  
*Appendix A, Special-Status Wildlife Species Potential to Occur*  
*Appendix B, Special-Status Plant Species Potential to Occur*

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# **APPENDIX A**

*Special-Status Wildlife Species Potential to Occur*

**Appendix A. Special-Status Wildlife Species Potential to Occur  
Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project**

Latin Name	Common Name	Status (Federal/State) <sup>1</sup>	Habitat <sup>2</sup>	Potential to Occur
<i>Invertebrates</i>				
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE/None	The conservancy fairy shrimp is adapted to seasonally inundated features and occur primarily in vernal pools, seasonal wetlands that fill with water during fall and winter rains and dry up in spring and summer. Different pools within or between complexes may provide habitat for the fairy shrimp in alternative years, as climatic conditions vary.	<b>Potential to occur.</b> Aerial photos indicate the potential for vernal pools and seasonal wetlands in northern portions of the annexation area, which may provide habitat for this species.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT/None	Vernal pool fairy shrimp is adapted to seasonally inundated features and occur primarily in vernal pools, seasonal wetlands that fill with water during fall and winter rains and dry up in spring and summer. Different pools within or between complexes may provide habitat for the fairy shrimp in alternative years, as climatic conditions vary.	<b>Potential to occur.</b> Aerial photos indicated the potential for vernal pools and seasonal wetlands in the northern portions of the annexation area, which may provide habitat for this species.
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	FT/None	The valley elderberry longhorn beetle is completely dependent on its host plant, elderberry ( <i>Sambucus nigra</i> ssp. <i>cerulea</i> ), which occurs in riparian and other woodland communities in California's Central Valley and the associated foothills. Female beetles lay their eggs in crevices on the stems or on the leaves of living elderberry plants. When the eggs hatch, larvae bore into the stems. The larval stages last for one to two years. The fifth instar larvae create emergence holes in the stems and then plug the holes and remain in the stems through pupation. Adults emerge through the emergence holes from late March through June. The short-lived adult beetles forage on leaves and flowers of elderberry shrubs.	<b>Not expected to occur.</b> No elderberry shrubs present.



<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	FE/None	Vernal pool tadpole shrimp is associated with low-alkalinity seasonal pools in unplowed grasslands. The vernal pool tadpole shrimp is found only in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California. Suitable vernal pools and seasonal swales are generally underlain by hardpan or sandstone.	<b>Potential to occur.</b> Aerial photos indicated the potential for vernal pools and seasonal wetlands in northern portions of the annexation area, which may provide habitat for this species.
<i>Fishes</i>				
<i>Hypomesus transpacificus</i>	Delta smelt	FT/SE	Euryhaline species (tolerant of a wide salinity range) that spend a majority of their one year life span along the freshwater edge of the mixing zone (saltwater-freshwater interface), where the salinity is approximately 2 ppt. Shortly before spawning, adults migrate upstream from the brackish-water habitat associated with the mixing zone and disperse widely into river channels and tidally influenced backwater sloughs. They spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally influenced backwater sloughs and channel edgewater.	<b>Not expected to occur.</b> The site is outside of the species' known geographic range and there is no habitat present.
<i>Mylopharodon conocephalus</i>	hardhead	None/SSC	Occur in low- to mid-elevation streams in the main Sacramento-San Joaquin River drainage, and in the Russian River. Typically found in undisturbed areas of larger low- to mid-elevation streams, although they are also found in the mainstem Sacramento River at low elevations and in its tributaries to about 4,920 ft. They prefer clear, deep (>32 in) pools and runs with sand-gravel-boulder substrates and slow velocities. They tend to be absent from streams where introduced species, especially centrarchids (sunfish), predominate; and from streams that have been severely altered by human activity.	<b>Not expected to occur.</b> No suitable habitat present.

<i>Oncorhynchus mykiss irideus</i> pop. 11	steelhead - Central Valley DPS	FT/None	Spawn downstream of dams on every major tributary within the Sacramento and San Joaquin River systems. Regardless of life history strategy, for the first year or two of life rainbow trout and steelhead are found in cool, clear, fast-flowing permanent streams and rivers where riffles predominate over pools, there is ample cover from riparian vegetation or undercut banks, and invertebrate life is diverse and abundant.	<b>Not expected to occur.</b> The site is outside of the species' known geographic range and there is no habitat present.
<i>Amphibians</i>				
<i>Ambystoma californiense</i>	California tiger salamander	FT/ST, WL	Found in riparian and wet meadow habitats, but is more common in grasslands. Most of their life cycle is spent underground in adjacent valley oak woodland or grassland habitat, primarily in rodent burrows. Breeding takes place following the first heavy winter rains. Temporary or permanent freshwater pools or slowly flowing streams are required for egg-laying and larval development. They appear to be absent in waters containing predatory game fish.	<b>Potential to occur.</b> Aerial photos indicate the potential for vernal pools and seasonal wetlands in northern portions of the annexation area, which may provide habitat for this species.
<i>Rana draytonii</i>	California red-legged frog	FT/SSC	Breeding habitat includes coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams. These frogs also breed in artificial impoundments including stock ponds, irrigation ponds, and siltation ponds. Creeks and ponds with dense growths of woody riparian vegetation, especially willows ( <i>Salix</i> spp.) are preferred, although the absence of vegetation at an aquatic site does not rule out the possibility of occupancy. Adult frogs prefer dense, shrubby or emergent riparian vegetation near deep [ $\geq 2$ to 3 feet (0.6 to 0.9 m)], still or slow moving water, especially where dense stands of overhanging willow and an intermixed fringe of cattail ( <i>Typha</i> sp.) occur adjacent to open water.	<b>Not expected to occur.</b> No suitable habitat present.
<i>Spea hammondi</i>	western spadefoot	None/SSC	Inhabits areas with slightly moist, friable soils in mostly treeless habitats. Usually absent from narrow canyons and highly mesic habitats. Requires rain pools for spawning with little to no vegetation.	<b>Potential to occur.</b> Aerial photos of the site indicate the potential for vernal pools or seasonal wetlands in northern portions of the annexation area, which could provide habitat for this species.

<i>Reptiles</i>				
<i>Actinemys marmorata</i>	northwestern pond turtle	None/SSC	Found in rivers, lakes, streams, ponds, wetlands, vernal pools, ephemeral creeks, reservoirs, agricultural ditches, estuaries, and brackish waters. Western pond turtles prefer areas that provide cover from predators, such as vegetation and algae, as well as basking sites for thermoregulation. Adults tend to favor deeper, slow moving water, whereas hatchlings search for slow and shallow water that is slightly warmer. Terrestrial habitats are used for wintering and consist usually of burrows in leaves and soil. Western pond turtles also lay their eggs in terrestrial habitats. They are rarely found at altitudes above 4,900 feet.	<b>Not expected to occur.</b> The project site is highly disturbed and lacks suitable aquatic habitat.
<i>Gambelia sila</i>	blunt-nosed leopard lizard	FE/FP, SE	Occur in semi-arid grasslands, alkali flats and washes in the San Joaquin Valley and surrounding valleys and foothills. It is diurnal species that uses mammal dens and burrows for shelter and cover. Breeds from May to June.	<b>Not expected to occur.</b> Outside of the species' known geographic range and there is no habitat present.
<i>Thamnophis gigas</i>	giant garter snake	FT/ST	Found in isolated populations restricted to the Central Valley. Occur in freshwater marsh and wetlands, irrigation ditches, low gradient streams and rice fields containing emergent vegetation. Adjacent upland habitat is necessary for cover and aestivation.	<b>Not expected to occur.</b> No habitat present. The irrigation ditches onsite lack upland refugia.
<i>Birds</i>				
<i>Agelaius tricolor</i>	tricolored blackbird	BCC/SSC, ST	A colonial species found almost exclusively in California. It utilizes wetlands, marshes and agricultural grain fields for foraging and nesting.	<b>Not expected to occur.</b> No nesting habitat present, and the row crops grown on the site would provide minimal insect prey.
<i>Asio flammeus</i>	short-eared owl	None/SSC	Occurs in open terrain such as prairies and marshes. Nests on the ground and eats small mammals.	<b>Not expected to occur.</b> No nesting habitat present.
<i>Athene cucularia</i>	burrowing owl	BCC/SSC	The burrowing owl utilizes abandoned ground squirrel burrows in open habitats and grasslands, also disturbed areas. Diet consists of insects, small mammals, reptiles and amphibians. Commonly uses burrows on levees or mounds where there are unobstructed views of possible predators such as raptors or foxes.	<b>Low potential to occur.</b> Potential nesting and foraging habitat is present; however, no ground squirrels or associated burrows suitable for nesting or overwintering were observed during the field survey.

<i>Buteo swainsoni</i>	Swainson's hawk	BCC/ST	Spends the breeding season in the Central Valley of California and is commonly found in agricultural areas or open grasslands containing solitary trees for nesting. Diet consists of small mammals and reptiles.	<b>Moderate potential to occur.</b> Potential nesting and foraging is present and there are five documented occurrences of this species within 5 miles of the project site (CDFW 2019).
<i>Charadrius montanus</i>	mountain plover	BCC/SSC	This species is a winter resident in the Central Valley from September through March. Found in Sutter and Yuba cos. southward into Mexico at elevations below 3,200 feet. Also found in foothill valleys west of the San Joaquin Valley, the Imperial Valley, and plowed fields of Los Angeles and western San Bernardino cos. Foraging occurs in short and open grasslands, plowed fields with little vegetation, and open sagebrush areas.	<b>Not expected to occur.</b> No nesting habitat present. This species is not known to nest in California (CDFW 2019).
<i>Circus hudsonius</i>	northern harrier	None/SSC	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	<b>Not expected to occur.</b> The site is outside of the species' known geographic range and there is no nesting habitat present.
<i>Haliaeetus leucocephalus</i>	bald eagle	FDL, BCC/FP, SE	Lives near large bodies of open water such as lakes, marshes, estuaries, seacoasts and rivers, where fish are abundant. Usually nests within one mile of water in tall trees with open branchwork bordering lakes or large rivers. In Central California, bald eagles prefer foothill pines for nesting.	<b>Not expected to occur.</b> No nesting habitat present.
<i>Lanius ludovicianus</i>	loggerhead shrike	BCC/SSC	A year-round resident in most areas of California that contain grasslands, open areas, orchards and areas with scattered trees, shrubs, fences, and other perching options. Highest densities are found in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. Feeds on small vertebrates and invertebrates, impales prey on thorns or barbed wire.	<b>Low potential to occur.</b> The project site provides poor quality nesting habitat as the site frequently disturbed by disking activities and residential dwellings, and lacks scattered perching options.

Mammals				
<i>Antrozous pallidus</i>	pallid bat	None/SSC	Occupies a variety of habitats including grassland, shrubland, woodland and forests from sea level up through mixed conifer forest. Roosts in caves, mines, crevices and occasionally hollow trees or buildings. Prefers open habitats for foraging. Highly sensitive to disturbance.	<b>Low potential to occur.</b> Potential foraging and roosting habitat is present; however, frequent human disturbance onsite likely precludes this species from utilizing the site.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/SSC	Occupies mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels. Highly sensitive to disturbance.	<b>Low potential to occur.</b> Potential foraging and roosting habitat is present; however, frequent human disturbance onsite likely precludes this species from utilizing the site.
<i>Eumops perotis californicus</i>	western mastiff bat	None/SSC	Occurs in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, chaparral, desert scrub, and urban. Suitable habitat consists of extensive open areas with abundant roost locations. Primarily roosts in rock crevices and shallow caves on cliff sides, but occasionally roosts in buildings. When roosting in rock crevices, needs vertical faces to drop off to take flight.	<b>Low potential to occur.</b> Potential foraging and roosting habitat is present; however, roosting opportunities within the project site are few and limited to occupied residential dwellings.
<i>Lasiurus blossevillii</i>	western red bat	None/SSC	In California, habitat includes forests and woodlands from sea level up through mixed conifer forests. Strongly associated with riparian habitats in the Central Valley and lower reaches of Sierra Nevada streams. Roosts primarily in trees. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Not found in desert areas.	<b>Low potential to occur.</b> Potential roosting and foraging habitat is present, but roosting opportunities are limited to non-riparian trees. There are no riparian areas onsite.
<i>Taxidea taxus</i>	American badger	None/SSC	Utilizes dry, open, treeless areas, such as grasslands, coastal scrub, agriculture, and pastures, especially with friable soils. Preferred prey items include rodents and small mammals.	<b>Low potential to occur.</b> The project site provides marginal habitat due to the level of existing disturbance, including regular disking. No potential dens were observed during the field survey.

<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE/ST	Occurs in grasslands and agricultural areas along the edges of the San Joaquin Valley. Utilizes dens created by other mammals, as well as larger pipes and culverts for cover. It is primarily a nocturnal species and feeds on small mammals, birds and reptiles.	<b>Low potential to occur.</b> Although potential habitat exists onsite, development in the surrounding area likely precludes this species from utilizing the site. No potential dens were observed during the field survey. The project site is not located in critical habitat for this species (USFWS 2019).
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**<sup>1</sup>Status Abbreviations**

FE: Federally Endangered

FT: Federally Threatened

FDL: Federally Delisted

BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern

SSC: California Species of Special Concern

FP: California Fully Protected Species

WL: California Watch List Species

SE: State Endangered

ST: State Threatened

**<sup>2</sup>Sources:** CDFW 2019c; Google Earth 2021

# **APPENDIX B**

*Special-Status Plant Species Potential to Occur*

## Appendix B. Special-Status Plant Species Potential to Occur Yosemite Avenue – Gardner Avenue to Hatch Road Annexation Project

Latin Name	Common Name	Status (Federal/State/CRPR) <sup>1</sup>	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) <sup>2</sup>	Potential to Occur
<i>Plants</i>				
<i>Atriplex cordulata</i> var. <i>cordulata</i>	heartscale	None/None/1B.2	Chenopod scrub, Meadows and seeps, Valley and foothill grassland (sandy); saline or alkaline/annual herb/Apr–Oct/0–1835	<b>Not expected to occur.</b> No saline or alkaline soils present.
<i>Atriplex depressa</i>	brittlescale	None/None/1B.2	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland, Vernal pools; alkaline, clay/annual herb/Apr–Oct/0–1050	<b>Not expected to occur.</b> No alkaline soils present.
<i>Atriplex minuscula</i>	lesser saltscale	None/None/1B.1	Chenopod scrub, Playas, Valley and foothill grassland; alkaline, sandy/annual herb/May–Oct/45–655	<b>Not expected to occur.</b> No habitat present.
<i>Atriplex persistens</i>	vernal pool smallscale	None/None/1B.2	Vernal pools (alkaline)/annual herb/June, Aug, Sep, Oct/30–375	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools in northern portions of the annexation area, which may provide habitat for this species.
<i>Atriplex subtilis</i>	subtle orache	None/None/1B.2	Valley and foothill grassland; Alkaline/annual herb/June, Aug, Sep (Oct)/130–330	<b>Not expected to occur.</b> No alkaline soils present.
<i>Brasenia schreberi</i>	watershield	None/None/2B.3	Marshes and swamps (freshwater)/perennial rhizomatous herb (aquatic)/June–Sep/95–7220	<b>Not expected to occur.</b> No freshwater marshes or swamps present.
<i>Calycadenia hooveri</i>	Hoover's calycadenia	None/None/1B.3	Cismontane woodland, Valley and foothill grassland; rocky/annual herb/July–Sep/210–985	<b>Not expected to occur.</b> No rocky soils present.
<i>Castilleja campestris</i> var. <i>succulenta</i>	succulent owl's-clover	FT/SE/1B.2	Vernal pools (often acidic)/annual herb (hemiparasitic)/(Mar)Apr–May/160–2460	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools in northern portions of the annexation area, which may provide habitat for this species.
<i>Clarkia rostrata</i>	beaked clarkia	None/None/1B.3	Cismontane woodland, Valley and foothill grassland/annual herb/Apr–May/195–1640	<b>Not expected to occur.</b> No habitat present.
<i>Delphinium recurvatum</i>	recurved larkspur	None/None/1B.2	Chenopod scrub, Cismontane woodland, Valley and foothill grassland; alkaline/perennial herb/Mar–June/5–2590	<b>Not expected to occur.</b> No alkaline soils present.



<i>Downingia pusilla</i>	dwarf downingia	None/None/2B.2	Valley and foothill grassland (mesic), Vernal pools/annual herb/Mar–May/0–1460	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools in northern portions of the annexation area, which may provide habitat for this species.
<i>Eryngium racemosum</i>	Delta button-celery	None/SE/1B.1	Riparian scrub (vernally mesic clay depressions)/annual / perennial herb/June–Oct/5–100	<b>Not expected to occur.</b> The site is outside of the species' known elevation range.
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	None/None/1B.2	Valley and foothill grassland, Vernal pools/annual / perennial herb/Apr–June/260–3200	<b>Not expected to occur.</b> The site is outside of the species' known elevation range..
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	None/SE/1B.2	Marshes and swamps (lake margins), Vernal pools; clay/annual herb/Apr–Aug/30–7790	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools in northern portions of the annexation area, which may provide habitat for this species.
<i>Lagophylla dichotoma</i>	forked hare-leaf	None/None/1B.1	Cismontane woodland, Valley and foothill grassland; Sometimes clay/annual herb/Apr–May/145–1100	<b>Not expected to occur.</b> No habitat present.
<i>Navarretia myersii</i> ssp. <i>myersii</i>	pincushion navarretia	None/None/1B.1	Vernal pools; often acidic/annual herb/Apr–May/65–1085	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools present in northern portions of the annexation area, which may provide habitat for this species.
<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	shining navarretia	None/None/1B.2	Cismontane woodland, Valley and foothill grassland, Vernal pools; Sometimes clay/annual herb/(Mar)Apr–July/210–3280	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools in northern portions of the annexation area, which may provide habitat for this species.
<i>Neostapfia colusana</i>	Colusa grass	FT/SE/1B.1	Vernal pools (adobe, large)/annual herb/May–Aug/15–655	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools in northern portions of the annexation area, which may provide habitat for this species.

<i>Orcuttia inaequalis</i>	San Joaquin Valley Orcutt grass	FT/SE/1B.1	Vernal pools/annual herb/Apr–Sep/30–2475	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools in northern portions of the annexation area, which may provide habitat for this species.
<i>Orcuttia pilosa</i>	hairy Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/May–Sep/150–655	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools in northern portions of the annexation area, which may provide habitat for this species.
<i>Pseudobahia bahiifolia</i>	Hartweg's golden sunburst	FE/SE/1B.1	Cismontane woodland, Valley and foothill grassland; clay, often acidic/annual herb/Mar–Apr/45–490	<b>Not expected to occur.</b> No habitat present.
<i>Puccinellia simplex</i>	California alkali grass	None/None/1B.2	Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; Alkaline, vernal mesic; sinks, flats, and lake margins/annual herb/Mar–May/5–3050	<b>Potential to occur.</b> Aerial imagery indicates the potential for vernal pools and seasonal wetlands in northern portions of the annexation area, which may provide habitat for this species.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (assorted shallow freshwater)/perennial rhizomatous herb (emergent)/May–Oct(Nov)/0–2135	<b>Potential to occur.</b> Aerial imagery indicates the potential for seasonal wetlands and vernal pools in northern portions of the annexation area, which may provide habitat for this species.
<i>Sidalcea keckii</i>	Keck's checkerbloom	FE/None/1B.1	Cismontane woodland, Valley and foothill grassland; serpentinite, clay/annual herb/Apr–May(June)/245–2135	<b>Not expected to occur.</b> The site is outside of the species' known elevation range and lacks habitat.
<i>Tuctoria greenei</i>	Greene's tuctoria	FE/SR/1B.1	Vernal pools/annual herb/May–July(Sep)/95–3510	<b>Potential to occur.</b> Aerial imagery indicates the potential for potential wetlands and vernal pools in northern portions of the annexation area, which may provide habitat for this species..

**<sup>1</sup>Status Abbreviations**

FE: Federally Endangered

FT: Federally Threatened

SE: State Endangered

ST: State Threatened

SR: State Rare

CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

**<sup>2</sup>Sources:** CNPS 2019.

Google Earth 2021.

# Appendix F

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Cultural Resources Inventory Report  
Dudek, August 2020

August 26, 2020

10049

Julie Nelson  
City of Merced  
678 West 18th Street  
Merced, California 95340

***Subject: Cultural Resources Letter Report for the Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project, City of Merced, California***

Dear Ms. Nelson:

This letter report documents the cultural resources study conducted by Dudek for the proposed Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project (proposed project). The project proposes to annex 70 acres from Merced County to the City of Merced and to construct and operate the "The Crossings", a mixed-use development component on an approximately 28.6-acre portion of the project site. No development is proposed on the remaining approximately 40.2 acres (Remainder Area). The City of Merced is the lead agency responsible for compliance with the California Environmental Quality Act (CEQA). The cultural resources study included a Central California Information Center (CCIC) records search, Native American Heritage Commission (NAHC) Sacred Lands File search, tribal outreach, an intensive pedestrian survey, and recordation and evaluation of the property located at 1897 East Yosemite Avenue. The cultural resources study was conducted by Dudek in accordance with the standards and guidelines defined by the California Office of Historic Preservation (OHP), CEQA, and the *Merced Vision 2030 General Plan* (City of Merced 2012).

## **PROJECT LOCATION AND DESCRIPTION**

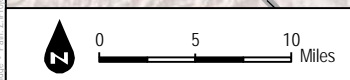
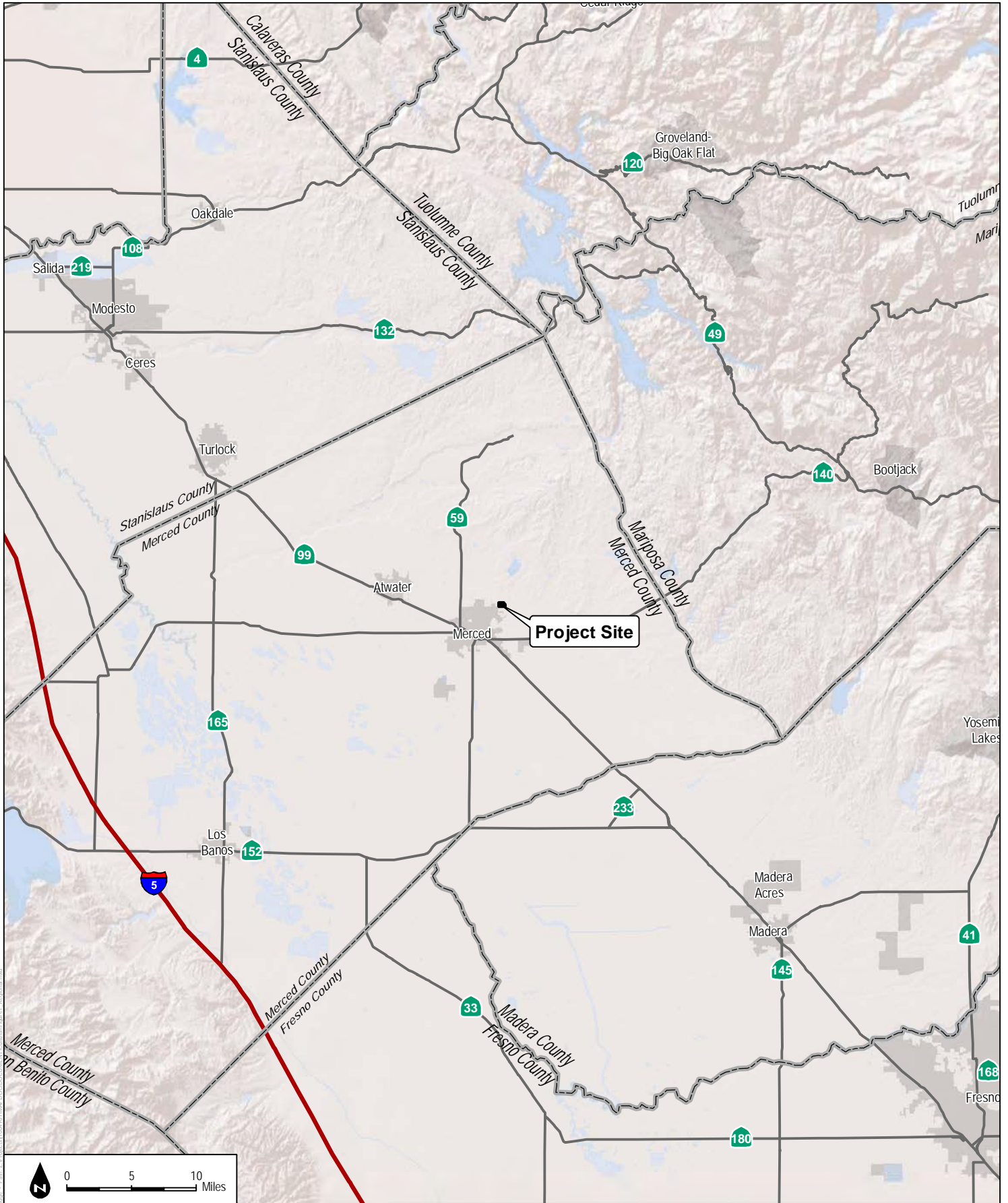
This project area is located in Section 9 of Township 7 South, Range 14 East, of the Merced, California 7.5' USGS Quadrangle map. The approximately 70-acre project site is located in unincorporated Merced County contiguous to the City of Merced between North Gardner Avenue and Hatch Road along East Yosemite Avenue (Figures 1 and 2). The project area is bounded by East Yosemite Avenue to the south, North Gardner Avenue to the west, Hatch Road to the east, and an extension to the Yosemite Lateral irrigation canal to the north. The project area includes the following Assessor Parcel Numbers (APNs) 060-570-009, 060-570-010, 060-570-011, 060-570-012, 060-570-013, 060-570-014, 060-570-056, 060-570-058, 060-570-059, 060-570-097, and 060-570-098.

This cultural resources study evaluates impacts to cultural resources associated with implementation of the 28.6-acre mixed-use development (“The Crossings”) of the proposed project on a project level, consistent with Section 15161 of the CEQA Guidelines. The remaining 40.2 acres of the proposed project are evaluated on a program level, consistent with Section 15168 of the CEQA Guidelines.

The Crossings is a proposed mixed-use development located on a 28.6-acre site that fronts Yosemite Avenue and Gardner Avenue. The project consists of a 540-unit apartment village that includes 20 three-story residential buildings, a 13,700 square foot clubhouse, and associated outdoor recreation space. The residential buildings would have 27 units per building. Of the 540 units, 300 units would be one bedroom, one bathroom and 240 units would be two bedrooms, two bathrooms. The project also includes five (5) mixed-use buildings consisting of 66,000 square feet of retail space on the ground level and 45,000 square feet of residential space on the second level, totaling 30 additional units (12 apartments and 18 extended stay units).

Vehicle access to the residential portion would be provided by a driveway off of E. Yosemite Avenue that would provide both ingress and egress to the site. Access to the retail portion would be provided by a driveway off of E. Yosemite Avenue and two driveways off of N. Gardner Avenue. Internal driveways would connect the retail and residential portions of the project site.

Water supply, wastewater conveyance and treatment, and storm drainage for the project would be provided by the City of Merced. The project would tie into the existing water, sewer, and storm drain lines located in E. Yosemite Avenue and N. Gardner Avenue. In addition, the earthen irrigation canal on the north side of the project, an extension of the Yosemite Lateral irrigation canal from Lake Yosemite, will be piped and converted into an enclosed water line.



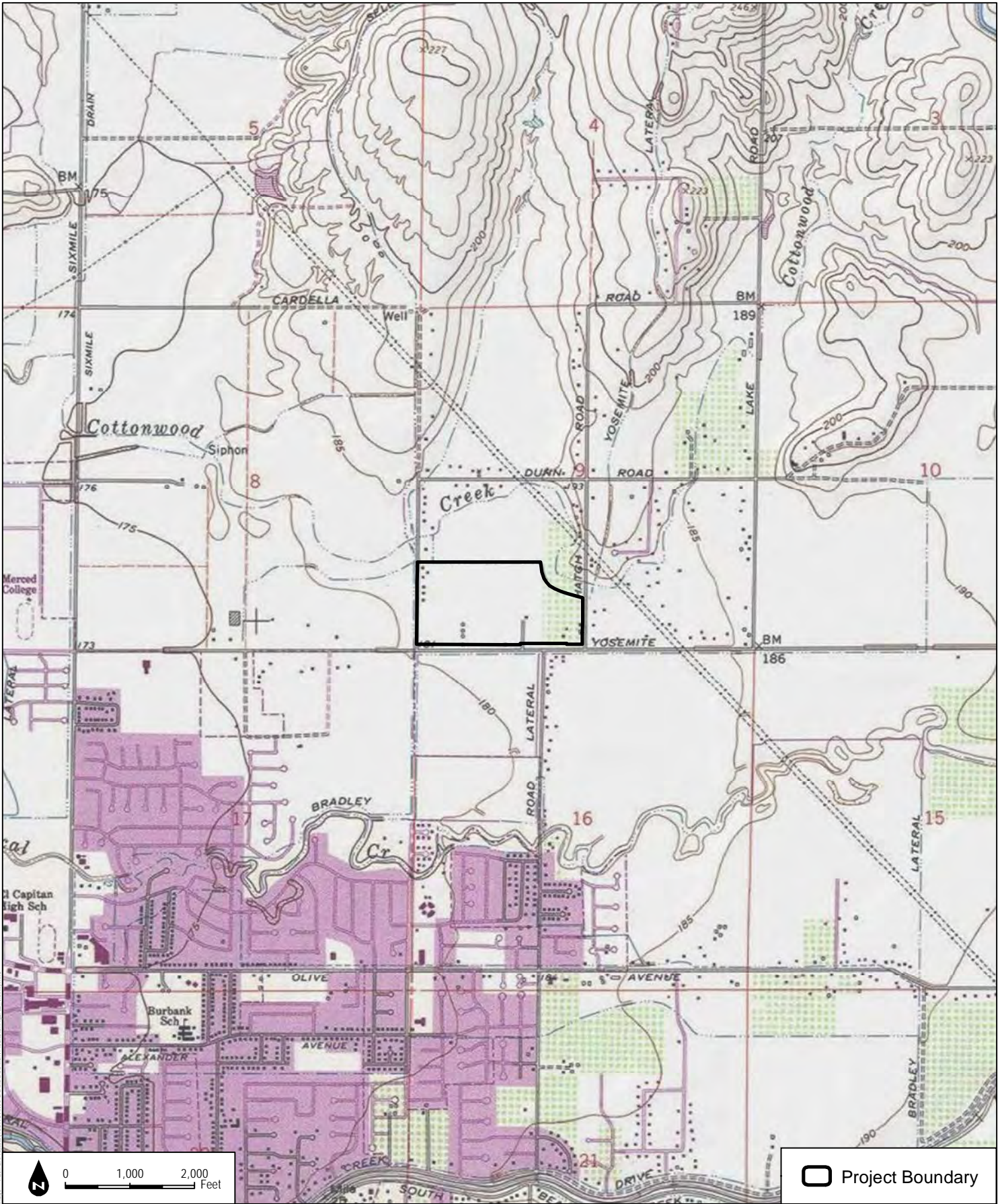
SOURCE: ESRI Basemaps (Accessed 2016); County of Merced (2014)



Merced Student Housing Project

**FIGURE 1**  
Regional Map

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SOURCE: USGS 7.5-Minute Series Merced Quadrangle  
Township 7S, Range 14E, Section 9

**DUDEK**

Merced Student Housing Project

Project Boundary

**FIGURE 2**  
Vicinity Map

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## **REGULATORY FRAMEWORK**

### **National Register of Historic Places**

While there is no federal nexus for this project, the National Register of Historic Places (NRHP) criteria was applied to the evaluation of historical resources within The Crossings component.

The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service (NPS), under the U.S. Department of the Interior, the NRHP was authorized under the NHPA, as amended. Its listings encompass all National Historic Landmarks, as well as historic areas administered by NPS.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

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

Integrity is defined in NRHP guidance, How to Apply the National Register Criteria, as “the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity” (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered

for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be “exceptionally important” (criteria consideration G) to be considered for listing.

## **State Regulations**

### ***The California Register of Historical Resources (Public Resources Code Section 5020 et seq.)***

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." (PRC Section 5020.1(j)). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." (PRC section 5024.1(a).) The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains “substantial integrity,” and (ii) meets at least one of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than fifty years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see Cal. Code Regs., tit. 14, Section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP and properties listed or formally designated as eligible for listing in the NRHP are automatically listed

in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

### **California Environmental Quality Act**

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines “unique archaeological resource.”
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines “historical resources.” In addition, CEQA Guidelines Section 15064.5(b) defines the phrase “substantial adverse change in the significance of an historical resource;” it also defines the circumstances when a project would materially impair the significance of an historical resource.
- PRC Section 21074(a) defines “tribal cultural resources.”
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource." (PRC Section 21084.1; CEQA Guidelines Section 15064.5(b)). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA. (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption. (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the

resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); PRC Section 5020.1(q). In turn, the significance of an historical resource is materially impaired when a project:

- (1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- (2) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- (3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA (CEQA Guidelines Section 15064.5(b)(2)).

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as tribal cultural resource (PRC Sections 21074(c); 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC Section 5097.98.

### ***Native American Historic Cultural Sites (PRC Section 5097 et seq.)***

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Heritage Commission to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

### ***California Health and Safety Code Section 7050.5***

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (Section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California Native American Heritage Commission (NAHC) within 24 hours (Section 7050.5c). The NAHC will notify the Most Likely Descendant. With the permission of the landowner, the Most Likely Descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the Most Likely Descendant by the NAHC. The Most Likely Descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

## **Merced Vision 2030 General Plan**

The City of Merced has specific cultural regulations outlined in the *Merced Vision 2030 General Plan* (City of Merced 2012). This plan was adopted to serve as a guide for growth and planning within the city. It addresses the City's goals regarding their cultural resource preservation and states three policies designed to achieve these goals. The plan is a living document and is amended at times. The policies reproduced below are current at the time of this cultural resource inventory (City of Merced 2012).

### **Goals**

- (1) A Diverse and Rich Historic and Cultural Resource Environment
- (2) A Long-Term Community Historic Preservation/Improvement Program

### **Policies**

#### **SD-2.1 Identify and Preserve the City's Archaeological Resources**

It is thought that the San Joaquin Valley was inhabited in the late Pleistocene and early Holocene period, dating from perhaps as early as 12,000 years before the present (B.P.). Prior to Euro-American arrival, the San Joaquin Valley was occupied by Yokuts Indian populations. The Yokuts settlement system was characterized by principal villages on terraced areas adjacent to watercourses. Knowledge of these early inhabitants is limited. It is likely that the streams traversing the Merced Planning Area served as settlements for Yokuts and it is a State policy to preserve and protect the archaeological resources of the region.

#### **Implementing Actions:**

**2.1.a Utilize the inventory of known archeological sites maintained by the Central California Information Center for the review of development proposals.** The Archaeological Inventory shall be used to identify areas within the Merced Planning Area subject to preservation practices. For large scale development projects proposed in close proximity to a natural water course, or in an area which exhibits potential for containing cultural resource material, preliminary cultural resource inventories should be conducted by a qualified archaeologist. Information from these site investigations shall be provided to the Central California Information Center for recordation.

**2.1.b Utilize standard practices for preserving archeological materials that are unearthed during construction, as prescribed by the State Office of Historic Preservation.** Cultural resource discoveries are subject to the rules and regulations in State

law. The City should work closely with the building trades industry to facilitate compliance with these laws and to assist where necessary in minimizing the adverse impacts of the implementation of these laws on the City's construction industry.

**2.1.c If appropriate, consider reconstruction of archaeological sites in City parks, on school grounds, in open space areas, or other suitable locations where they can serve an educational purpose.** In order to increase the public's awareness to the cultural heritage of Merced, the City should support the efforts of Native American groups and individuals to develop cultural displays and exhibits in local public places.

## **SD-2.2 Identify and Preserve the City's Historic and Cultural Resources**

The City of Merced contains many fine examples of its early development. Historic buildings, tree plantings, and other improvements serve to give the City a special character which is unique in the San Joaquin Valley. The City of Merced is dedicated to preserving, protecting and enhancing its historic and cultural resources.

### **Implementing Actions:**

**2.2.a Expand City cultural and historic information resources.** Establish and maintain an inventory of cultural, historic, and architecturally significant resources within the City and the planning area by expanding and improving the existing inventory of the downtown area. Consider a program or support other programs which designate historic landmarks and architecturally significant structures in the City.

**2.2.b Support community groups and individuals working to preserve, protect and enhance the City's Historic and Cultural Resources.** In accordance with the City's Historic Preservation Ordinance (MMC 17.54) which outline procedures and criteria for historic designation, continue to support Historic Preservation Commission activities. Support, as feasible, both private and public efforts to preserve and rehabilitate historic structures in the City, including the need to protect a site from intrusion of surrounding land uses which are uncomplimentary or incompatible.

**2.2.c Review and revise as necessary, the City's development/construction regulations to facilitate the preservation of historic structures.** Investigate and consider the possibility of using historic overlay zones in conjunction with the Historic Preservation Ordinance to control the use or modification of significant historic areas in the community, recognizing the limitations of Government Code Section 37361 as it applies to church facilities.

**2.2.d Support, as feasible, efforts to promote the preservation of historically or architecturally significant structures in the City.** Support the preservation of the downtown's historically and architecturally significant structures. Encourage the design of new developments to be consistent with the design, character, and building bulk of the existing downtown. Encourage and support efforts to preserve historic structures in the Courthouse Square area, Downtown, Central Merced, and throughout the City. The restoration of the Merced Theater is one such current project.

**2.2.e Support efforts to designate historic districts within the City.** The City should, as appropriate, be supportive of private efforts to establish historic districts with appropriate recognition and designation as National Registry Districts or by means of some other historic district recognition.

### **SD-2.3 Develop and Promote Financial Incentive Programs for Historic Preservation Efforts**

Historic and cultural resources can be a financial liability to private citizens. In many instances, it is more economical to demolish and build new structures than to rehabilitate historic structures. The economics of maintaining and improving historic properties have resulted in many buildings and structures being lost or allowed to deteriorate to such a degree that preservation is impractical. The City will assist in the identification of financial resources that can be used by individuals and groups in the City to preserve, enhance and protect the historic and cultural resources of the City.

#### **Implementing Actions:**

**2.3.a Work to identify financial resources which can be used for historic preservation efforts in Merced.** Utilize, where possible, Redevelopment funds to help finance restoration of historic buildings and structures in Merced. Identify other sources of historic preservation funds, such as Community Development Block Grants, Office of Historic Preservation Grant Funds, tax incentives, etc., to be used to finance historic renovation/restoration projects.

**2.3.b Provide access to information on financial resources available to property owners to assist in historic preservation/restoration efforts.** Refer interested property owners to the State Office of Historic Preservation, for information regarding tax advantages of National Registry of historic properties, special building code standards applicable to historic buildings and structures, and loan and grant programs available to finance historic preservation/renovation.



## **BACKGROUND RESEARCH**

### **Records Search Results**

A records search was completed for the current project area and a half-mile radius by staff at the CCIC at California State University Stanislaus on December 7, 2016 (Appendix A). This search included a review of their collection of mapped prehistoric, historical, and built-environment resources, Department of Parks and Recreation (DPR) Site Records, technical reports, historical maps, and local inventories. Additional consulted sources included the NRHP, California Inventory of Historical Resources/CRHR and listed OHP Archaeological Determinations of Eligibility, California Points of Historical Interest, and California Historical Landmarks.

### ***Previously Conducted Studies***

CCIC records indicate that nine (9) previous cultural resources technical investigations have been conducted within one-half mile of the proposed project area (Table 1). Of these studies, one includes a portion of the project area (ME-04387). ME-04387 is an archaeological and built environment assessment for the University of Merced Development Project and associated local improvements. A portion of this study’s project area includes road improvements to East Yosemite Avenue, adjacent to the project area to the south. While the study discovered several previously unknown cultural resources, none were within one-half mile of the project area.

**Table 1**  
**Previous Technical Studies**

<b>Report Number</b>	<b>Date</b>	<b>Title</b>	<b>Author</b>
<i>Within the project area</i>			
ME-04387	2001	University of California, Merced, Cultural Resources (Archaeological and Historic Built Environment Resources), Technical Report.	URS Corporation
<i>Within the one-half-mile search area</i>			
ME-00584	1991	Cultural Resources Survey for a Residential Subdivision Dunn Road and Cottonwood Avenue Merced County, California.	Bissonette, Linda
ME-00646	1990	Cultural Resource Investigation of the Proposed Black Rascal Estates 43.7 Acres in Merced County, California.	Napton, L. K.
ME-04384	2001	Archaeological Survey Report, Merced Campus Parkway (Draft Technical Report, Federal Aid Project #RPHP21L-0484[001]).	URS Corporation
ME-04385	2001	Archaeological Survey Report--Addendum 1, Merced Campus Parkway (Draft Technical Report, Federal Aid Project #RPHP21L-0484[001]).	URS Corporation
ME-04698	2002	Archaeological Survey Report--Addendum 2, Merced Campus Parkway (Draft Technical Report; Federal Aid Project #RPHP21L-0484[001]).	URS Corporation

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Report Number	Date	Title	Author
ME-05956	2005	Cultural Resources Fieldwork Results for Cottonwood Creek Bicycle Path Corridor, Merced County, California.	Bowden, E.
ME-06949	2002	Historic Property Survey Report, Addendum 1. Merced Campus Parkway, Federal Aid Project #RPHP21L-0484(001).	Dexter, S.
ME-06979	2002	Historic Architectural Survey Report University Community Plan Project Merced County, California.	Herbert, R. F.

### ***Previously Identified Cultural Resources***

CCIC records indicate that no archaeological or built environment resources have been previously identified within the proposed project area, or within one-half mile of the project area.

### **Archival and Building Development Research**

Dudek consulted historic maps and aerial photographs to understand development of The Crossings component and surrounding properties. Historic aerial photographs were available for 1946, 1958, 1999, 2005, 2009, 2010, and 2012 (NETR 2017). The Merced County Assessor's online system was accessed on January 31, 2017, and provided a property record with basic information about the property at 1897 East Yosemite Avenue. Additional primary and secondary source documentation including previous cultural resource studies in the area, irrigation reports, historic newspapers and the a book titled *A History of Merced County* by John Outcalt were used as part of an extensive research effort for possible connections to significant people and events associated with the property.

### **NAHC and Tribal Correspondence**

Dudek requested a NAHC search of their Sacred Lands File (SLF) on December 7, 2016 for the proposed project area. The NAHC results, received December 12, 2016, failed to indicate the presence of Native American cultural resources within the project area or within one-half mile or the project area. Dudek sent information outreach letters to all NAHC-listed Native American tribal representatives on February 6, 2017 (Appendix B). No responses to these outreach efforts have been received to date. Any subsequent tribal outreach responses will be forwarded to the lead agency.

## **CULTURAL CONTEXT**

### **Prehistoric Context**

#### ***Paleoindian Period (ca. 12,000 to 9000 BP)***

There is evidence of human habitation in the region dating to approximately 12,000 years before present (BP). While few sites of Paleoindian age have been identified in this area, occupation is documented to date to at least 11,000 years ago (Fenenga 1993; Fredrickson and Grossman 1977; Hale, Giacinto, and Hanten 2016; Riddell and Olsen 1969; Siefkin 1999; Wallace 1991; Wallace and Riddell 1988). Most of the evidence for a Paleoindian presence in the valley has been limited to surface finds of fluted projectile points (see below), that are typically regarded by archaeologists to be associated with populations occupying this area during the late Pleistocene and early Holocene.

As noted above, the evidence for a Paleoindian occupation in the San Joaquin Valley has been in the form of numerous fluted, concave base (Clovis or “Clovis-like”) projectile points, along with other artifacts presumed to be Paleoindian in age (e.g., “humpies” and crescents; see Fredrickson and Grossman 1977; Sampson 1991). Such artifacts have been collected from surface contexts in several locations, most notably from the southern shoreline of Tulare Lake southeast of Mendota. Unfortunately, many of these discoveries have been made by amateur collectors, many of whom were collecting illegally, so limited provenance is available for these artifacts. This has resulted in an enormous and irretrievable loss of data for understanding the Paleoindian Period in this region.

#### ***Early Period (ca. 9000 to 6000 BP)***

Evidence for the Early Period in the San Joaquin Valley is limited. During this period, however, it is believed that human subsistence was based largely on the hunting of large game and fishing (Sutton 1997:12). Grinding implements, such as mortars, pestles, millingstones, and handstones, appear infrequently during this time in the archaeological record. Other types of artifacts in these assemblages include hand-molded baked clay net weights, Olivella and Haliotis shell beads and ornaments, charmstones, and stemmed projectile points. Bone artifacts are uncommon. Burials are typically fully extended, oriented to the west, and generally have associated artifacts (e.g., quartz crystals). Cremations are rare (Moratto 1984:181–182; Sutton 1997:12).

Two sites that are important for a better understanding of the Early Period on the western slopes of the Sierra Nevada are Skyrocket (CAL-629/930; Bieling et al. 1996; La Jeunesse and Pryor 1998) and Clarks Flat (CAL-342; Milliken et al. 1997; Peak and Crew 1990). The Skyrocket site contained eight components spanning the time between 9400 and 7000 BP, as evidenced by the radiocarbon dates and artifact assemblage (e.g., fluted, stemmed, and Pinto points). La Jeunesse et

al. (2004) viewed the Skyrocket site as transitional from Paleoindian to Archaic times, and interestingly, contained some of the earliest evidence of mortar and pestle use in California. The Clarks Flat site produced the earliest radiocarbon date of the two sites at  $9,570 \pm 150$  radiocarbon years before present (RCYBP; Milliken et al. 1997:22) and also contained stemmed points. Despite the evidence from these two sites, however, Delacorte (2001:14) observed that “both the structure and age of early Holocene occupation in the Sierra Nevada and adjacent portions of California have yet to be well defined.”

### ***Middle Period (ca. 6000 to 3000 BP)***

After approximately 6,000 years BP the climate became generally warmer. This time period is characterized by a more generalized subsistence pattern (Moratto 1984:183; Sutton 1997:12). While hunting, fowling, and fishing continue to be the focus of subsistence activities, an increased emphasis on seed processing (particularly acorns) is evident. Artifacts include Olivella and Haliotis beads and other ornaments, distinctive spindle-shaped charmstones, cobble mortars, chisel-ended pestles, and large projectile points (inferring use of the atlatl) (Moratto 1984:183; Sutton 1997:12). Bone tools, such as awls, fish spear tips, saws, and flakers may be evidence of generalized subsistence, but preservation bias (i.e., the lack of these perishable tools in earlier components) may have affected the archaeological record. Burials are tightly flexed and have few associated artifacts. At the same time, there is a slight increase in the number of cremations. Evidence of violent death appears in the burial assemblage, as indicated by disarticulated skeletons with embedded weapon points (Moratto 1984:183).

Wedel’s (1941) excavations at Buena Vista Lake demonstrate that many of the artifacts are comparable to those found in the Delta and Santa Barbara Channel regions (Siefkin 1999:56; Wedel 1941:147–151), suggesting widespread prehistoric interactions. A human finger bone from KIN-80, on the southwestern shore of Tulare Lake, was radiocarbon dated to  $4,360 \pm 70$  RCYBP, representing one of the only radiocarbon dates on human bone in the Tulare Lake Basin and providing additional direct evidence for occupation in the San Joaquin Valley during the Early Period (Gardner et al. 2005).

### ***Late Period (ca. 3000 to 150 BP)***

The Late Period has been postulated to represent the occupation of the ethnographic Yokuts (e.g., Kroeber 1925; Gayton 1948; Latta 1977; Spier 1978a, 1978b; Wallace 1978), although this presumption is based on assemblage composition and must be conditioned by the recognition that artifacts cannot be equated with culture. This is especially true since it is increasingly understood that the high diversity of identified tribes in California may have been a relatively late phenomenon associated with the development of an individualized currency economy (Bettinger 2015).

During the Late Period in general, subsistence began to focus on the processing of acorns and other costly to process plant foods, with a proportionate decrease in the contribution of hunting, fowling, and fishing (Moratto 1984:183; Sutton 1997:12). Typical artifacts of this period include Olivella beads, Haliotis ornaments, stone beads and cylinders, clamshell disk beads, tubular smoking pipes of schist and steatite, arrow shaft straighteners, flat-bottomed mortars, cylindrical pestles, and small side-notched projectile points for use with the bow and arrow.

## **Ethnohistoric (post-AD 1750)**

### ***Northern Valley Yokut***

The region surrounding the project area would have been within Northern Valley Yokut tribal territory during the ethnohistoric period (Wallace 1978). This group inhabited the lower San Joaquin River watershed and its tributaries extending from Calaveras River in the north to approximately the large bend of the San Joaquin River eastward near Mendota. The lower San Joaquin River meanders through the territory making bends, sloughs, and marshes full of tule reeds as it meanders. Farther from the rivers and marshes, the valley floor would have been dry and sparsely vegetated (Wallace 1978, Kroeber 1925).

Northern Valley Yokut habitation areas were most commonly situated in close proximity to rivers and tributaries, more often on the east side of the river (Kroeber 1925). Yokut populations and habitation areas were generally concentrated near the San Joaquin River, and in the foothills to the east. This focus on waterways can also be seen in their dietary resources, which included various fish, waterfowl, antelope, elk, acorns, tule roots, and various seeds. In particular, salmon was an abundant food during the fall spawning and in springtime. A focus on fishing is also seen in the material culture consisting of net sinkers and harpoons, likely used from rafts constructed from tule reed bundles (Wallace 1978).

Traditional larger habitation areas were often situated upon mounds, on or near riverbanks. Northern Valley Yokut dwellings were constructed of tule reed woven mats placed over a pole frame oval or round structure. These structures were generally from 25-40 feet in diameter, and typically housed a single family (Wallace 1978). This is in contrast to the larger multi-family dwellings erected sometimes by the Southern Yokuts. In addition to dwellings, earth covered ceremonial sweat lodges were constructed. While there were permanent, or semi-permanent, habitation areas in association with riverine resources, peripheral camps used when gathering, hunting, and processing resources such as acorns and seeds were common (Gayton 1948; Kroeber 1925).

The Northern Valley Yokuts saw sharp and devastating decline from disease and relocation to coastal missions nearly immediately after Spanish contact (Osbourne 1992). This served to

further increase with the large influx of cattle ranching, agriculture, and Anglos Americans after the gold rush (Osbourne 1992, Cook 1976).

## **The Historic Period**

### ***Spanish Period (1769–1822)***

Spanish missionization of Alta California was initiated in San Diego (1769). A total of 21 missions were constructed by the Dominican and Franciscan orders between 1769 and 1823. Missions in the region included San Francisco de Asís (1776), Santa Clara de Asís (1776), San José de Guadalupe (1797 in Alameda County), San Rafael Arcángel (1817 in Marin County), and San Francisco Solano (1823 in Sonoma County; Grunsky 1989). The first Spanish arrived in the San Joaquin Valley in 1772, led by don Pedro Fages (Johnson, Dawson, and Haslam 1993). Over the next few decades several other Spanish expeditions would make it to the Merced area of the Valley. During the first decade of the 19<sup>th</sup> Century, a trail was established from the Los Angeles Basin to San Francisco.

### ***Mexican Period (1822–1848)***

Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to Native American populations. Following the establishment of the Mexican republic, the government seized many of the lands belonging to Native Americans, providing them as parts of larger Land Grants to affluent Mexican citizens and rancheros. The 1833 Secularization Act passed by the Mexican Congress ordered half of all mission lands to be transferred to Native Americans, and the other half to remain in trust and managed by an appointed administrator. These orders were never implemented due to several factors that conspired to prevent Native Americans from regaining their patrimony. A Mexican land grant, Rancho Sanjon de Santa Rita, was issued in the vicinity to Francisco Maria Soberanes in 1841 (Ogden 1862). This grant included more than 48,000 acres within present day Merced and Fresno Counties. The grant was generally west of west of the San Joaquin River, including what is now Santa Rita Park and Dos Palos.

### ***American Period (Post 1848)***

California was officially ceded to the United States in 1848, which led to the continued appropriation of Native American territory by ranchers, prospectors, and an increasing number of settlers. The United States Government did little to dissuade these trespasses. By the mid-19<sup>th</sup> Century, Euro-Americans miners, failed in the lodes to the east, began to move into the area to try their luck at agriculture and to work as farm hands (Rolle 1998). From 1850, with the passage of California's Indian Act, until legislative reforms in the late 1880s, state laws provided

little actual protections to Native American population throughout California who often worked on these local ranches and farms.

As the area proved excellent for agriculture, populations continued to rise in Merced. By 1870, a post office was established. The success of farming in the region necessitated the need for more farm hands, steadily increasing the population of Merced. The town was incorporated as the City of Merced in 1889 (Rolle 1998). Merced's position along a Southern Pacific Railroad line ballooned its population in the late 19<sup>th</sup> and earlier 20<sup>th</sup> centuries. The 1930s saw the appearance of large scale "agribusinesses" with the development of new water sources in the region and Merced's importance grew as an agricultural market city (Rolle 1998). During World War II, the Merced County fairgrounds became a temporary detainment center for Japanese Americans removed from their homes through President Roosevelt's Executive Order 9066 (Johnson, Dawson, and Haslam 1993). Post-War Merced saw steady, though not drastic population increase. The City of Merced is currently the county seat of Merced County.

## **CULTURAL RESOURCES SURVEY**

### **Archaeological Resources**

Dudek archaeologist William Burns, RPA, inspected all portions of The Crossings component of the project area on December 9, 2016, using standard archaeological procedures and techniques that meet the Secretary of Interior's Standards and Guidelines for cultural resources inventory. The Crossings portion of the project area includes approximately 25.6 acres in tilled agricultural land and approximately 3 acres developed with a residence a barn and various smaller sheds. The entire area was subject to an intensive pedestrian survey utilizing parallel transects spaced 15 meters apart. Mr. Burns examined the ground surface for surface artifacts, undisturbed areas, or archaeological deposits. Subsurface exposures and rodent burrows were opportunistically inspected for indications of soils with the potential to contain archaeological deposits. Ground visibility was excellent throughout the most of the area (approximately 85%). However, areas surrounding the residence lacked ground visibility as a result of parked agricultural machinery and paved areas (approximately 10%). The entirety of The Crossings portion of the project area has been subject to substantial disturbances related to agricultural and residential use. All portions of The Crossings component were found to be heavily disturbed as a result of past and present agricultural activities, construction of the residence and associated structures, and paved areas around the residence. No archaeological resources were identified within The Crossings component of the project during the field survey.

## **Built Environment Resources**

Dudek archaeologist William Burns is cross-trained in conducting historic built environment field surveys. The survey entailed walking all portions of the 3 acre area that is developed and documenting each building with notes and photographs, specifically noting character-defining features, spatial relationships, and observed alterations. The survey was positive for one residential property and one irrigation ditch within that required recordation and evaluation for historical significance. The residence/farm located at 1897 East Yosemite Avenue on APN 060-570-010. The irrigation canal, which is an extension of the Yosemite Lateral, borders the project area on the north. Both were recorded on the appropriate set of DPR forms (Appendix C). Significance evaluations for the two resources are presented in the following section.

## **YOSEMITE LATERAL EXTENSION EVALUATION**

An extension of the Yosemite Lateral irrigation canal (P-24-001891) enters the northeast corner of the project area and then borders the entire north boundary of the site. The irrigation canal is an open air, earthen ditch approximately 16 feet wide and 5.8 feet deep. Project designs currently plan on piping this irrigation ditch.

The Yosemite Lateral flows to the Project area from approximately 3 miles north at Yosemite Lake, a manmade reservoir. Yosemite Lake and Yosemite Lateral are both part of the Merced Irrigation District (MID; P-24-001909). The Yosemite Lateral itself begins at the Fairfield Channel, approximately 2.5 miles to the north by Yosemite Lake, and flows south until draining into Cottonwood Creek. The section at the northern boundary of the project area is a small conduit for the Yosemite Lateral. Below is a brief history from the DPR form.

The Yosemite Lateral, probably built in 1888, is one of the oldest canals in this part of the country. The Crocker Huffman Land and Water Company built the lateral for the purposes of delivering water to the Yosemite Colony. As built, the lateral drew water through headgates at Lake Yosemite. Probably at the time of construction of the Fairfield canal, ca. 1903, the Yosemite Lateral was realigned to draw from the Fairfield. The Fairfield Canal, it appears, took over headgates formerly used by the Yosemite Lateral.

This extension of the lateral flows west from the main section of the Yosemite Lateral across the northern boundary of the project area. It is earthen and covered in grass, trapezoidal in shape and has a flat bottom that is earth/grass/river rock with low flat berms on each side of it. Seven particular features of the irrigation ditch are present within the project area, including a concrete dam, two concrete culverts with valve, two wood and concrete dams, and two small outlets with valves. Following are more detailed descriptions of these features.



Feature 1, located 650 feet east of N Gardner Avenue is a concrete dam. There are notches for a sluice gate but none of the boards remain. A few cracks are present in the concrete on the north side. At the eastern side of the feature is a valve to irrigate the fields to the south. The canal is 16 feet wide and 51 inches deep at this feature. Feature 2, located 1300 feet east of N Gardner Avenue is a concrete culvert leading to a ditch with a valve in a concrete box. The sluice gate is not present. The irrigation ditch is 16 feet wide and 70 inches deep at this feature. Feature 3, located 1900 feet east of N Gardner Avenue where the ditch turns south, is a concrete and wooden dam with the sluice gate still present. The concrete walls align with the canal. The dam allows a 4 foot wide opening with 2 inch by 4 inch boards present. The irrigation ditch is 18 feet wide and 64 inches deep at this feature. Feature 4, located 100 feet south of Feature 3, is an outlet on the south side of the ditch with a valve. Feature 5, located 270 feet south of Feature 3 where the ditch begins to turn east again, is an outlet on the south side of the ditch similar to Feature 4 but the valve is missing. Feature 6, located 90 feet west of Hatch Road, is a concrete dam with no sluice gate still present. The dam allows a 4 foot wide opening. The irrigation ditch is 16 feet wide and 40 inches deep at this feature. Feature 7, located 10 feet west of Hatch Road, is a concrete lined culvert. The irrigation ditch is 16 feet wide and 70 in deep at this feature.

The DPR form, written by JRP Historical Consulting Services in 2000, recommends P-24-001891 ineligible for listing in the NRHP/CRHR due to its very low degree of integrity. Dudek agrees with this recommendation for the extension to the Yosemite Lateral bordering the Project area on the north.

## **PROPERTY SIGNIFICANCE EVALUATION**

The property significance evaluation was prepared by Dudek architectural historian Sarah Corder, MFA, who meets the Secretary of the Interior's Professional Qualification Standards for architectural history. The evaluation considers both NRHP and CRHR significance criteria and integrity requirements.

## **Property Description**

### ***Main House***



*Overview of the Main House, View to Northeast*

The subject property is a vernacular, 1.5-story, single-family residence. The building sits on a concrete slab foundation and features a hipped roof sheathed in wood shingles. Exterior walls are clad in horizontal wood siding. The main entrance to the house is located on the south elevation. The entry door is located beneath a metal awning and is accessed via a poured concrete walkway and four wood steps. The façade of the house is asymmetrical with a central entry metal screen door, paired one-over-one windows on the west section of the façade; a bay window projection with three windows on the east section of the façade; and a projecting dormer on the half story. All windows on this elevation are one-over-one, wood-framed single-hung and the eastern projection features metal awnings above all windows. The west elevation is asymmetrical and features a half story projecting dormer and an irregular first story fenestration with a variety of window sizes from south to north. Two windows on this elevation have metal awnings. All windows on the west elevation are one-over-one, single hung wood-frame.

The rear (north) elevation of the house features a centered entry door with a shed style wooden porch with wooden supports, irregular fenestration on the first story and a projecting dormer on half story. All windows on the rear of the house are the same one-over-one, single hung wood windows seen on all other elevations in varying sizes and arrangements. The east elevation is asymmetrical featuring an irregular fenestration on the first story with a three bay window projection offset to the south and a projecting dormer on the half story.

Various heating and cooling elements are visible from the east elevation including an interior brick chimney, two metal stovepipes and what appears to be a metal cooling unit on the roof and on the ground near the bay window projection. There is a chain link fence that runs along the front of the main residence and the west side of the main residence. The enclosure features a poured concrete sidewalk, a mature tree and sparse grass.

Merced County property records indicate that the residence was built in 1920. The assessor's office documentation states that the building currently has 990 livable square feet, 1 bathroom, 2 bedrooms and a total of 5 rooms. Two of the building's elevations (north and south) contain entrances and the rear entrance features a wooden porch. The subject property also has multiple structures to the north of the main residence that are accessed by driveways on the east and west sides of the residence. The single-family residence and seven agricultural structures are located on approximately 27-acres of agricultural land. The property has a large collection of automobile parts and heavy equipment, as well as farming equipment and machinery, which supports the current resident's heavy hauling business, Reniero's Heavy Haul.

### ***Outbuilding 1***



*Outbuilding 1 South Elevation*

A small one-story wood frame structure is located north of the main residence. The structure is rectangular in-plan and features unpainted horizontal wooden siding, and a front gabled roof sheathed in composition shingles. The entry door is offset to the east and accessed by a small poured concrete stoop under a small front gabled wooden projection. There is also a small vent directly under the front gable of the structure.

## ***Outbuilding 2***



### *Outbuilding 2 West Elevation*

Another one-story structure is located north of the main residence. The structure is rectangular in-plan with board-and-batten siding. Only the west elevation is visible due to a roof collapse and heavy vegetation growth on and around the building. The west elevation has a small fixed window offset to the south. There also appears to be a large fixed window and entry door offset to the north, but the heavy equipment and collapsed roof made it difficult to clearly identify materials and details. This structure has poor integrity overall.

### ***Outbuilding 3***



*Outbuilding 3 North Elevation*

The large wooden barn is roughly rectangular in plan with a steeply sloped shed roof that is sheathed in wood shingles. The north elevation of the building is clad in board-and-batten siding and features a large sliding door to the west and a standard entry door to the east. On the west side of the elevation there is projecting wooden track for the sliding door that does not appear to be original to the barn. The east elevation shows the steep pitch of the shed roof, and is clad in board-and-batten siding and features two twelve paned wood windows. The south elevation is clad in horizontal wood siding and features a set of paired single paned wood windows on the second story. The west elevation is clad in board-and-batten siding to the north and in horizontal wood siding to the south. The west elevation features a large sliding door to the south and an open storage area under a large shed roof to the north.

#### **Outbuilding 4**



*Outbuilding 4 South Elevation*

A small one-story shed with a pyramidal roof sheathed in composition shingles and clad in horizontal wood siding. The structure features a single wooden entry door on the south elevation.

#### **Outbuilding 5**



*Outbuilding 5 South Elevation*

The one-story front gabled barn has a wood shingle roof and is clad with board and batten siding and features a central block with two doors that swing out, which is flanked by two slightly recessed wings with single door entry points under shed roofs sheathed in wood shingles. The east elevation features a now enclosed section with roughly hewn vertical wooden panels and exposed rafters. The north (rear) elevation is clad in board and batten and features a wooden entry door to the west.

### ***Outbuilding 6***



### *Outbuilding 6 North and East Elevations*

The small one-story structure with a front gabled roof is located slightly northeast of Outbuilding 5 and is clad in board and batten. There is a central entry door on the north elevation. The roof is missing all original materials. All other elevations are not visible due to heavy equipment and various farming machinery and materials.

## **Outbuilding 7**



*Outbuilding 7 South Elevation*

The small one-story structure with a front gable roof sheathed in standing seam metal is clad in horizontal siding and is located to the east of Outbuilding 5. The front (south) elevation features a slightly offset to the east wood paneled door that serves as the only entry point to the structure.

## **Property Development History**

The history of the residence, dating back to its construction in 1920, is altogether lacking despite extensive archival and property record research. With regard to design, materials, and workmanship, a review of Merced County electronic and hard copy property records yielded no building permits for new construction or alteration. Observed alterations to the property include the addition of heating and cooling elements to the roof of the residence, the addition of window air conditioning units, metal awnings, and a replaced/new concrete walkway around the property.

Historic aerial photographs were reviewed to identify any other changes to the property over time. The 1946 historic aerial photograph shows a narrow strip of property with a single access point with Outbuildings 1, 2, 3 and 5 in their existing locations. The historic aerial photograph from 1958 shows a small shed constructed to the south east of Outbuilding 5, which is no longer present on the property. There is a substantial gap in the historic aerial photographs from 1958-1999 and by 1999 all of the current buildings appear on the aerial and the property has changed dramatically with the addition of a U shaped drive through the property giving two access points to the property from East Yosemite Avenue. The 1999 aerial photograph also shows extensive agricultural machinery/equipment around the property. The aerial photographs from 1958 to 1999 show a



significant increase in the footprint of the residential portion of the property and a significant change in access points for the property. No additional changes were observed to the property in any of the remaining aerial photographs from 2005, 2009, 2010, 2012 (NETR 1946, 1958, 1999, 2005, 2009, 2010, 2012).

While no original building plans were identified, the property appears to retain much of its original simplistic vernacular style/design and workmanship, and its exterior materials appear to be largely intact. The property's feeling and association as a rural farming residence also remain intact. It appears that little has changed on the property, but the surrounding area shows heavy suburban development and a clear departure from the early rural development patterns in the area.

## **Property Historic Context**

### ***Merced County Agricultural Development***

Merced County was established in 1855 and named after the Merced Lake. Prior to 1855, Merced County was part of Mariposa County and was sparsely populated with the 1860 census reflecting a population of only 1,141. At the time of its founding Merced County was largely made up of farms and ranches. Large scale population growth started in Merced County in 1872, when the Southern Pacific Railroad established a stop in Merced and transformed the landscape and development pattern of the county. By 1900 the census showed a population of 9,215 (Oucalt 1925: 297).

Agricultural development in Merced County is also an important pattern of development and continues to be a key element in the economic development of Merced County today. In 1873 the Farmers Canal Company was formed based on the work of civil engineer William Collier. While the Farmers Canal Company was successful in creating an extension to Canal Creek, they were unsuccessful in moving the canal further and sold their company to Charles Crocker and C.H. Huffman in 1882, which became Crocker-Huffman Land and Water Company in 1888. It was noted in a USGS report from 1899 that the Crocker-Huffman canal was the most important and reliable system in the San Joaquin Valley. By 1919 the Merced Irrigation District was formed and projects like the Exchequer Dam were undertaken and irrigation was taken to the next level. The important developments in irrigation systems allowed Merced County to transition from dry farming of small grains and livestock ranching to irrigation based farming. This transition allowed the farmers to switch from small grain farming and cattle ranching to tree and row crops. By the early decades of the twentieth century, dairy farming also became popular in Merced County and by the 1920s livestock was the most profitable business in Merced County (Grunsky 1899: 34-36, Oucalt 1925: 302, 340).

Land subdivision was also a key factor in the development of Merced County. Beginning with the development of irrigation companies and the establishment of the railroad in Merced, large portions of the county were subdivided into colonies. Although most of the development was closely tied to water rights and water development, the land development pattern created by large landholding entities like the railroad and the Crocker-Huffman Land and Water Company continued to be part of the development pattern throughout the 20th century. The colony style subdivision of properties created large ranches, small farms, ranchette and eventually medium density suburban developments throughout the county. (Dunbar 2000, Oucalt 1925:336-337).

### **California Bungalow Style**

The subject property is an example of a vernacular bungalow-style (with nods to the Prairie style) residence and small family farm constructed in 1920. Merced, like other counties in California, had a residential boom in the 1920s. To support the population of 24,579 (Oucalt 1925:297), builders in Merced turned to one of the most popular styles of the time, the Craftsman style bungalow.

The Craftsman architecture movement in the United States is one of the most prevalent and widespread movements that appealed to almost all social classes. One of the most notable architectural developments arising from the Craftsman movement is the Bungalow. The Arts and Crafts movement began in the mid-late part of the 19th century in England as a reactionary movement against the excessiveness and ostentatious designs of the Victorian era. One of the key contributors to bringing the Craftsman movement to the United States was Gustav Stickley. His work and efforts helped fuel the development of the Craftsman movement and spread it across the United States.

Upon its arrival in California, the Craftsman movement produced a truly unique California architectural form – the California Bungalow. Developed by the work of Greene and Greene in Pasadena, the California Bungalow became one of the most widespread architectural movements in California. The adaptation of the Greene and Greene bungalow model for the masses contributed to its appeal and application to meet the needs of the housing booms happening across California following World War I. Builders and contractors began to mass-produce bungalow designs in pattern books and made them more available to the public. Although the Greene and Greene bungalows represent the highest artistic and pure forms of the movement; it is in the modest, vernacular application in places like Merced County that the mass production of the key characteristics of the style can be seen.

## **NRHP/CRHR Designation Criteria**

The subject property is one of many family farms in the area from approximately the same period of construction and no significant historical associations were identified. Due to a lack of significant associations with events important to history, the subject property does not appear eligible under NRHP/CRHR Criteria A/1.

Archival research also failed to indicate any associations with significant persons. For these reasons, the subject property does not appear eligible under NRHP/CRHR Criteria B/2.

The main house is an example of a vernacular bungalow-style (with nods to the Prairie style) residence and small family farm constructed in 1920. Merced, like other counties in California, had a residential boom in the 1920s. To support the population of 24,579 (Oucalt 1925:297), builders in Merced turned to one of the most popular styles of the time, the Craftsman style bungalow.

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Although the Greene and Greene bungalows represent the highest artistic and pure forms of the movement; it is in the modest, vernacular application in places like Merced County that the mass production of the key characteristics of the style can be seen. However, the main house lacks some of the most distinctive characteristics of vernacular bungalows in California, including a full or partial front porch with columns, multi-pane windows, and exposed rafters.

Further, the seven outbuildings on the property primarily consist of ubiquitous structures in extremely poor condition. The two barns (Outbuildings 3 and 5) represent poor examples of three-portal style and transverse-style barns, respectively. These buildings lack integrity and exhibit signs of alteration/replaced components, as evidenced by mixed material types (corrugated metal and wood). In general, the barns lack important character-defining features of their respective styles.

Archival building permit research failed to provide information regarding the original builder or architect, but it is not likely to be the work of a master. Finally, the property does not appear eligible as a contributing property to an historic district. For these reasons, the subject property does not appear eligible under NRHP/CRHR Criteria C/3 (McAlester 2013:566-578, Gottfried 2009: 26, 190-194, SurveyLA Context 14-15).

The property is unlikely to yield any information important in prehistory or history and therefore does not appear eligible under NRHP/CRHR Criteria D/4.

### **Integrity Assessment**

The property's location has remained unchanged since its initial construction; always located on a large rural/agricultural property, functioning as a single-family residence and family farm. However, a review of aerial photographs shows extensive change to the land surrounding the farm. When the subject property was originally developed it was surrounded by other large and small farms and the area was quite rural, but an aerial photograph from 1999 shows the development of multiple residential subdivisions to the south, east and west of the property. The area around the property continues to develop as evidenced by aerial photographs from 2005 and 2009 obtained from the National Environmental Research, LLC. The most recent aerial photo from 2012 shows a clear shift from rural development to suburban development with only a few small farming parcels remaining to the north of the property (NETR 2005, 2009, 2010, 2012). Therefore, the integrity of setting has been eroded as a result of encroaching development. The main house appears to retain requisite integrity of design, materials, and workmanship, however, it lacks important character-defining features of the vernacular bungalow style in California. The associated outbuildings on the property exhibit poor integrity overall, primarily as a result of neglect and weathering. Changes to the property's setting overtime, in combination with the paving of the property and poor condition of the outbuildings, have greatly affected the integrity of feeling for the property as a rural agricultural property. Finally, no important associated were identified with the property.

## **Summary of Findings**

The property at 1897 East Yosemite Avenue is not significant to local, regional or national patterns of development or significant people, and suffers from integrity issues. As a result, the property is recommended not eligible under all NRHP and CRHR designation criteria. Therefore, the property is not considered a historical resource for the purposes of CEQA.

## **SUMMARY AND MANAGEMENT RECOMMENDATIONS**

### **Archaeological Resources**

Observation of the present conditions within the proposed project indicates that all areas have been subject to a substantial degree of past disturbances related to agricultural and residential activities. No newly identified archaeological resources were recorded during the pedestrian survey of The Crossings area. Further, a CCIC records search did not identify the presence of cultural resources within the proposed project APE. An NAHC Sacred Lands File search and subsequent information outreach with NAHC-listed tribal representatives also failed to indicate the presence cultural resources. The project, as currently designed, appears to have a low potential for encountering intact cultural deposits during ground disturbing activities, and would have no impact to known cultural resources. Based on these negative findings and the observed conditions of The Crossings area, no additional cultural resources efforts, including archaeological monitoring, are recommended to be necessary beyond standard protection measures for unanticipated discoveries of cultural resources and human remains.

### ***Unanticipated Discovery of Archaeological Resources***

In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under CEQA (14 CCR 15064.5(f); PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

### ***Unanticipated Discovery of Human Remains***

In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County Coroner shall be immediately notified of the discovery. No further excavation


or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendent (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.


### **Built Environment Resources**

As a result of the current study, two potential historical resources were identified within The Crossings portion of the project area. The extension to the Yosemite Lateral (P-24-001891) was previously recommended ineligible for the NRHP/CRHR by JRP Historical Consulting Services (P-24-001891 DPR form) and Dudek agrees with this recommendation. The subject property at 1897 East Yosemite Avenue was found not eligible under all NRHP and CRHR designation criteria due to a lack of significant historical associations and architectural merit. Therefore, the subject property is not considered an historical resource for the purposes of CEQA. No additional management recommendations have been identified for The Crossings component. However, it is recommended that a qualified architectural historian assess the Remainder Area for potential impacts to historical resources prior to any project-specific activities occurring.

If you have any questions about this report, please contact Senior Archaeologist Adam Giacinto at [agiacinto@dudek.com](mailto:agiacinto@dudek.com); or Senior Architectural Historian Samantha Murray at [smurray@dudek.com](mailto:smurray@dudek.com).

Respectfully Submitted,

  
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*Att: Appendix A: CCIC Records Search Results  
Appendix B: NAHC and Tribal Correspondence  
Appendix C: DPR Forms*

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**NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION**

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**Firm:** Dudek

**Project Proponent:** City of Merced

**Report Date:** August 2020

**Report Title:** Cultural Resources Letter Report for the Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project, City of Merced, California

**Type of Study:** Archaeological Inventory, Intensive Pedestrian Survey

**Acreage:** 30 acres

**Resources:** P-24-001891

**USGS Quads:** Section 9, Township 7 South, Range 14 East, Merced Quadrangle USGS map

**Keywords:** Intensive Pedestrian Survey, Merced

**APPENDIX A**  
*CONFIDENTIAL*  
*CCIC Records Search Results*

# **APPENDIX B**

## *NAHC and Tribal Correspondence*

February 6, 2017

Mr. Joey Garfield, Tribal Archaeologist  
Tule River Indian Tribe  
P.O. Box 589  
Porterville, CA 93258

***Subject: Information Request for the University Village Student Housing Project, City of Merced, California***

Dear Mr. Garfield,

Dudek is conducting a cultural resources survey for the proposed University Village Student Housing Project in the City of Merced, California. Construction of student housing, retail area, and other University buildings is planned by UC Merced. The area is comprised of partially developed agricultural land undeveloped land located north of E Yosemite Dr. and east of N Gardner Ave. This project falls in Township 7S; Range 14E; Section 9 of the Merced, CA USGS map (Figure 1).

The Native American Heritage Commission conducted a Sacred Lands file search for the project area. No Native American cultural resources were identified within a one-half mile radius of the proposed project. I am writing to you in order to find out if you, or your tribal community, have any knowledge of cultural resources or places that may be impacted by the proposed project.

If you have any information or concerns pertaining to such information, please contact me by phone or email.

Respectfully,

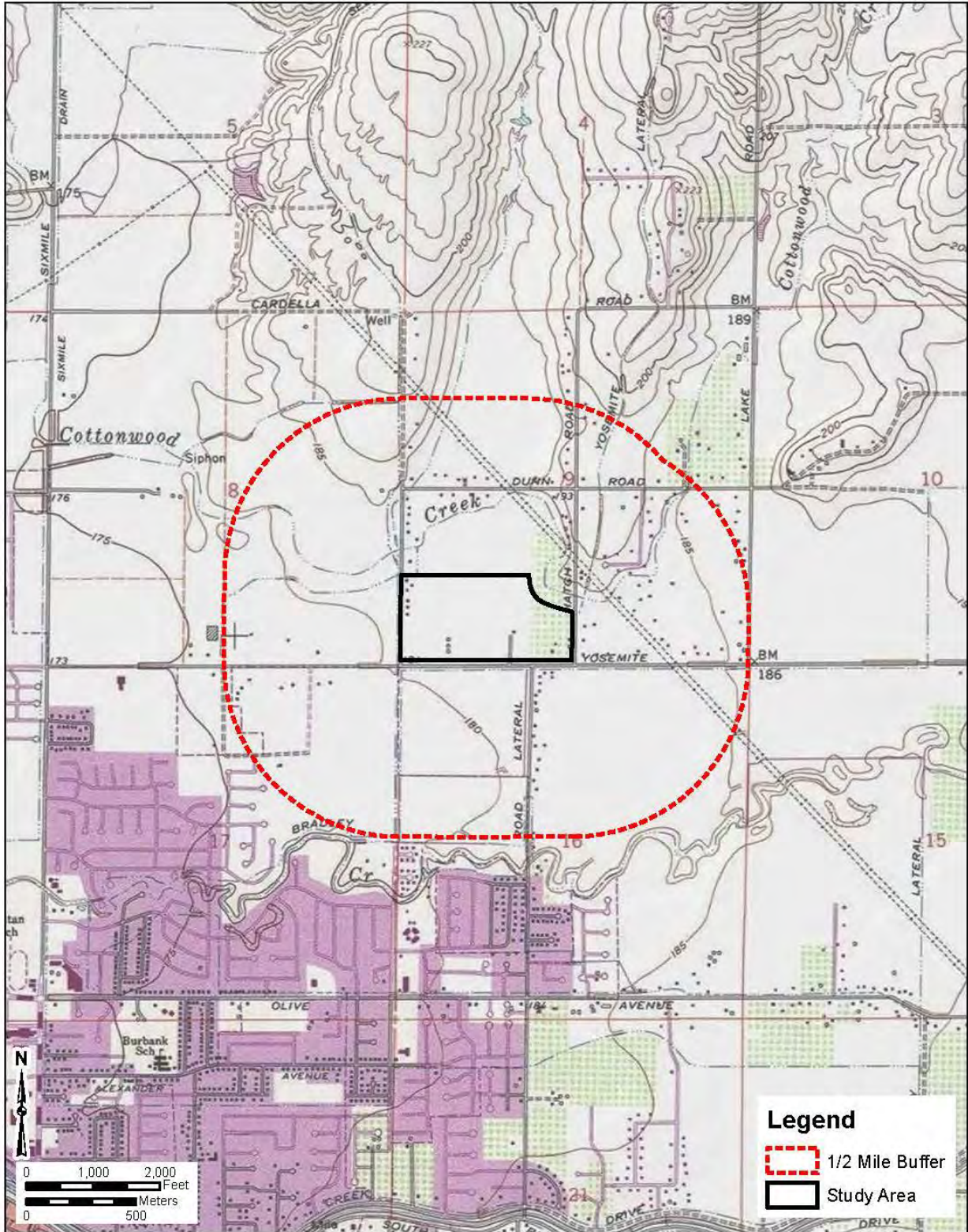


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William Burns, MSc, RPA  
Archaeologist  
Phone: (760) 334-1156  
Email: wburns@dudek.com

**Attachments:**

*Figures 1: Records Search map*



SOURCE: USGS 7.5-Minute Series Merced Quadrangle  
Township 7S; Range 14E; Sections 8, 9, 10, 15, 16, 17

February 6, 2017

Ms. Lois Martin, Chairperson  
Southern Sierra Miwuk Nation  
P.O. Box 186  
Mariposa, CA 95338

***Subject: Information Request for the University Village Student Housing Project, City of Merced, California***

Dear Ms. Martin,

Dudek is conducting a cultural resources survey for the proposed University Village Student Housing Project in the City of Merced, California. Construction of student housing, retail area, and other University buildings is planned by UC Merced. The area is comprised of partially developed agricultural land undeveloped land located north of E Yosemite Dr. and east of N Gardner Ave. This project falls in Township 7S; Range 14E; Section 9 of the Merced, CA USGS map (Figure 1).

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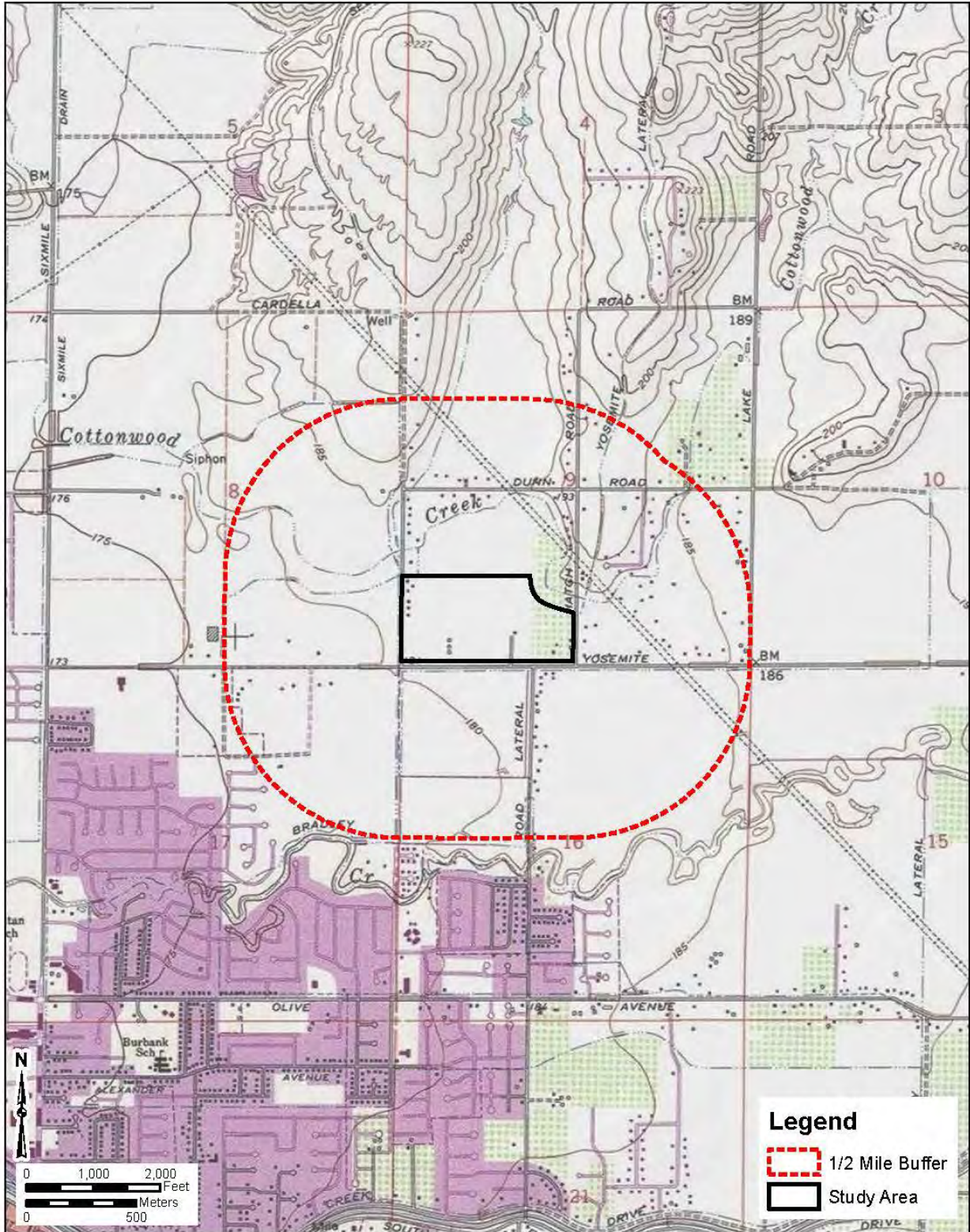
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William Burns, MSc, RPA  
Archaeologist  
Phone: (760) 334-1156  
Email: wburns@dudek.com

**Attachments:**

*Figures 1: Records Search map*





SOURCE: USGS 7.5-Minute Series Merced Quadrangle  
Township 7S; Range 14E; Sections 8, 9, 10, 15, 16, 17

February 6, 2017

Ms. Katherine Erolinda Perez,  
P.O. Box 717  
Linden, CA 95235

***Subject: Information Request for the University Village Student Housing Project, City of Merced, California***

Dear Ms. Perez,

Dudek is conducting a cultural resources survey for the proposed University Village Student Housing Project in the City of Merced, California. Construction of student housing, retail area, and other University buildings is planned by UC Merced. The area is comprised of partially developed agricultural land undeveloped land located north of E Yosemite Dr. and east of N Gardner Ave. This project falls in Township 7S; Range 14E; Section 9 of the Merced, CA USGS map (Figure 1).

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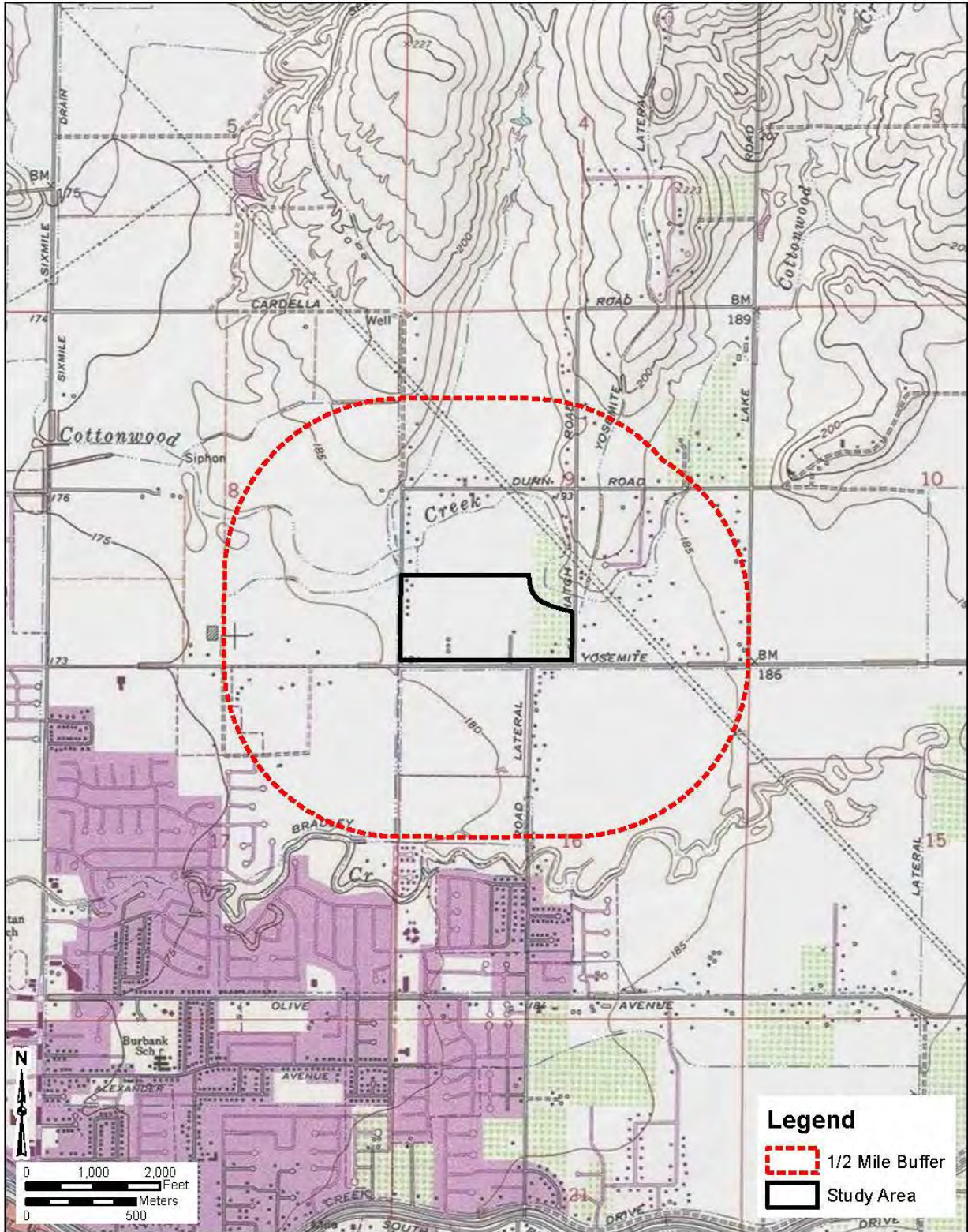


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William Burns, MSc, RPA  
Archaeologist  
Phone: (760) 334-1156  
Email: wburns@dudek.com

**Attachments:**

*Figure 1: Records Search map*



SOURCE: USGS 7.5-Minute Series Merced Quadrangle  
Township 7S; Range 14E; Sections 8, 9, 10, 15, 16, 17

February 6, 2017

Mr. Neil Peyron, Chairperson  
Tule River Indian Tribe  
P.O. Box 589  
Porterville, CA 93258

***Subject: Information Request for the University Village Student Housing Project, City of Merced, California***

Dear Mr. Peyron,

Dudek is conducting a cultural resources survey for the proposed University Village Student Housing Project in the City of Merced, California. Construction of student housing, retail area, and other University buildings is planned by UC Merced. The area is comprised of partially developed agricultural land undeveloped land located north of E Yosemite Dr. and east of N Gardner Ave. This project falls in Township 7S; Range 14E; Section 9 of the Merced, CA USGS map (Figure 1).

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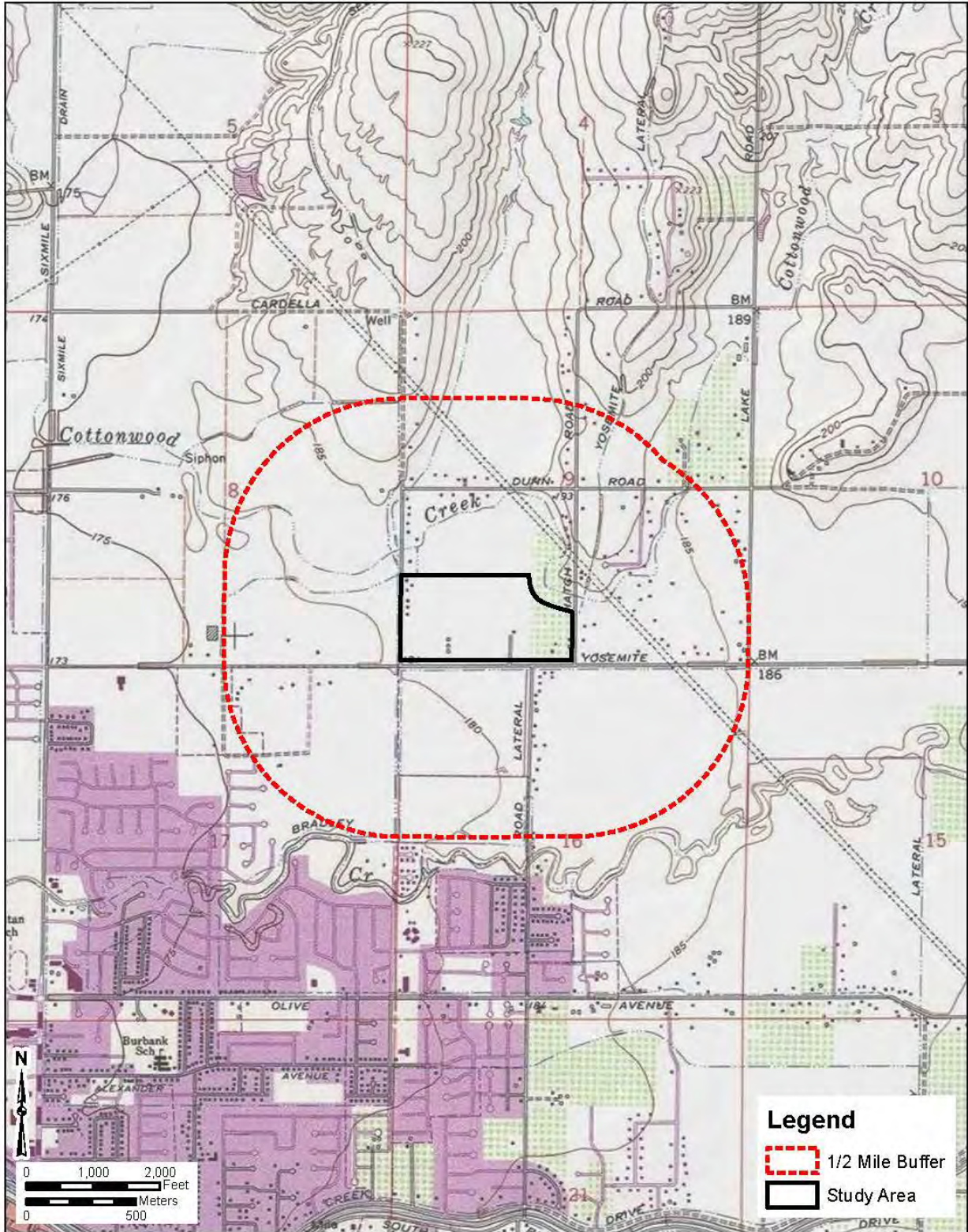


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William Burns, MSc, RPA  
Archaeologist  
Phone: (760) 334-1156  
Email: wburns@dudek.com

**Attachments:**

*Figures 1: Records Search map*



SOURCE: USGS 7.5-Minute Series Merced Quadrangle  
Township 7S; Range 14E; Sections 8, 9, 10, 15, 16, 17

February 6, 2017

Ms. Kerri Vera, Environmental Department  
Tule River Indian Tribe  
P.O. Box 589  
Porterville, CA 93258

***Subject: Information Request for the University Village Student Housing Project, City of Merced, California***

Dear Ms. Vera,

Dudek is conducting a cultural resources survey for the proposed University Village Student Housing Project in the City of Merced, California. Construction of student housing, retail area, and other University buildings is planned by UC Merced. The area is comprised of partially developed agricultural land undeveloped land located north of E Yosemite Dr. and east of N Gardner Ave. This project falls in Township 7S; Range 14E; Section 9 of the Merced, CA USGS map (Figure 1).

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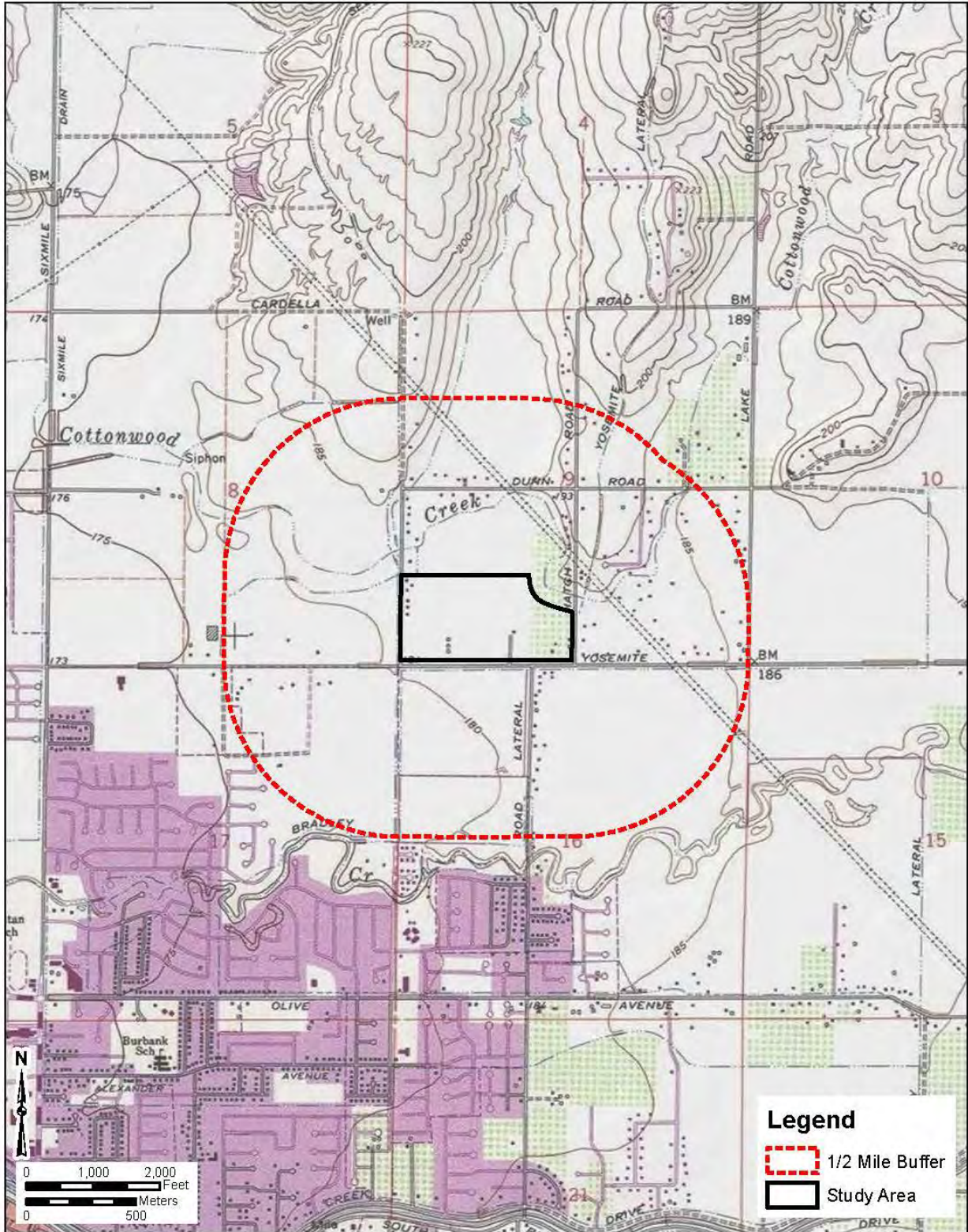


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William Burns, MSc, RPA  
Archaeologist  
Phone: (760) 334-1156  
Email: wburns@dudek.com

**Attachments:**

*Figures 1: Records Search map*



SOURCE: USGS 7.5-Minute Series Merced Quadrangle  
Township 7S; Range 14E; Sections 8, 9, 10, 15, 16, 17

**APPENDIX C**  
*DPR Forms*



\*Recorded by: Dudek

\*Date: 8/25/2020

Continuation

Update

This DPR serves as an update to the original discovery. Dudek revisited the resource during the 2020 Cultural Resources Inventory of the Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project, City of Merced California.

P-24-001891 was initially recorded by JRP Historical Consulting Services in 2000 as the Yosemite Lateral, an irrigation canal and part of the Merced Irrigation District (P-24-001909). An extension of the Yosemite Lateral bordered the project area for the above project and so was inspected and rerecorded.

This extension of the lateral flows west from the main section of the Yosemite Lateral across the northern boundary of the project area. It is earthen and covered in grass, trapezoidal in shape and has flat bottom that is earth/grass/river rock with low flat berms on each side of it. Seven particular features of the irrigation ditch are present within the project area, including a concrete dam, two concrete culvert with valve, two wood and concrete dam, and two small outlets with valves. Following are more detailed descriptions of these features.

Feature 1, located 650 feet east of N Gardner Avenue, is a concrete dam. There are notches for a sluice gate but none of the boards remain. A few cracks are present in the concrete on the north side. At the eastern side of the feature is a valve to irrigate the fields to the south. The canal is 16 feet wide and 51 inches deep at this feature. Feature 2, located 1300 feet east of N Gardner Avenue is a concrete culvert leading to a ditch with a valve in a concrete box. The sluice gate is not present. The irrigation ditch is 16 feet wide and 70 inches deep at this feature. Feature 3, located 1900 feet east of N Gardner Avenue where the ditch turn south, is a concrete and wooden dam with the sluice gate still present. The concrete walls align with the canal. The dam allows a 4 foot wide opening with 2 inch by 4 inch boards present. The irrigation ditch is 18 feet wide and 64 inches deep at this feature. Feature 4, located 100 feet south of Feature 3, is an outlet on the south side of the ditch with a valve. Feature 5, located 270 feet south of Feature 3 where the ditch beings to turn east again, is an outlet on the south side of the ditch similar to Feature 4 but the valve is missing. Feature 6, located 90 feet west of Hatch Road, is a concrete dam with no sluice gate still present. The dam allows a 4 foot wide opening. The irrigation ditch is 16 feet wide and 40 inches deep at this feature. Feature 7, located 10 feet west of Hatch Road, is a concrete lined culvert. The irrigation ditch is 16 feet wide and 70 in deep at this feature.

The DPR form, written by JRP Historical Consulting Services in 2000, recommends P-24-001891 ineligible for listing in the NRHP/CRHR due to its very low degree of integrity. The resource appears to be in the same condition as was previously reported and Dudek agrees with this recommendation for the extension to the Yosemite Lateral.

