INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

PARSONS AVENUE BRIDGE OVER BEAR CREEK PROJECT

February 2014

Quad Knopf

Initial Study/Mitigated Negative Declaration
Parsons Avenue Bridge Over Bear Creek Project

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INTRODUCTION

SECTION ONE – INTRODUCTION

1.1 CEQA Requirements

This document is the Initial Study/Mitigated Negative Declaration on the potential environmental effects of the new four-lane Parsons Avenue Bridge Project over Bear Creek, located in the City of Merced. The City of Merced will act as the Lead Agency for this project pursuant to the *California Environmental Quality Act (CEQA)* and the *CEQA Guidelines.*

Section 15063 of the CEQA Guidelines requires the Lead Agency to prepare an Initial Study to determine whether a discretionary project will have a significant effect on the environment. The purposes of an Initial Study, as listed under Section 15063[c] of the CEQA Guidelines, include:

(1) Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR [Environmental Impact Report] or a Negative Declaration;

(2) Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration;

(3) Assist in the preparation of an EIR, if one is required, by:

- *(A) Focusing the EIR on the effects determined to be significant,*
- *(B) Identifying the effects determined not to be significant,*
- *(C) Explaining the reasons for determining that potentially significant effects would not be significant, and*
- *(D) Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.*

(4) Facilitate environmental assessment early in the design of a project;

(5) Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment;

(6) Eliminate unnecessary EIRs; and

(7) Determine whether a previously prepared EIR could be used with the project.

Regardless of the type of CEQA document that must be prepared, the basic purpose of the CEQA process as set forth in the CEQA Guidelines Section 15002(a) is to:

(1) Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.

(2) Identify ways that environmental damage can be avoided or significantly reduced.

(3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.

(4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

According to Section 15070(b), a Mitigated Negative Declaration is appropriate if it is determined that:

(1) Revisions in the project plans or proposals made by or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

The Initial Study contained in Section Three of this document has determined that with mitigation measures and features incorporated into the project design and operation, the environmental impacts are less than significant.

1.2 Intended Uses of the Mitigated Negative Declaration

The proposed project has been evaluated with respect to the provisions of the adopted Merced Vision 2030 General Plan and the corresponding potential adverse environmental impacts, adopted environmental impact mitigation measures and determinations of overriding considerations established by the certification of the related Final Program Environmental Impact Report (FEIR) (SCH #2008071069). The proposed project has been determined to be fully in the scope of the approved General Plan and FEIR as provided by the California Environmental Quality Act (CEQA), as codified in the Public Resources Code (PRC) Section 21157.1 (d) and the CEQA Guidelines Section 1577.

Based upon an analysis of the project, as summarized in the following environmental assessment checklist, it has been determined that the project may contribute to the creation of certain environmental effects or the project may be adversely impacted by existing conditions as addressed herein. However, these potential impacts have been determined to be equivalent to or less than those adverse impacts identified by the General Plan FEIR. It has been further determined that all applicable mitigation measures of the General Plan FEIR have been applied to the project, to assure that the project will not cause significant adverse cumulative impacts, growth inducing impacts and irreversible significant effects beyond those identified by the General Plan FEIR as provided by CEQA Section 1577(b)(3) and 15177(d). In addition, pursuant to Public Resources Code, Section 21157.6(b) (1), it has been determined that no substantial changes have occurred with respect to the circumstances under which the FEIR was certified and that no new information, which was not known and could not have been known at the time that the FEIR was certified as complete, has become available.

This Mitigated Negative Declaration is an informational document that is intended to inform decision-makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed project. The environmental review process has been established to enable public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the City must balance any potential environmental effects against other public objectives, including economic and social goals.

The City of Merced (City), as the Lead Agency, has determined, based on the Initial Study, that the environmental review for the proposed application can be completed with a Mitigated Negative Declaration. This report, together with a Notice of Intent to Adopt a Negative Declaration, will be circulated and published for a period of 30 days for public and agency review. Responsible agencies that may have discretionary approval authority over the project and trustee agencies having jurisdiction over natural resources affected by the project will have the opportunity to review and provide comments during the review period. Other agencies and the public may also contribute comments.

The written and oral comments received during the public review period will be considered by the City prior to adopting the Mitigated Negative Declaration.

1.3 Document Organization and Contents

The Mitigated Negative Declaration is organized as follows:

Section I. Introduction presents an introduction to the entire report. This section identifies contact persons involved in the process, scope of environmental review and environmental procedures.

Section II. Project Description describes the proposed project and project design features.

Section III. Environmental Evaluation contains the environmental checklist and Initial Study form. The checklist form presents results of the environmental evaluation for the proposed project and those issue areas that would either have a potentially significant impact, a less than significant impact, or no impact.

Section IV. Mitigation Monitoring Plan

Section V. Persons and Documents Consulted

Section VI. List of Preparers

SECTION TWO

PROJECT DESCRIPTION

SECTION TWO – PROJECT DESCRIPTION

2.1 Introduction

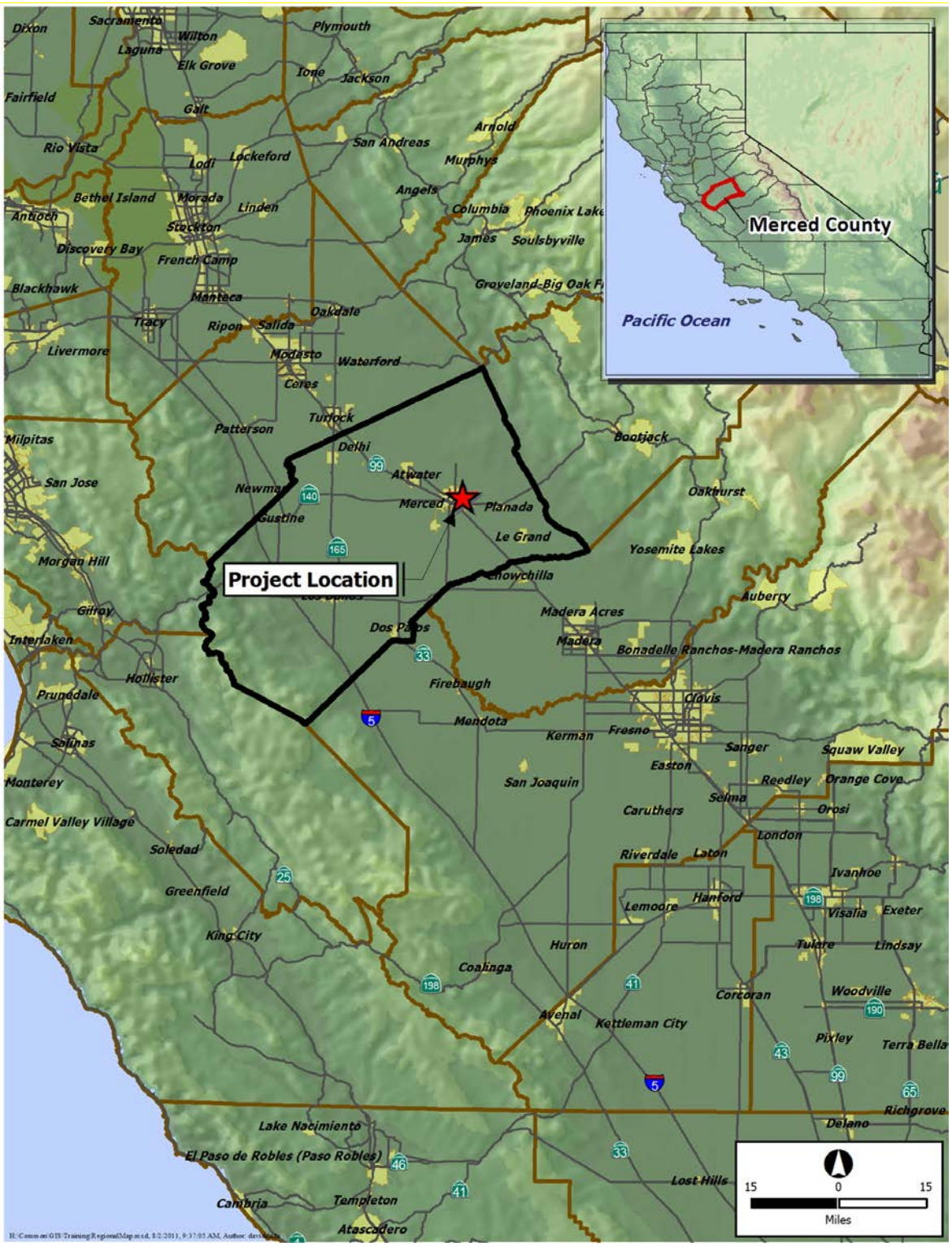
This document is an Initial Study and a Mitigated Negative Declaration of the potential environmental effects associated with the construction of the Parsons Avenue Bridge over Bear Creek project between Mondo Avenue and Buena Ventura Avenue in the City of Merced. Pursuant to Section 15063 of the CEQA Guidelines, this Initial Study has been conducted to determine whether the proposed project will have a significant effect on the environment. The Initial Study Checklist, in Section Three, found that while there are potentially significant environmental impacts that may result from the proposed project, they could be mitigated to a less than significant level by the mitigation measures proposed in this document.

2.2 Project Location and Background

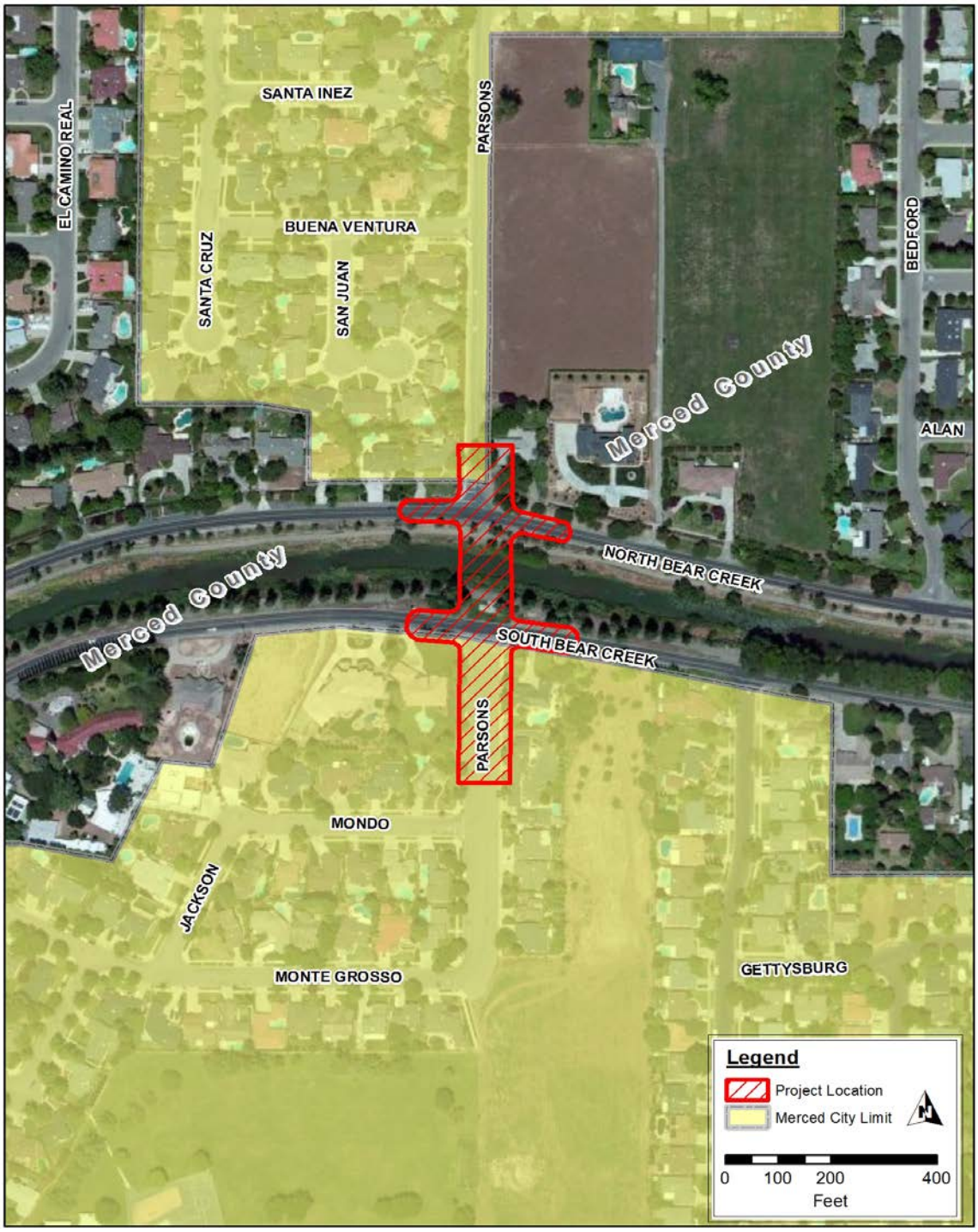
The project is located in the east central portion of Merced County (Figure 2-1). The bridge construction project site is situated in the eastern central section of the City of Merced on Parsons Ave. Figure 2-2 displays the project site at a larger scale to show the area of Bear Creek where the bridge crossing is proposed. A portion of the project, the area between North and South Bear Creek Drives and area northeast of the proposed bridge, is located within Merced County while the remaining sections of the project lie within the City limits of Merced.

The latitude and longitude of the existing bridge are 37°18’34”N and 120°27’05”W, respectively. The proposed bridge project is located in 2 sections, Sections 20 and 21 of Township 7 S, Range 14 East of the Mount Diablo Base and Meridian (MDB&M). The project includes portions of six parcels: 07-230-062, 07-230-054, 08-130-074, 33-270-017, 33-210-066, and 33-210-065 (Figure 2-3). Elevation on the site is approximately 185 feet above mean sea level (MSL). Land use in the area surrounding the project site is primarily recreational (Bear Creek) and low density residential. The City of Merced General Plan land use designations surrounding the project area include: Low Density Residential, Medium Density Residential and Open Space-Park Recreation. The Merced County General Plan displays Single Family Residential as the only land use in this project area.

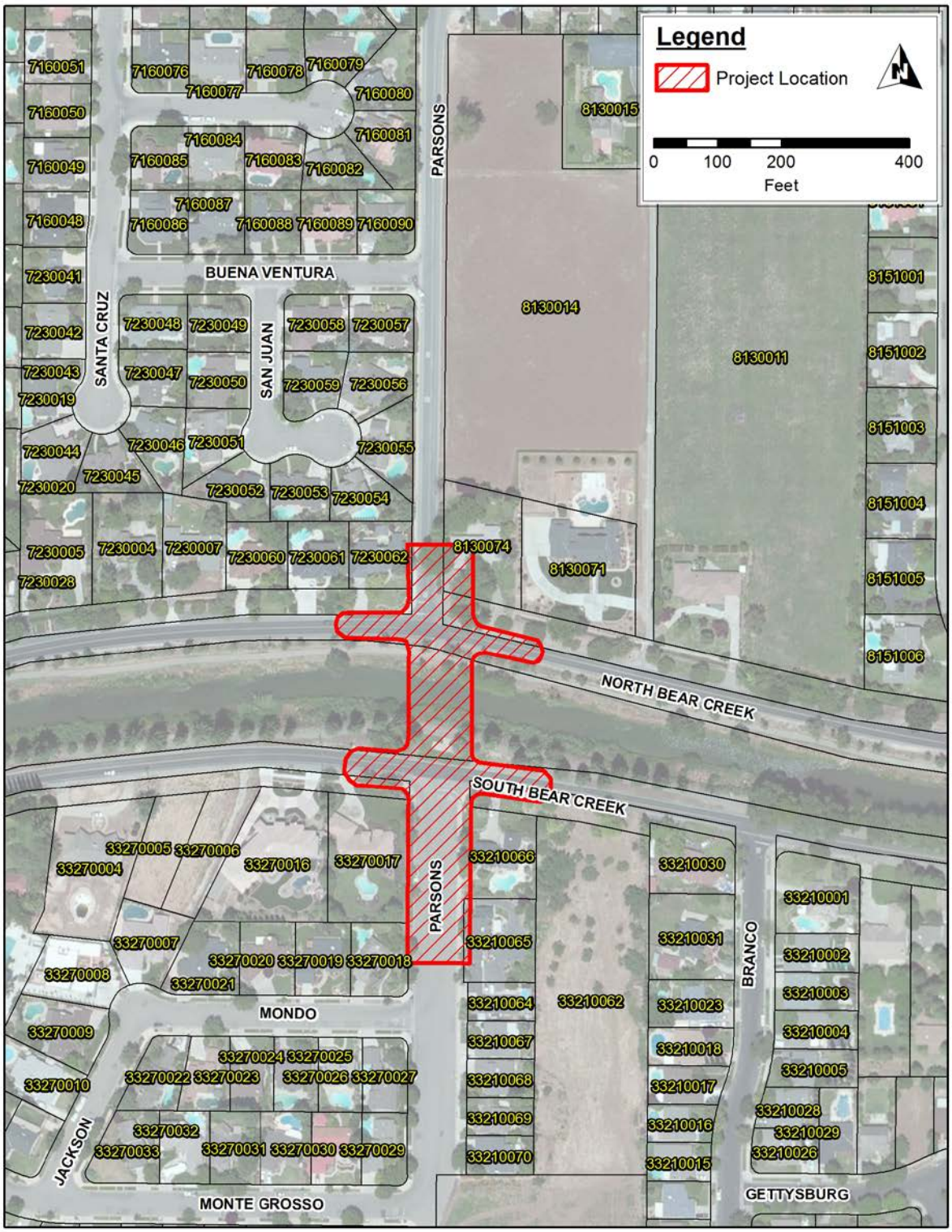
The City of Merced City Council had approved a Final Environmental Impact Report (FEIR) for the entire Parsons Avenue Corridor project on June 21, 1993 and adopted a mitigation monitoring and reporting program, facts and findings, and a statement of overriding considerations. The report was prepared to analyze construction of approximately 1.4 miles of new roadway designed to connect existing segments of Parsons Avenue to form a continuous 4-lane arterial street. This Initial Study and Mitigated Negative Declaration has focused the review on a portion of this overall road corridor project, which consists of the bridge over Bear Creek and bridge approaches. This CEQA document has been prepared to address current environmental impacts of this bridge component of the approved 1993 Parsons Avenue Corridor project.



Quad Knopf	REGIONAL LOCATION	Figure 2 - 1



Quad Knopf	PROJECT SITE	Figure 2 - 2



Quad Knopf	ASSESSOR'S PARCEL MAP	Figure 2 - 3

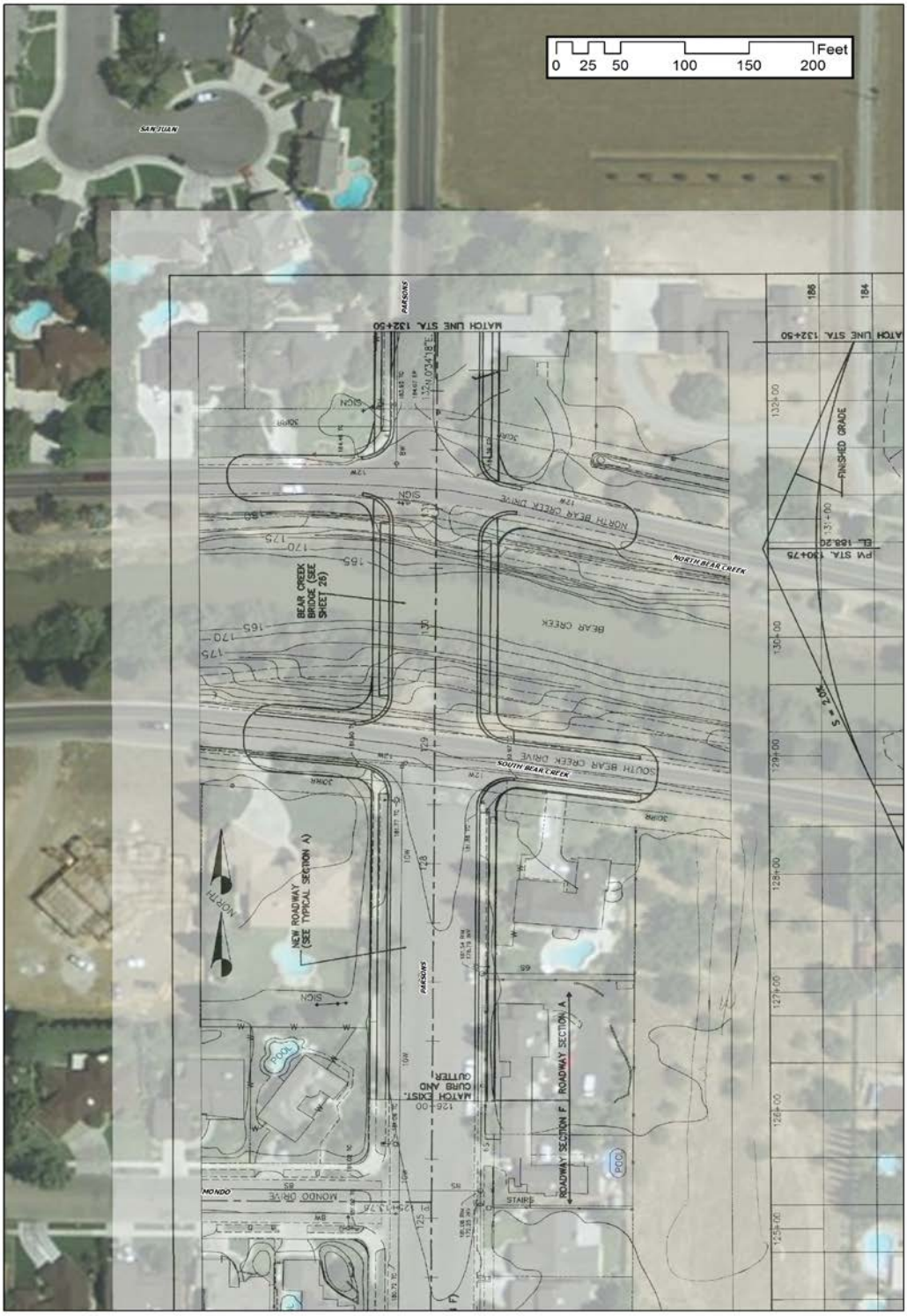
Currently pedestrian/bicycle pathways (Michael O. Sullivan Bike Path) exist on the north and south sides of Bear Creek near the proposed bridge crossing (Figure 2-2 and Figure 2-3). Parsons Avenue has been recently extended from Monte Grosso Drive southward to East 27th Street, although the aerial does not show this new street extension. There will be a temporary impact to the pathways during construction, and after construction the pathways will be back in operation with minimal change to the pathway design.

2.3 Project Description

The project consists of constructing a new bridge to accommodate up to 4 lanes of traffic including a bike lane (class II on-street) and sidewalks, with a reconstructed bicycle-pedestrian pathway underpass on each side of Bear Creek to provide adequate pathway clearance under the bridge. Pathway connections will be provided from the Michael O. Sullivan Bike Path to the Parsons Avenue and N. Bear Creek Drive and S. Bear Creek Drive intersections. The Michael O. Sullivan pathway will become connected to the sidewalks on Parsons Avenue on the north and south sides of the bridge to extend bike/pedestrian access from Parsons Avenue to the Michael O. Sullivan Bike Path. The proposed bridge will either consist of a 2-lane or 4-lane bridge depending on funding at the time of development. The 4-lane bridge structure will consist of an 80' x 140' design with bridge support columns within the creek bed. The project will also involve reconstruction of the street approaches to widen to accommodate 4 lanes of traffic. The bridge will also include class II (on-street) bike lanes as well as improving the street approaches to South Bear Creek and North Bear Creek Avenues. See Figure 2-4 for overlay of the proposed project design. The project analysis contained herein will review the option of the 4-lane bridge, which would have the greatest environmental impact among the available options.

BRIDGE APPROACHES/RIGHT OF WAY

The approaches are proposed to be re-aligned and restriped from two-lanes to four-lanes to tie into the existing roadway. Potential improvements to the approaches would include realignment, overlay, restriping, and shoulder work within the existing right-of-way. The Parsons Avenue approach north of Bear Creek Drive will require demolition of a vacant residential house located on city-owned property. The lot is located at the northeast corner of N. Bear Creek Drive and Parsons Avenue. Since demolition of the structure will occur, the City will be required to apply for a demolition permit with the San Joaquin Valley Air Pollution Control District.



Quad Knopf	PROPOSED PROJECT DESIGN	Figure 2 - 4

VEHICULAR TRAFFIC ACCESS/STAGING

Proper traffic controls will be in place to continue to move traffic through North Bear Creek Drive and South Bear Creek Drive during the construction of the Parsons Avenue bridge and approaches.

PROJECT SCHEDULE

The anticipated construction schedule is to be in either 2014 or 2015 during the waterways low flow season which is typically from May – October.

CONSTRUCTION EQUIPMENT

Typical road and bridge construction equipment would include bull dozers, pile driving or drilling rig (Baker tanks if CIDH Concrete Piles are used), backhoes, excavators, scrapers, trucks, cranes, air compressors, graders, forklifts, ready-mix trucks, concrete pumps, bridge deck finishing machine, HMA pavers, rollers, pavement striper, and workers' vehicles.

CONSTRUCTION STAGING

The construction contractor would likely use a combination of proposed approach shoulders, fallow areas adjacent to the roadway to the north and south of Bear Creek, and/or other areas that can be secured to store equipment and materials. Any temporary staging area would be reclaimed to conditions equivalent to or better than the existing conditions, after project construction has been completed.

SECTION THREE

EVALUATION OF ENVIRONMENTAL IMPACTS

SECTION THREE – EVALUATION OF ENVIRONMENTAL IMPACTS

1. Project title:
   Parsons Avenue Bridge Over Bear Creek Project

2. Lead agency name and address:
   City of Merced
   678 West 18th Street
   Merced, CA 95340

3. Contact person and phone number:
   Ken F. Elwin, P.E.
   City of Merced
   (209)-385-6898

4. Project location: The Parsons Avenue Bridge is to be located in the City of Merced and in the Merced County jurisdiction on Parsons Avenue, over Bear Creek, 1.0 mile north of State Route 140 (SR-190), also known as Yosemite Parkway between McKee Road and G Street.

5. Project sponsor's name and address:
   City of Merced
   678 West 18th Street
   Merced, CA 95340

6. General plan designation: The City of Merced General Plan land use designations surrounding the project area include: Low Density Residential, Medium Density Residential and Open Space-Park Recreation. The Merced County General Plan displays Single Family Residential as the only land use in this project area.

7. Zoning: About half of the project is within the City of Merced and is located in two residential Zoning districts (R-1-6, and R-1-10). The other half of the project is located in the County of Merced and has a Low Residential Zoning designation along the riparian corridor and extending north of N. Bear Creek on the east side of Parsons Avenue.

8. Description of project: The proposed project consists of the construction of a 2-lane or a 4-lane bridge structure (depending on funding at the time) with sidewalks and bike lanes (class II on-street) on Parsons Avenue over Bear Creek. Pathway connections will be provided from the Michael O. Sullivan Bike Path to the Parsons Avenue and N. Bear Creek Drive and S. Bear Creek Drive intersections. The Michael O. Sullivan pathway will become connected to the sidewalks on Parsons Avenue on the north and south sides of the bridge. The project will also include the widening and realignment of the Parsons Avenue street approaches at the Bear Creek and Parsons Avenue intersections. The proposed design will include bridge supports within the creek bed to support the bridge structure.

The project analysis will review the option of a 4-lane bridge, which would have the greatest environmental impacts.

Proposed improvements to the bridge approaches may include realignment, overlay, restriping, and shoulder work within the existing right-of-way.

Proper traffic controls will be in place to continue to move traffic through North Bear Creek Drive and South Bear Creek Drive during the construction of the Parsons Avenue bridge and approaches.

9. Surrounding land uses and setting: The project area is a future bridge connection on Parsons Avenue over Bear Creek. The bridge crosses Bear Creek and is adjacent to the North and South Bear Creek Avenues. Surrounding land is privately owned, and is considered urban and built-up land. Land uses surrounding the project area include recreational and residential lands.

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

- State of California Native American Heritage Commission;
- State of California Department of Fish and Wildlife;
- California State Clearinghouse, within the Office of Permit Assistance;
- U.S. Army Corps of Engineers;
- San Joaquin Valley Air Pollution Control District;
- Central Valley Regional Water Quality Control Board;
- Central Valley Flood Protection Board;
- Merced County; and
- Merced Irrigation District.

Environmental Factors Potentially Affected:

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

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

These impacts are reduced to a less than significant level by the mitigation measures proposed in this document.

Determination:

On the basis of this initial evaluation:

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

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

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

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

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

Ken Elwin — 5/22/14

Lead Agency: Ken Elwin, PE
City of Merced — Date

Ginger White — 2/1/14

Prepared by: Ginger White, AICP
Senior Planner
Quad Knopf, Inc. — Date

3.1 Aesthetics

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Response:

Scenic Vistas (a): The City of Merced General Plan identifies North and South Bear Creek Drive to be scenic corridors. The proposed project would allow for the construction of a bridge along Parsons Avenue over Bear Creek. A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The project involves the construction of a bridge and therefore obstruction to the corridor will be minimal. Therefore, little opportunity exists for project activities to obscure views of scenic vistas.

Conclusion: The project would cause ***less than significant impacts*** to scenic vistas.

Mitigation Measures: None are required.

Scenic Resources (b): There are no state designated scenic highways within the immediate proximity to the project site. California Department of Transportation Scenic Highway Mapping System identifies two State Routes that are officially designated state scenic highways within Merced County, however these are located outside of the City of Merced in the western portion of Merced County. In addition, no scenic highways or roadways are listed within the project area in the City of Merced's General Plan or Merced County's General Plan. Based on the National Register of Historic Places (NRHP) and the City and County's General Plans, no

historic buildings exist on the project site. The proposed project would not damage any trees, rock outcroppings or historic buildings within a State scenic highway corridor.

Conclusion: There would be ***no impact.***

Mitigation Measures: None are required.

Visual Character (c): The proposed project would not substantially change the visual character of the project area. The Parsons Avenue Bridge and bridge approaches are proposed in alignment with Parsons Avenue to the north and south of Bear Creek. Construction of the bridge and roadway would slightly alter the character of the current area. However, because the bridge and roadway are not greatly elevated, the balance between the natural and developed character in the area would not be disturbed. The bridge would be similar in size and structure to existing bridges along Bear Creek Drive and would be consistent with the existing urban setting. The proposed project would remove some trees immediately adjacent to the bridge; however, the project has been configured to minimize tree removal to the extent feasible. Impacts regarding removal of trees are discussed in detail in Section 3.4: Biological Resources. The removal of trees would not significantly alter or change the viewshed; as such, impacts to the visual character of the site are less than significant.

Conclusion: This impact would be ***less than significant***.

Mitigation Measures: None are required.

Creation of light or glare (d): The area currently has several street lights on Parsons Avenue/North Bear Creek Drive and Parsons Avenue/South Bear Creek Drive intersections. The bridge construction project would facilitate improved traffic operations along Parsons Avenue and would not create substantial new sources of light or glare.

Conclusion: This impact would be ***less than significant***.

Mitigation Measures: None are required.

3.2 *Agriculture and Forestry*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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.				
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12229(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by GC section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Response:

Farmland Conversion (a, e): The project site is located in an area of the City/County considered urban, built up land by the State Farmland Mapping and Monitoring Program. No *Prime Farmland, Unique Farmland, or Farmland of Statewide Importance* or land under the Williamson Act contracts occurs in the project area. Therefore, no land conversion from Farmland would occur for the project. Surrounding land uses include low density residential, medium density residential, and recreational uses; as such, the proposed project does not have the potential to result in the conversion of farmland to non-agricultural uses or forest land uses to non-forest land.

Conclusion: There would be ***no impacts***.

Mitigation Measures: None are required.

Zoning Conflicts (b, c): The project site is not zoned for agriculture nor is the site covered by a Williamson Act contract; no impacts would occur. The project is not zoned for forest land and does not propose any zone changes related to forest or timberland.

Conclusion: There would be ***no impacts***.

Mitigation Measures: None are required.

Forest Land Conversion (d): No conversion of forestland, as defined under Public Resource Code or General Code, as referenced above, will occur as a result of the project.

Conclusion: There would be ***no impact***.

Mitigation Measures: None are required.

3.3 *Air Quality*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management of 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?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations or hazardous emissions?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Response:

This environmental issue focuses on the project's air quality impacts. Issues over project consistency with applicable air quality plans, policies and regulations, increases of any pollutant for which the area has been designated as a "non-attainment" area are to be addressed. Additional concerns are over the exposure of sensitive receptors, such as nearby residents, to increased levels of air pollution or odors.

Air Quality Attainment Plan Consistency (a): The SJVAB is designated nonattainment of state and federal health based air quality standards for ozone and $PM_{2.5}$. The SJVAB is designated nonattainment of state PM_{10}. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- Extreme Ozone Attainment Demonstration Plan (EOADP) for attainment of the 1-hour ozone standard (2004);
- 2007 Ozone Plan for attainment of the 8-hour ozone standard;
- 2007 PM_{10} Maintenance Plan and Request for Redesignation; and
- 2008 $PM_{2.5}$ Plan.

Because of the region's non-attainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (ROG or NOx), PM_{10}, or $PM_{2.5}$ were to exceed the SJVAPCD's significance thresholds, then the project uses would be considered to conflict with the attainment plans. In addition, if the project uses were to result in a change in land use and corresponding increases in vehicle miles traveled, they may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

As discussed in Impact c), below, predicted construction and operational emissions would not exceed the SJVAPCD's significance thresholds for ROG, NOx, PM_{10}, and $PM_{2.5}$. As a result, the project uses would not conflict with emissions inventories contained in regional air quality attainment plans, and would not result in a significant contribution to the region's air quality non-attainment status. In addition, the project would not result in a change of land use and would not result in an increase in vehicle miles traveled unaccounted for in regional emissions inventories. Additionally, the project would comply with all applicable rules and regulations.

Conclusion: This impact would be ***less than significant impact***.

Mitigation Measures: None are required.

Air Quality Standards/Violations (b): Because ozone is a regional pollutant (SJVAPCD 2002), the pollutants of concern for localized impacts are CO and fugitive PM_{10} dust from construction. Ozone and PM_{10} exhaust impacts are addressed under Impact c), below. The proposed project would not result in localized CO hotspots or PM_{10} impacts, as discussed below. Therefore, the proposed project would not violate an air quality standard or contribute to a violation of an air quality standard in the project area.

LOCALIZED PM_{10}

Localized PM_{10} would be generated by project construction activities, which would include earth-disturbing activities. The SJVAPCD indicates that all control measures in Regulation VIII are required for all construction sites by regulation. The SJVAPCD's GAMAQI (SJVAPCD

2002) lists additional measures that may be required of very large projects or projects close to sensitive receptors. If all appropriate "enhanced control measures" in the GAMAQI are not implemented for very large projects or those close to sensitive receptors, then construction impacts would be considered significant (unless the Lead Agency provides a satisfactory detailed explanation as to why a specific measure is unnecessary). The GAMAQI also lists additional control measures (Optional Measures) that may be implemented if further emission reductions are deemed necessary by the Lead Agency. The SJVAPCD's Regulation VIII (Fugitive PM_{10} Prohibitions) has been updated and expanded since the GAMAQI guidance was written in 2002. Regulation VIII now includes the "enhanced control measures" contained in the GAMAQI.

The proposed project would comply with the SJVAPCD's Regulation VIII dust control requirements during construction and demolition (including Rules 8011, 8031, 8041, and 8071). Compliance with this regulation would reduce the potential for significant localized PM_{10} impacts to less than significant levels.

CO HOTSPOT

Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The SJVAPCD provides screening criteria to determine when to quantify local CO concentrations based on impacts to the level of service (LOS) of roadways in the project vicinity.

The project entails constructing a new bridge over an area that currently does not have a crossing. The other nearest bridge crossings are at between a "C+" and a "D" Level of Service (LOS) rating. "G" Street currently operates at a "C+" LOS rating and is projected to move to a "D/E" rating in the Merced Vision 2030 General Plan, while McKee Road is projected to move to a "F" LOS rating in the 2030 General Plan. The Parsons Avenue bridge will help lessen the "G" Street and McKee Road crossings by providing another crossing between the 2 existing bridges. The General Plan has planned for the Parsons Avenue bridge project to relieve traffic congestion from the N-S traffic issues in the area. The General Plan also contains a transportation policy to use a minimum peak hour LOS "D" as a design objective for all new streets in new growth areas and for most existing City streets except under special circumstances. The proposed bridge project will lower LOS of nearby bridge crossings and maintain an LOS "D" or better at the proposed Parsons Avenue Bridge location. Therefore, as further discussed in the Transportation/Traffic checklist evaluation, the project would not generate, or substantially contribute to, additional traffic that would reduce the level of surface on local roadways. Therefore, the project would not significantly contribute to an exceedance that would exceed state or federal CO standards.

Conclusion: This impact would be ***less than significant impact***.

Mitigation Measures: None are required.

Non-attainment Cumulatively Considerable Net Increase of Criteria Pollutants (c): The nonattainment pollutants for the SJVAPCD are ozone, PM_{10} and $PM_{2.5}$. Therefore, the pollutants of concern for this impact are ozone precursors, regional PM_{10}, and $PM_{2.5}$. Ozone is a regional pollutant formed by chemical reaction in the atmosphere, and the project's incremental increase

in ozone precursor generation is used to determine the potential air quality impacts, as set forth in the GAMAQI.

The SJVAPCD does not have a threshold for regional PM_{10} or $PM_{2.5}$. This document proposes a PM_{10} threshold using the same basis as the ozone precursor thresholds. Since the GAMAQI was published, the SJVAPCD has been recommending use of a PM_{10} threshold of 15 tons per year. However, a similar basis of threshold is not available for $PM_{2.5}$ emissions. Because the Basin is in nonattainment for $PM_{2.5}$, the threshold for $PM_{2.5}$ for this project will be 9 tons per year. The justification for this number is that $PM_{2.5}$ is in nonattainment and should have a more stringent threshold than PM_{10} to provide a worst-case assessment. The annual standard for PM_{10} is 20 $\mu g/m^3$ and the annual standard for $PM_{2.5}$ is 12 $\mu g/m^3$. Therefore, the ratio of PM_{10} to $PM_{2.5}$ results in a threshold for $PM_{2.5}$ of 9 tons per year.

The annual significance thresholds to be used for the project for operational and construction emissions are as follows:

- 10 tons per year ROG;
- 10 tons per year NOx;
- 15 tons per year PM_{10}; and
- 9 tons per year $PM_{2.5}$.

The project involves the construction of a new bridge and widening of approaches to the north and south of the bridge. For purposes of air quality calculations, it was assumed that the project would be built out in 6 months in the year 2013. Since construction will occur in later years, the construction emissions would be equal or less than the 2013 estimates, because of fleet changeover and regulatory requirements. Project construction was assumed to begin in May, 2013. This represented a worst-case scenario. The Sacramento Metropolitan Air Quality Management District's Road Construction model was used to estimate emissions from the infrastructure improvements. (Note that this model was used because no comparable model has been issued by the SJVAPCD, however the SJVAPCD approves of the model's usage for linear construction project.). The Roadway Construction Emissions Model is a Microsoft Excel worksheet available to assess the emissions of linear construction projects. The estimated annual construction emissions are shown below.

Table 3.3-1
Construction Emissions

	Emissions (tons)			
	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
2013 Bridge Construction	0.30	3.00	.20	.10
2013 Roadway Construction	0.30	2.8	.20	.10
Total 2013	**0.60**	**5.80**	**0.40**	**0.20**
SJVAPCD Annual Threshold	10	10	15	9
Any Year Significant?	**No**	**No**	**No**	**No**

The project's construction emissions would not exceed the SJVAPCD's thresholds for ozone precursors or PM_{10} or $PM_{2.5}$. As discussed in Section 4.3.2 of the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) provides that any proposed project that would individually have a significant air quality impact (i.e., exceed significance thresholds for ROG, NOx, PM_{10}, or $PM_{2.5}$) would also be considered to have a significant cumulative impact. Although the GAMAQI does not provide guidance for evaluating cumulative air quality impacts in instances where project-specific emissions of criteria pollutants do not exceed the Air District's significance thresholds, it does state: "[a]ll but the largest individual sources emit ROG and NOx in amounts too small to have a measurable effect on ambient ozone concentrations by themselves." Because the project would not exceed the project-level thresholds of significance, the project would not result in a cumulatively considerable air quality impact.

Conclusion: This impact would be ***less than significant impact***.

Mitigation Measures: None are required.

Expose sensitive receptors to substantial pollutant concentrations (d): The proposed project would not expose sensitive receptors to substantial concentrations of localized PM_{10}, carbon monoxide, diesel particulate matter, or hazardous pollutants, naturally occurring asbestos, or valley fever, as discussed below.

LOCALIZED PM_{10}

As shown in Impact b), above, the project would not generate a significant impact for construction-generated, localized PM_{10}. Therefore, the project would not expose sensitive receptors to unhealthy levels of PM_{10}.

PM HOTSPOT

A $PM_{2.5}$ and PM10 Hotpot Analysis is not required for the project because it is not a Project of Air Quality Concern (POAQC). The following is provided for informational purposes, the Merced County Association of Governments (MCAG) will be responsible for preparing the final determination and undertaking the interagency coordination (this is separate from CEQA).

The project is located in the San Joaquin Valley $PM_{2.5}$/ PM_{10} state and federal non-attainment area. According to the Environmental Protection Agency (EPA) Transportation Conformity Guidance, projects that are exempt or are not Projects of Air Quality Concern (POAQC) do not require hot spot analysis.

The Parsons Avenue Bridge Project does not meet the criteria of an exempt project under 40CFR 93.126; however, the project does not meet criteria for a POAQC as defined in the final rule by 40CFR 93.123(b)(1).

Based on guidance provided by the Environmental Protection Agency, Federal Highway Administration, and Federal Transit Administration (2006), this project is not considered to be a POAQC for the following reasons:

A traffic study has been completed for the Merced Vision 2030 General Plan and traffic counts have been projected in Table 3.3-2. The AADT traffic counts in the table are representative of Parsons Avenue from Olive Avenue to SR 40. Because this total number was well under the AADT threshold of 125,000, further analysis to determine the projected percentage of traffic volume that would cross the future bridge is not required.

Table 3.3-2
Average Annual Daily Traffic

Year	AADT
2010	15,630 (both directions)
2030	30,000 (both directions)

Source: Quad Knopf, Parsons Avenue Bridge Traffic Technical Appendix from 2030 General Plan EIR, 2012

i. This project will not exceed the AADT threshold of 125,000. In addition, this project does not involve truck routing and therefore would not become a POAQC.
ii. The average LOS for the project will not affect intersections that are at LOS D, E, or F. This project will improve safety, circulation, and decrease air pollution at the location.
iii. The area is fully developed and established truck routes will not change.

CARBON MONOXIDE HOTSPOT

As shown in Impact b), above, the project would not generate a CO hotspot. In addition, the existing background concentrations of CO are low and any CO emissions would disperse rapidly. The nearest SJVAPCD monitoring station located near the project site (Coffee Street) does not have any records on CO emissions. The next closest station would be the Turlock-S Minaret Street monitoring station which shows the highest 1-hour and 8-hour CO concentrations for the past three years as 2.19 ppm and 1.53 ppm, respectively. The 1-hour and 8-hour CO standard are 20 ppm and 9 ppm, respectively. Therefore, the project would not expose sensitive receptors to unhealthy levels of CO.

DIESEL PARTICULATE MATTER

Construction equipment generates diesel particulate matter (DPM), identified as a carcinogen by the ARB. The State of California has determined that DPM from diesel-fueled engines poses a chronic health risk with chronic (long-term) inhalation exposure. The California Office of Environmental Health Hazard Assessment recommends using a 70-year exposure duration for determining residential cancer risks. Because of the project size and short duration, and the distance to the nearest sensitive receptor, the project construction would not pose a toxic risk to nearby residents.

NATURALLY OCCURRING ASBESTOS

The Department of Conservation, Division of Mines and Geology published a guide entitled A General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, for generally identifying areas that are likely to contain naturally occurring asbestos. The guide includes a map of areas where formations containing naturally occurring asbestos in California are likely to occur. Foothill areas within Merced County are identified as areas with ultramafic rocks. Those areas are not located near the project site. For this reason, the project is not anticipated to expose workers or nearby receptors to naturally occurring asbestos.

MOBILE SOURCE AIR TOXICS (MSAT)

The Parsons Avenue Bridge project fits into the "Projects with Low Potential MSAT Effects" because it is a minor project with the design-year annual average daily traffic count less than 140,000. The purpose of the project is to add a bridge crossing over Bear Creek to accommodate the existing N-S traffic demand within the City of Merced. Because the bridge crossing would increase the efficiency of the roadway, reduce congestion and eliminate idling of vehicles, MSATs are expected to decline. The project also includes bicycle and pedestrian lanes on both sides of the bridge, thereby enhancing opportunities for alternatives to automobile transportation.

This section includes a basic analysis of the likely MSAT emission impacts of the proposed project.

Year 2010 and General Plan year 2030 Annual Average Daily Traffic (AADT) volumes from the City of Merced for the existing road project segment are as follows:

Table 3.3-3
Traffic Data – 2010 and 2030

Road Segment	AADT's	
	2010	**2030**
Parsons Avenue (SR 140 to Olive)		
SR 140 to Bear Creek	11,300	35,320
Bear Creek to Olive	4,330	29,380

Source: Quad Knopf, Parsons Avenue Bridge Traffic Count study from Merced 2030 General Plan EIR, 2012

Emissions of MSATs will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future with or without the project.

The additional travel lanes contemplated as part of the project will have the effect of moving some traffic closer to nearby residences; therefore, under the project alternative there may be localized areas where ambient concentrations of MSATs could be higher with the project than without. However, the magnitude and duration of these potential increases compared to the no-project alternative cannot be accurately quantified due to the inherent deficiencies of current models. In sum, when a road is widened and, as a result, moves closer to receptors, the localized MSAT emissions of the project could be higher relative to the no-project alternative, but this would be offset due to increases in speeds and reductions in congestions (which are associated with lower MSAT emissions). Also, MSATs will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions, that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

The approaches are proposed to be re-aligned and restriped from two-lanes to four-lanes to tie into the existing roadway. Potential improvements to the approaches would include realignment, overlay, restriping, and shoulder work within the existing right-of-way. The Parsons Avenue approach north of Bear Creek Drive will require demolition of a vacant residential house located on city-owned property. The lot is located at the northeast corner of N. Bear Creek Drive and Parsons Avenue. Since demolition of the structure will occur, the City will be required to apply for a demolition permit with the San Joaquin Valley Air Pollution Control District.

Conclusion: Impacts would be ***less than significant.***

Mitigation Measures: None are required.

Odors (e): According to the GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate; and

- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The proposed project is a new bridge project and does not contain land uses typically associated with emitting objectionable odors. Diesel exhaust and ROGs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not be at a level to induce a negative response.

The project site is not located within the Project Screening Levels distances from the common odor producing facilities presented in Table 4-2 of the GAMAQI. Therefore, development of the project would not create a significant odor impact.

Conclusion: This impact would be ***less than significant impact***.

Mitigation Measures: None are required.

3.4 Biological Resources

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

A biological Survey Report was prepared and is included as Appendix B. The Parsons Bridge Project Site (project site) is located in Section 20 on the Gregg U.S. Geological Survey (USGS) 7.5 minute quadrangle, Township 7 South and Range 14 East, Mount Diablo Base and Meridian in the City of Merced, Merced County, California (Figure 1). The City of Merced proposes to build a new concrete bridge (Parsons Bridge) across Bear Creek to provide a new crossing at Parsons Avenue (Figure 2). Bear Creek is approximately 90 feet wide and 20 feet deep with fairly steep banks overgrown with vegetation. The new bridge will accommodate four lanes of traffic (two each way) and bike lanes. To span the existing creek and supply the required hydraulic freeboard, portions of Parsons Avenue, North Bear Creek Drive, and South Bear Creek Drive will need to be raised and reconstructed. It is anticipated that 1,000 feet of Parsons Avenue, 500 feet of North Bear Creek Drive and 500 feet of South Bear Creek Drive, will need to be reconstructed as part of this project. In total, the bridge and end spans will be 140 feet long and 80 feet wide. Land use in the area surrounding the project site is primarily recreational and residential.

VEGETATION COMMUNITIES

The project site habitat is relatively low quality because it is generally very narrow, fragmented, and disturbed. It perhaps historically supported more species characteristic of a Great Valley Mixed Riparian Forest (Holland Code 61420), but it now supports a riparian habitat that is mixed with ornamental and non-native plants (Table 2). The south bank is heavily vegetated with sandbar willow (*Salix exigua)*, red willow *(Salix laevigata*), false willow (*Baccharis neglecta*), black walnut (*Juglans californica var. californica)*, scrub oak (*Quercus berberidifolia*), giant reed (*Arundo donax)*, and Himalayan blackberry (*Rubus armeniacus)*. Valley oak (*Quercus lobata)*, California fan palm (*Washingtonia filifera)*, date palm (*Phoenix dactylifera)*, peppertree (*Schinus molle)*, and California redwood (*Sequoia sempervirens)* are located upslope south of the bank. The north bank has less vegetation than the south bank; it is vegetated with sandbar willow, mulberry (*Morus alba)*, black walnut, and valley oak. Valley oak, magnolia (*Magnolia grandiflora)*, and relatively larger walnut trees are located upslope north of the bank. The surrounding residential areas contain a significant number of trees including gray pine (*Pinus sabiniana*), maple (*Acer* spp), sycamores (*Plantanus* spp), and various ornamentals.

Table 3.4-1
Plants Observed on the Parsons Bridge Project Site, Merced County, California

Scientific Name	Common Name
Phoenix dactylifera	date palm
Washingtonia filifera	California fan palm
Rubus armeniacus	Himalyan blackberry
Sorghum halepense	johnson grass
Rumes crispus	curly dock
Schinus molle	peppertree
Magnolia grandiflora	magnolia
Quercus berberidifolia	California scrub oak
Baccharis neglecta	false willow
Salix exigua	sandbar willow
Salix laevigata	red willow
Equisetum hyemale	horsetail
Juglans nigra	black walnut
Sequoia sempervirens	California redwood
Equisetum hyemale	Oregon ash
Artemisia douglasiana	mugwort
Quercus lobata	valley oak
Arundo donax	giant reed
Morus alba	mulberry
Liquidambar styraciflua	sweetgum

Aerial imagery suggests that the riparian habitat extends beyond the banks and walking trails to the streets. Field surveys, however, indicate that the riparian habitat generally does not extend past the stream banks of Bear Creek. The stream banks are much lower in elevation than the adjoining upland habitats that encompass the recreational trails. These upland habitats support non-riparian tree species (e.g. redwoods and palms) that have been artificially established. These trees are not dependent upon the hydrological regime of Bear Creek, which is far below their root zones.

General wildlife activity observed on the project site was relatively minimal. Avian species identified on the project site during the survey included mourning doves (*Zenaida macroura*), American crows *(Corvus brachyrhynchos*), and barn swallows (*Hirundo rustica*). The California ground squirrel (*Spermophilus beecheyi)* was the only mammal species observed on the project site during the survey.

SENSITIVE NATURAL COMMUNITIES

The conversion of large expanses of native lands in the San Joaquin Valley has led to the State and federal listing of a multitude of plants and animals as Endangered, Threatened, of Special Concern, or otherwise being declared Sensitive. The database search listed historical occurrences of two Sensitive Communities, 24 special status plant species, and 27 special status wildlife species (Appendix B). There are no historical records of sensitive natural communities or special status species occurring on the project site. However, there are confirmed records of special status resources occurring within 10 miles of the project site. These special status resources include two vegetative communities, 15 plant species, and 18 wildlife species. Some

of these species have the potential to occur on or immediately adjacent to the project site. A total of eight USFWS critical habitat units were located within 10 miles of the project site, but none occur on the project site. The closest critical habitat unit was for succulent owl's-clover (*Castilleja campestris ssp. Succulent)* located approximately 2.5 miles from the project site.

No Sensitive Natural Communities exist in the vicinity of the project site, but there are records of Northern Claypan Vernal Pool and Northern Hardpan Vernal Pool occurring within 10 miles of the project site. Although Bear Creek is not formally recognized as a Sensitive Natural Community, it meets the standard criteria of waters of the U.S., and its associated riparian habitat is generally considered to be a sensitive community.

SPECIAL-STATUS SPECIES

Prior to conducting field surveys, a desktop review of literature resources was conducted to determine if the project area is located within the range of sensitive biological resources such as state and/or federally-listed threatened and/or endangered species. A list of special-status species that could potentially occur in the project area and a ten mile radius of the project area was compiled by accessing the California Natural Diversity Database (CNDDB) (2012), the California Native Plant Society (CNPS) (2012) online inventory and the United States Fish and Wildlife Service (USFWS) online database (accessed July 2012) for the USGS 7.5-minute quadrangle of Merced in which the project area is located.

For the purposes of this analysis, special-status species are those species:

- Listed as threatened or endangered under the Endangered Species Act (ESA) and those species formally proposed or candidates for listing;
- Listed as threatened or endangered under California ESA (CESA) or candidates for listing;
- Designated as endangered or rare pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected pursuant to California Fish and Game Code (Sections 3511, 4700, 5050);
- Designated as a species of special concern by CDFW; and
- Plants listed as rare under the California Native Plant Protection Act or considered by CNPS as List 1A, 1B, or 2 species.

SPECIAL-STATUS PLANT SPECIES

The special-status plant species reviewed in this document are listed in a table provided in Appendix B. This list was compiled based upon query results from CNDDB and the CNPS online inventory. No sensitive plant species were observed during the reconnaissance-level surveys. The project site has been heavily degraded and is currently surrounded by residential development.

SPECIAL-STATUS WILDLIFE SPECIES

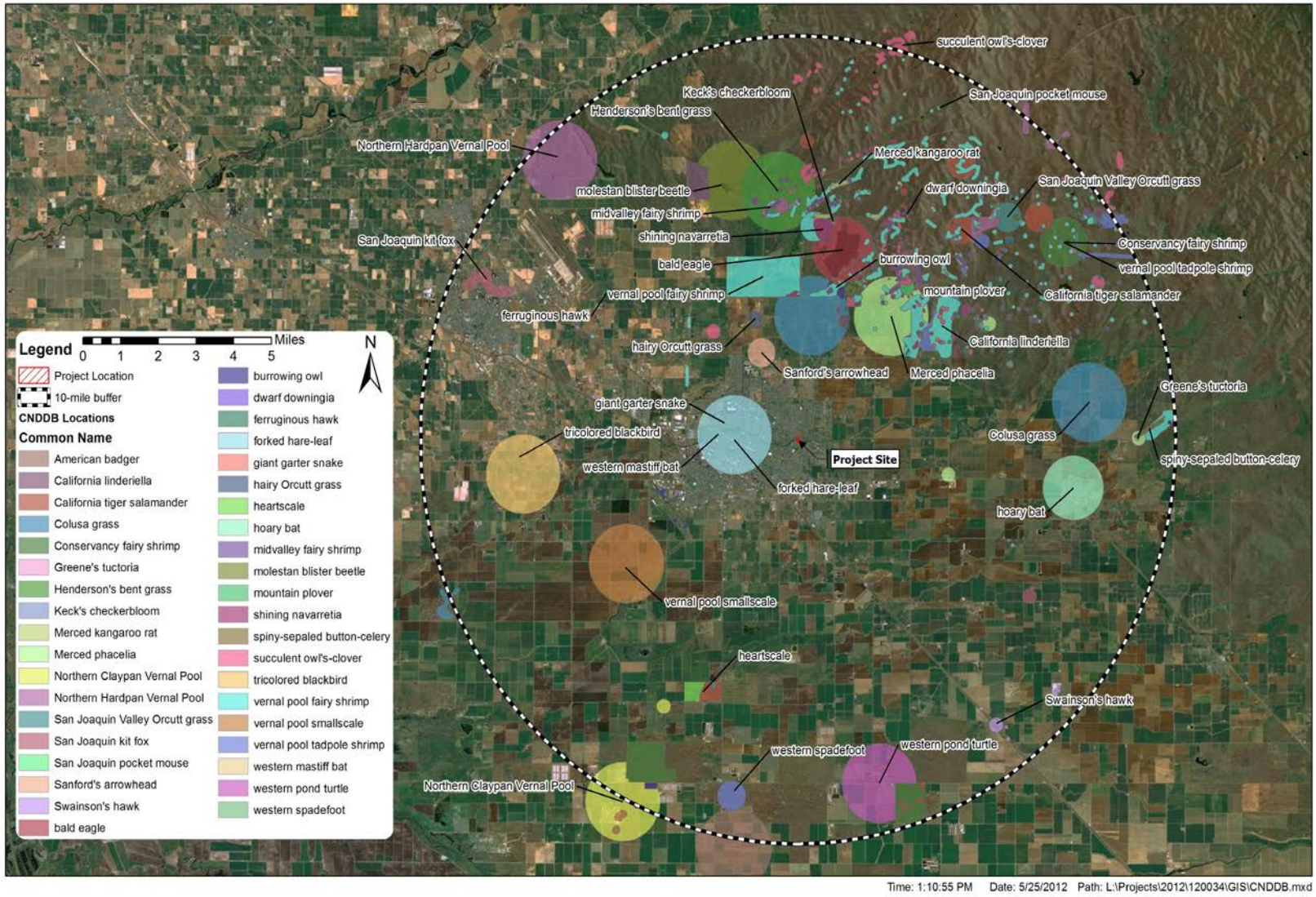
The special-status wildlife species considered for review in this document are included in a table provided in Appendix B. This list was compiled from the USFWS list and query results from CNDDB.

Recorded occurrences of special-status wildlife species within 10 miles of the project site are shown in Figure 3.4-1. Based upon results of the species review, it was determined that seven have the potential to occur in or immediately adjacent to the biological survey area or BSA. This area was specifically evaluated for these seven species along with various species of migratory birds and raptors. They are the *western pond turtle (*Actinemys marmorata pallida, *western red bat (*Lasiurus blossevillii), *San Joaquin kit fox (*Vulpes macrotis mutica*), American badger (*Taxidea taxus*), Swainson's hawks (*buteo swainsoni*), western burrowing owl (*Athene cunicularia*), tricolored blackbird (*Agelaius tricolor*),* and various migratory birds and raptors.

FIELD SURVEYS

An on-site reconnaissance-level survey of the project site was conducted by Quad Knopf Biologists Andy Glass and Tyler Schade on May 24, 2012. The survey primarily consisted of completing pedestrian transects throughout the project site and its vicinity to map habitats, complete a species inventory, and evaluate the potential for special status species to occur. "Windshield surveys," however, were also completed along roads within 0.5 mile of the project site. General tasks completed during these efforts included:

- Characterizing vegetation associations and habitat conditions present on the project site;
- Inventorying plant and wildlife species, including raptor and nest surveys on/or near the project site;
- Assessing the potential for special status species to occur or near the project site;
- Delineating the boundaries of Ordinary High Water Marks (OHWM), banks, and riparian habitats along Bear Creek (HUC12: 180400011801) using a sub-meter GPS Unit (Trimble GeoExplorer); and
- Identifying, measuring, and mapping trees within the project vicinity.



Quad Knopf

CNDDB RECORDS OF SPECIAL-STATUS SPECIES KNOWN WITHIN 10 MILES OF THE PARSONS AVENUE BRIDGE PROJECT SITE

Figure 3.4 – 1

Response:

This section describes the existing biological resources and potential effects from project implementation on the site and its surrounding area.

Substantial adverse effect on sensitive species (a): The project site is primarily urban outside of the riparian zone and adjacent parkway and disturbed areas along the river. The project site does not include suitable habitat for any special status plant species and none were observed during the surveys. They are considered absent from the project site. No impacts to special-status plant species would occur.

Based upon results of the species review, it was determined that seven have the potential to occur in or immediately adjacent to the biological survey area or BSA. This area was specifically evaluated for these seven species along with various species of migratory birds and raptors. They are the western pond turtle (*Actinemys marmorata pallida*, western red bat (*Lasiurus blossevillii)*, San Joaquin kit fox (*Vulpes macrotis mutica*), American badger (*Taxidea taxus*), Swainson's hawks (*buteo swainsoni*), western burrowing owl (*Athene cunicularia*), tricolored blackbird (*Agelaius tricolor*), and various migratory birds and raptors. No special-status species were observed on the project site during the surveys and none are likely to be present on the site; however, the project site could potentially be used by the western red bat or the western pond turtle. Other transient foragers to the site could include the tricolored blackbird, nesting migratory birds and raptors, the San Joaquin kit fox, and the American badger. Implementation of standard mitigation measures for avoidance and minimization will reduce potential biological impacts to ***less than significant***.

SPECIAL-STATUS WILDLIFE SPECIES

Western Pond Turtle

There are no known historical records of the western pond turtle (*Actinemys marmorata pallida*) on the project site, but there are two historical records occurring within 10 miles (see Figure 9). This aquatic turtle is limited to water sources that provide adequate breeding, basking sites, and that adjoin upland wintering habitat. While Bear Creek does provide slow seasonal flow, it provides few basking sites. Furthermore, the riparian habitat is largely degraded, and the surrounding upland habitat is highly disturbed with urban development. Therefore, though unlikely, this species could potentially occur on the project site as an occasional transient.

Conclusion: Though unlikely, this species could potentially occur on the project site as an occasional transient and could be a ***potentially significant impact***.

Mitigation Measure #3.4-1: Pre-construction surveys shall be performed on the project site in areas where there is a potential for western pond turtle to occur. These areas include a 500-foot buffer upstream and downstream along the creek corridor from the project site. If western pond turtles are found, appropriate mitigation measures will be developed in consultation with CDFW.

Effectiveness of Measure: Implementation of Mitigation Measure #3.4-1 would reduce the impact on the Western Pond Turtle to a level that is ***less than significant with mitigation incorporated*.**

Western Red Bat

There are no historical records of the western red bat (*Lasiurus blossevillii)* occurring within 10 miles of the project site (see Figure 9). This species prefers riparian habitat edges with walnuts, oaks, willows, cottonwoods, and sycamores for roosting. It prefers mosaics of trees, protected from above and open below, and open areas for foraging. Although highly disturbed, the Bear Creek corridor does provide marginal habitat for this species.

Conclusion: Though unlikely, this species could potentially occur on the project site as this site does provide marginal habitat for the species and could be a ***potentially significant impact***.

Mitigation Measure #3.4-2: Pre-construction surveys shall be performed on the project site in areas where there is a potential for western red bat to occur. These include all areas of the project site that contain or are within 500 feet of power poles or trees that are suitable for the establishment of roosts. Surveyors will look for roosts and potential roosts as well as guano for signs of the western red bat. If roosts are found acoustic monitoring shall be performed to identify species.

- Acoustic monitoring will use auto-triggering D240x Pettersson Elektronik time expansion bat detectors and Handy Recorder H2© digital player/recorders. Each bat call, recorded as a separate audio file, will later be downloaded from the recorder into a computer. Each file will be imported into Sonobat™ software for batch call analysis.

The pre-construction survey shall be performed within 14 days of construction to identify active roosts and mark them for avoidance. If western red bat roosts are found, appropriate mitigation measures will be developed in consultation with CDFW.

Effectiveness of Measure: Implementation of Mitigation Measure #3.4-2 would reduce the impact on the Western Red Bat to a level that is ***less than significant with mitigation incorporated*.**

Western Burrowing Owl

There are no known historical records of the western burrowing owl (*Athene cunicularia*) occurring on the project site, but there are seven historical records occurring within 10 miles (see Figure 9). Burrowing owls typically utilize a variety of arid and semi-arid environments with well-drained, level to gently sloping areas characterized by grassland or fallow land with a sparse herbaceous layer and friable soils. These conditions do not occur within the project vicinity. The dense riparian vegetation, steep banks, extensive paved areas, and high use recreational trails are uncharacteristic of burrowing owl habitat. The western burrowing owl, though, is known to occur in sub-optimal habitats characterized by human disturbances. Although unlikely, it could potentially occur on or near the project site.

Conclusion: No raptor nests were observed within a 0.5-mile radius of the project site. This species is unlikely to occur on or near the project site but it could potentially nest within the vicinity, and therefore there is a ***potentially significant impact***.

Mitigation Measure #3.4-3:

- Standard measures for the protection of burrowing owls provided in Burrowing Owl Consortium's April 1995 *Burrowing Owl Survey Protocol and Mitigation Guidelines* and the CDFW's October 17, 1995 *Staff Report on Burrowing Owl Mitigation* shall be implemented. Active burrows will be avoided by 250 feet, compensation will be provided for the displacement of burrowing owls, and habitat acquisition and the creation of artificial dens for any burrowing owls removed from construction areas will be provided (Appendix E, Appendix F of the Biological Survey Report).

- Standard measures for the protection of burrowing owls provided in Burrowing Owl Consortium's April 1995 *Burrowing Owl Survey Protocol and Mitigation Guidelines* and the CDFW's March 12, 2012 *Staff Report on Burrowing Owl Mitigation* shall be implemented.

- In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), pre-construction surveys shall be conducted to determine the presence of occupied burrows if ground clearing or construction activities will be initiated during the nesting season or during the non-breeding season. The portion of the project site on which construction is to take place and potential nesting areas within 500 meters of the proposed construction area shall be surveyed no more than 30 days prior to the initiation of construction. Surveys shall be performed by a qualified biologist or ornithologist to verify the presence or absence of nesting birds. Construction shall not occur within a 500 foot buffer surrounding active nests of raptors or a 250 foot buffer surrounding active nests of migratory birds. If construction within these buffer areas is required or if nests must be removed to allow continuation of construction, then approval and specific removal methodologies shall be obtained from CDFW.

- If during pre-construction nest surveys, burrowing owls are found to be present, the following measures will be implemented.

- Compensation for the loss of burrowing owl habitat will be negotiated with the responsible wildlife agencies. Appropriate mitigation may include participation in an approved mitigation bank, establishing a conservation easement, or other means acceptable to the responsible agency.

- Exclusion areas will be established around occupied burrows in which no construction activities would occur. During the non-breeding season (September 1 through January 31), the exclusion area would extend 160 feet around any occupied burrows. During the breeding season of burrowing owls (February 1 through August 31), exclusion areas of 250 feet surrounding occupied burrows would be installed.

- If construction must occur within these buffer areas, passive relocation of burrowing owls may be implemented as an alternative, but only during the non-breeding season and only with the concurrence of the CDFW. Passive relocation of burrowing owls would be implemented by a qualified biologist using accepted techniques. Burrows from which owls had been relocated would be excavated using hand tools and under direct supervision of a qualified biologist.

Compensation for the loss of burrowing owl burrows removed during construction will be negotiated with the responsible wildlife agency. This may require that replacement burrows be constructed on compensation lands.

Effectiveness of Measure: Implementation of Mitigation Measure #3.4-3 would reduce the impact on the burrowing owls to a level that is ***less than significant with mitigation incorporated.***

Tricolored Blackbird

There are no known historical records of the tricolored blackbird (*Agelaius tricolor*) occurring on the project site, but there are two historical records occurring within 10 miles (see Figure 9). It is common locally throughout the Central Valley and in coastal districts from Sonoma County southward. The tricolored blackbird roosts in large flocks and breeds near fresh water, preferably in emergent wetland, with tall, dense cattails or tules, thickets of willow, blackberry, wild rose, and tall herbs. They forage on the ground in croplands, grassy fields, flooded land, and along edges of ponds looking for insects. Though the riparian corridor on the project site lacks cattails, thickets of willow are present; thus, marginal habitat is available for the species on the project site. Therefore, the tricolored blackbird could possibly occur as a transient forager on the project site.

Migratory birds and other Raptors

Various species of migratory birds and raptors, which are protected by the Migratory Bird Treaty Act and various provisions of the California Fish and Game Code, are likely to forage within the project site and may nest on the project site. Passerines and other small species could potentially nest within the riparian shrub layer or nearby trees. Raptors could also potentially nest within the trees in the vicinity. No active or inactive migratory bird nests were identified on the project site, and no active or inactive raptor nests were identified within 0.5 mile of the project site. Construction on the project site has the potential to impact to impact nesting and foraging migratory birds and raptors.

Conclusion: Tree or structure removal or nearby construction could have a ***potentially significant impact*** on raptors and other nesting migratory birds that have established themselves in the project area.

Mitigation Measure #3.4-4:

- Pre-construction surveys shall be performed on the project site in areas where there is a potential for nesting raptors and nesting migratory birds to occur if construction occurs

during the breeding season (loosely defined as February 15 to August 15). These include all areas of the project site that contain or are within 500 feet of power poles or trees that are suitable for the establishment of nests. These areas should also include the non-native annual grassland habitat, which provides potential breeding habitat for ground-nesting birds such northern harriers and horned larks. The pre-construction survey shall be performed within 14 days of construction to identify active nests and mark those nests for avoidance. During the nesting period, raptor nests shall be avoided by 500 feet and all other migratory bird nests should be avoided by 250 feet.

- Any trees scheduled for removal during the nesting season from February 15th to September 1st must first be inspected by a qualified biologist prior to removal. Active nest trees cannot be removed until nesting has been completed or removal has been deemed permissible by a biologist.

Effectiveness of Measure: Implementation of Mitigation Measure #3.4-4 would reduce the impact on the migratory birds and other raptors to a level that is ***less than significant with mitigation incorporated.***

Swainson's Hawks

There are 13 historical records of Swainson's hawks (*buteo swainsoni*) occurring within 10 miles of the project site (see Figure 9). Swainson's hawks generally breed within riparian forests and other forested areas. They roost in a variety of trees and forage widely over forests, grasslands, and shrublands. They are easily disturbed by human activities.

Conclusion: Although riparian habitat is present on the project site, it is low quality and surrounded by urban development with little foraging potential but it could potentially nest within the vicinity, therefore is a ***less than significant impact***.

San Joaquin Kit Fox

There are no known historical records of the San Joaquin kit fox (*Vulpes macrotis mutica*) on the project site, but there are four historical record occurring within 10 miles (see Figure 9). No San Joaquin kit foxes or sign of San Joaquin kit foxes (e.g., dens, tracks, scat, characteristic scratch marks) were observed on the project site. San Joaquin kit foxes are known to utilize waterways as regional corridors. They are also known to utilize agricultural fields, such as the one nearby to the northeast, for foraging purposes.

Conclusion: Therefore, due to the mobility of this species and its preferred foraging habitat, there is a ***potentially significant impact*** on the project site as an occasional transient or forager. No evidence of the San Joaquin kit fox was observed during field surveys.

Mitigation Measure #3.4-5. Because there is the potential for San Joaquin kit foxes to occur on site, the USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance shall be followed (see Appendix C of the Biological Survey Report). The measures that are listed below have been excerpted from those guidelines and will protect San Joaquin kit foxes from direct mortality and from destruction of active dens and natal

or pupping dens. The Lead Agency or Designee shall determine the applicability of the following measures depending on specific construction activities and shall implement such measures when required.

- Pre-construction surveys shall be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities, or any project activity likely to impact the San Joaquin kit fox. Exclusion zones shall be placed in accordance with USFWS Recommendations using the following:

Potential Den	50 foot radius
Known Den	100 foot radius
Natal/Pupping Den (Occupied and Unoccupied)	Contact U.S. Fish and Wildlife Service for guidance
Atypical Den	50 foot radius

  If dens must be removed, they must be appropriately monitored and excavated by a trained wildlife biologist. Replacement dens will be required. Destruction of natal dens and other "known" kit fox dens must not occur until authorized by USFWS.

- Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.

- To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted under measure 13 referenced below.

- Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.

- No firearms shall be allowed on the project site.

- No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.

- Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.

- A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.

- An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.

- Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFW), and revegetation experts.

- In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.

- Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFW immediately in the case of a

dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.

- The Sacramento Fish and Wildlife Office and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309. The above listed measures would also protect American badgers.

- New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

Effectiveness of Measure: Implementation of Mitigation Measure #3.4-5 would reduce the impact on the San Joaquin kit fox to a level that is ***less than significant with mitigation incorporated*.**

American Badger

There are no known historical records of the American badger (*Taxidea taxus*) on the project site, but there is one historical record occurring within 10 miles (see Figure 9). The badger is known to occur in low densities scattered throughout the San Joaquin Valley. No American badgers or sign of badgers (e.g., dens, tracks, scat, characteristic scratch marks) were observed on the project site. Due to the mobility of this species and its preferred foraging habitat, this species could potentially occur on the project site as an occasional transient or forager. No evidence of the American badger was observed during field surveys.

Conclusion: No badgers were observed within a 0.5-mile radius of the project site. Although possible, this species is unlikely to occur on or near the project site and therefore there is a ***less than significant impact,*** but it could potentially nest within the vicinity.

Have a substantial adverse effect on any riparian habitat or other sensitive natural community (b):

RIPARIAN HABITAT

Conclusion: Riparian habitat is defined as lands that are influenced by a river, specifically the land area that encompasses the river channel and its current or potential floodplain. There is riparian habitat occurring on the project site along Bear Creek. Temporary and permanent impacts to riparian habitat, riparian trees, and oak trees are anticipated due to potential tree removal, root disturbance, soil erosion, and sediment deposition. Accordingly, without mitigation measures, ***potentially significant impacts*** would occur.

Mitigation Measure #3.4-6:

- Removal of vegetation to be avoided when possible; when avoidance is untenable, revegetation and replacement is necessary.

- Disturbance to the riparian habitat (approximately 0.393 acres) will require a Lake and Streambed Alteration Agreement (LSAA form 1602) from CDFW. Typical requirements of a LSAA require a compensatory planting ratio (typically a minimum 4:1 ratio) as determined by CDFW. A revegetation plan will be prepared as a requirement of the LSAA.

Effectiveness of Measure: Implementation of Mitigation Measure #3.4-6 would reduce the impact on the riparian habitat to a level that is ***less than significant with mitigation incorporated.***

SENSITIVE COMMUNITIES

It is likely the project habitat once contained valley oak canopy of 10% or greater, and thus is defined as an oak woodland through CDFW (Section 1360-1372). Oak woodlands are protected through CEQA.

Conclusion: One valley oak tree exists both within the project footprint and the riparian area. One other valley oak tree exists near the proposed project footprint and may need to be trimmed. Accordingly, without mitigation measures, there will be a ***potential for significant impacts*** to occur.

Mitigation Measure #3.4-7: The City of Merced should reduce impacts (e.g., removal, construction beneath the canopy, and trimming) to oak trees and riparian trees to the extent feasible. To facilitate avoidance, high visibility construction fencing shall be placed around the two valley oak trees. All fencing must provide a buffer area around each oak tree that is not less than the aerial cover of the canopy. When avoidance and full protection is not possible, The City of Merced shall provide mitigation for the loss of oak trees as outlined below (1-4). Neither the City of Merced nor Merced County has adopted an Oak Woodland Management Plan or other plan that specifies adopted compensation for the loss of oak trees. However, to mitigate for

impacts to valley oak trees per Section 21083.1 of the Public Resources Code, implementation of one or more of the following mitigation measures is recommended:

1. Conserve oak woodlands through the use of conservation easements;

2.
   A. Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees (typically a minimum 4:1 ratio);
   B. The requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted;
   C. Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project; and
   D. The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands.

3. Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. Required funds are determined by size, health, and amount of oak trees that are impacted. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project

4. Other mitigation measures developed by the City.

Option 2 is the recommended mitigation measure to reduce impacts to oak woodlands on the project site. Per Option 4, the City can fulfill all mitigation requirements through Option 2, if desired. The other options include purchasing conservation easements or contributing funds to the Oak Woodlands Conservation Fund. Consultation with CDFW in regards to the oak trees and LSAA is also recommended.

Effectiveness of Mitigation Measures Implementation of Mitigation Measure #3.4-7 for riparian habitat and valley oak trees would reduce impacts to ***less than significant*** by protecting existing trees to the extent feasible, and by providing in-kind compensation based on size, health, and amount of trees impacted.

Have a substantial adverse effect on federally protected wetlands (c): The project will not result in impacts to wetlands. However, the project site spans Bear Creek, which is a jurisdictional Waters of the United States. The project site encompasses approximately 0.257 acres within the OHWM of Bear Creek. Design plans include bridge support columns within the creek bed to support the bridge. Given the impact size from this project, ACOE Nationwide Permit 14 will likely be applicable. However, construction is expected to minimally impact riparian vegetation, including stream banks. As such, the California Department of Fish and Game (CDFW) is expected to claim jurisdiction of the streambanks and channel under CDFW Code Section 1600. The City of Merced should procure a section 1602 Lake and Streambed Alteration Agreement (LSAA) from CDFW prior to beginning construction.

Bear Creek is also considered to be a waters of the state under the jurisdiction of the Regional Water Quality Control Board (RWQCB). In accordance with the Porter-Cologne Act, the RWQCB typically claims jurisdiction of all surface waters. Accordingly, The City of Merced should also procure a Section 401 permit from the Regional Water Quality Control Board (RWQCB).

Conclusion: The project site contains drainages which are jurisdictional features. Implementation of the proposed project would have a ***potentially significant impact*** on wetlands and/or other Waters of the U.S. However, the California Department of Fish and Game has jurisdiction over any modifications to the bed, bank and channel of the creek.

Mitigation Measure #3.4-8: Consult with CDFW, ACOE, and RWQCB to verify respective jurisdictional claims, and if required obtain proper permitting through CDFW Section 1602 LSAA, Nationwide Permit 14 (including pre-construction notification), and RWQCB Section 401.

Effectiveness of Measure: Implementation of Mitigation Measure #3.4-8 would reduce the impacts to the watercourse to a level that is ***less than significant with mitigation incorporated.***

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 (d): Wildlife movement corridors are routes that provide shelter and sufficient food supplies to support wildlife species during migration. Movement corridors generally consist of riparian, woodlands, or forested habitats that span contiguous acres of undisturbed habitat, and are important elements of resident species' home ranges. The project site would not be considered a wildlife movement corridor due to highly disturbed habitat. The reconnaissance surveys conducted for the proposed project found no evidence of wildlife nursery sites on the project site, and the aquatic habitat does not support special status fish species. Because the project site does not serve as a wildlife movement corridor or as a wildlife nursery site, project development would not impede wildlife movement or the use of a wildlife nursery site. ***No impacts*** would occur.

Conclusion: Construction on the project site would not put the continued existence of any native or migratory species in jeopardy and the impact would be ***less than significant***.

Mitigation Measures: None are required.

Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e): The project will not conflict with any local policies or ordinances protecting biological resources. The Oak Woodlands Conservation Act protects the valley oak trees present on the project site. The Conservation Element in the General Plan of the City of Merced directs that removal of vegetation that stabilizes slopes should be minimized. Furthermore, the Subdivision Ordinance states that subdivision design should minimize cutting of existing trees. Additionally, South Bear Creek Drive is considered by the City of Merced to

be a designated Scenic Corridor by Policy OS-1.3. The project will not conflict with the recovery plan for upland species of the San Joaquin Valley (USFWS 1998).

Conclusion: One valley oak tree exists both within the project footprint and the riparian area. One other valley oak tree exists near the proposed project footprint and may need to be trimmed. Accordingly, without mitigation measures, there will be a ***potential for significant impacts*** to occur.

Mitigation Measure #3.4-9: To facilitate avoidance, high visibility construction fencing should be placed around trees to be avoided. All fencing must provide a buffer area around each tree that is not less that the aerial cover of the canopy. Removal of standing trees with DBH over 4 inches should be avoided whenever possible; similarly, the project footprint will be designed to avoid areas containing trees over 4 inches DBH. It is also recommended that the project footprint avoid areas and the removal of trees that will undermine stable slopes or increase slope instability; managing the slope stability of the stream banks will likely be addressed in the CDFW LSAA.

Effectiveness of Measure: Implementation of Mitigation Measure #3.4-9 would reduce the impacts to a level that is ***less than significant with mitigation incorporated.***

3.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064385?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

A Cultural records search and Native American Heritage Commission records search were performed for the project and are included in their entirety as Appendix C. The assessment was undertaken to identify any potential impact to cultural resources in the Area of Potential Effect (APE), defined to include a potential staging area, as well as the direct impact area. To complete the assessment, pre-field research was conducted followed by a complete pedestrian survey.

The following is a summary of the reports.

RECORD SEARCHES

Central California Information Center Search

A records search was conducted at the Central California Information Center (CCIC), California Historical Resources Information System. According to the CCIC records, this has been the only surveys that have been conducted in the area and have found that there have been no reported prehistoric, historic archaeological, or historic properties within the proposed project area. Other historic information includes that there may be buildings, structures, and objects over 45 years old within the quarter-mile buffer that have not yet been formally recorded or evaluated. No cultural resource sites listed on the National Register of Historic Places, the California Register of Historic Resources, California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources have been documented within 0.25 mile radius of the project APE.

Native American Heritage Commission Record Search

The Native American Heritage Commission (NAHC) was contacted on March 23, 2012, in order to determine whether Native American sacred sites have been identified either within or in close proximity to the project area. On April 3, 2012, the NAHC responded to the request for a search of the sacred lands file. The NAHC indicated in a written letter report that the file search failed to indicate the presence of Native American cultural resources within the 0.5 mile of the proposed project APE. Included with the response was a list of seven Native American representatives who may have knowledge of cultural resources within the project site. To ensure that all Native American resources were adequately addressed, letters to each of the seven listed tribal contacts were sent, which requested information regarding the presence of any known cultural resources on the project site or within a 0.25-mile radius beyond the project site. As of the date of this writing, no response has been received.

Response:

Historic Resources (a): The records search conducted at the CCIC indicated that no cultural resource sites listed on the National Register of Historic Places, the California Register of Historic Resources, California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources have been documented within 0.25 mile radius of the project area. Accordingly, no impacts to historic resources will occur.

A letter was sent to the Native American Heritage Commission (NAHC) requesting a check of the Sacred Lands Files. The check failed to reveal any properties listed as Sacred Lands. The NAHC did provide an extensive list of individuals and groups to contact regarding the property. Letters were sent to the individuals identified by the NAHC. As of the date of this writing, no responses have been received. It is unlikely that the project will have any impact on Native American resources.

Conclusion: Although considered unlikely since there is no indication of any historic resources on the project site, subsurface construction activities associated with the proposed project could potentially damage or destroy previously undiscovered historic resources. This is considered a ***potentially significant impact***. Mitigation is proposed requiring implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface historic resources.

Mitigation Measure #3.5-1: Although there is no recorded evidence of historic or archaeological sites on the project site, there is the potential during project-related excavation and construction for the discovery of cultural resources. The City of Merced shall incorporate into the construction contract(s) for the project a provision that includes the following measures:

- Before initiation of construction or ground-disturbing activities associated with the project, the project proponent for all project phases shall require all construction personnel to be alerted to the possibility of buried cultural resources, including historic, archeological and paleontological resources;

- The general contractor and its supervisory staff shall be responsible for monitoring the construction project for disturbance of cultural resources; and

- If a potentially significant historical, archaeological, or paleontological resource, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains or trash deposits are encountered during subsurface construction activities (i.e., trenching, grading), all construction activities within a 100-foot radius of the identified potential resource shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) forms. The archaeologist shall determine whether the item requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under California Environmental Quality Act, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public Resources Code section 21083.2. The City of Merced shall implement said measures.

Effectiveness of Measure: Implementation of Mitigation Measure #3.5-1 would reduce the impact on historic resources to a level that is ***less than significant with mitigation incorporated.***

Archeological Resources (b): As indicated above, the records search surveys did not identify any prehistoric resources. Nonetheless, the possibility exists that subsurface construction activities may encounter undiscovered archaeological resources. This would be a potentially significant impact. Implementation of mitigation measure #3.5-1 would require inadvertently discovery practices to be implemented should previously undiscovered archeological resources be located. As such, impacts to undiscovered archeological resources would be less than significant.

Conclusion: Subsurface construction activities could cause a ***potentially significant impact*** to previously undiscovered archeological resources. Mitigation is proposed to reduce this potentially significant impact to a level of less than significant.

Mitigation Measures: Implement Mitigation Measure #3.5-1

Effectiveness of Measure: Implementation of Mitigation Measure #3.5-1 would reduce the impact on archeological resources to a level that is ***less than significant with mitigation incorporated.***

Paleontological Resources (c): There are no unique geological features or known fossil-bearing sediments in the vicinity of the project site. However, there remains the possibility for previously unknown, buried paleontological resources or unique geological sites to be uncovered during subsurface construction activities. Therefore, this would be a potentially significant impact. Mitigation is proposed requiring standard inadvertent discovery procedures to be implemented to reduce this impact to a level of less than significant.

Conclusion: Subsurface construction activities could cause a ***potentially significant impact*** to previously undiscovered paleontological resources. Mitigation is proposed to reduce this potentially significant impact to a level of less than significant.

Mitigation Measure #3.5-2: The City of Merced will incorporate into the construction contract(s) a provision that in the event a fossil or fossil formations are discovered during any subsurface construction activities for the proposed project (i.e., trenching, grading), all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at the City of Merced, who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the City shall implement those measures, which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code section 21083.2.

Effectiveness of Measure: Implementation of Mitigation Measure #3.5-2 would reduce the impact on paleontological resources to a level that is ***less than significant with mitigation incorporated.***

Burial Sites (d): Although unlikely since neither the records research indicated the presence of such resources, subsurface construction activities associated with the proposed project could potentially disturb previously undiscovered human burial sites. Accordingly, this is a potentially significant impact. Mitigation is proposed to reduce this potentially significant impact to a level of less than significant.

Conclusion: Although considered unlikely subsurface construction activities could cause a ***potentially significant impact*** to previously undiscovered human burial sites.

Mitigation Measure #3.5-3: If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:

There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Merced County Coroner is contacted. Duly authorized representatives of the Coroner shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Section 27460, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines the remains are Native American, the Coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

Effectiveness of Measure: Implementation of Mitigation Measure #3.5-3 would reduce the impact on burial sites to a level that is ***less than significant with mitigation incorporated.***

3.6 Geology/Soils

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction of collapse?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems when sewers are not available for the disposal of wastewater?	☐	☐	☒	☐

Response:

Seismic Effects (a-i through a-iii):

Fault Rupture (a-i): The project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. Since no known surface expression of active faults is believed to cross the site, fault rupture through the site is not anticipated. ***No impacts*** would occur.

Strong Ground Shaking (a-ii): The City of Merced's 2030 General Plan identified the City as being within the Uniform Building Code Seismic Zone 3. The California Geological Survey maintains a web-based computer model that estimates probabilistic seismic ground motions for any location with California. The computer model estimates the "Design Basis Earthquake" ground motion, which is defined as the peak ground acceleration with a 10-percent chance of exceedance in 50 years (475-year return period). For an alluvium soil type, the project site's estimated peak ground acceleration is approximately 0.22g.

Although the project site is located in an area of low seismic activity, the project could be affected by groundshaking from nearby faults. The closest active faults are the San Joaquin fault group (30 miles to the west of the City), and the Foothills Fault System (30 miles to the north). These faults are small and have exhibited activity in the last 1.6 million years, but not in the last 200 years. The project site is located on alluvial deposits, which tend to experience greater ground shaking intensities than areas located on hard rock. However, the distance to the faults that are the expected sources of the shaking would be sufficiently great that the effects should be minimal.

Project construction would be subject to roadway design standards and specifications, such as Caltrans, and the City of Merced Public Works departments. Design standards and specifications are established to ensure that project construction meets all applicable seismic design standards for California. Seismic design standards account for peak ground acceleration, soil profile, and other site conditions and they establish corresponding design standards intended to protect public safety and minimize property damage. Compliance with the regulatory requirements of the design standards and specifications would reduce potential ground shaking impacts to ***less than significant***.

Seismic Related Ground Failure (including Liquefaction) (a-iii): The Natural Resources Conservation Service (NRCS) soil survey for the project area indicates that the soil that underlies the project area is composed Honcut silt loam. The soils are comprised of loam, sandy loam sand, and fine sand and are considered suitable for roadway developments. Based on the relative density of soils and low site seismicity, the potential for liquefaction and associated adverse consequences is anticipated to be low. Additionally, project construction would be subject to roadway design standards and specifications, such as Caltrans, and the City of Merced Public Works departments. Design standards and specifications are established to ensure that project construction meets all applicable seismic design standards for California. Seismic design standards account for potential ground failure and they establish corresponding design standards intended to protect public safety and minimize property damage. Compliance with the

regulatory requirements of the design standards and specifications would reduce potential ground failure impacts to a ***less than significant*** level.

Landslides (a-iv): The City of Merced's 2030 General Plan indicates that the project site is located on relatively flat topography and is not located adjacent to any steep slopes or areas that would otherwise be subject to landslides. Construction of the project would involve changes to the surface and subsurface soil conditions, however compliance with design standards and specifications would reduce potential landslide impacts to a **less than significant level**.

Conclusion: There would be ***no impact*** from fault rupture. Impacts from ground shaking, ground failure, and landslides would be ***less than significant*** with regulatory compliance.

Mitigation Measures: None are required.

Soil Erosion (b): The NRCS web soils survey determined that the project site consisted of Honcut silt loam is a fine sandy loam soil which is well drained. There has been high erosion potential along the banks of Bear Creek as defined in the 2030 General Plan (Safety). Construction activities associated with the proposed project would involve the import and export of soil, vegetation removal, grading, and excavation activities that could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the project site. As discussed in Section 3.9: Hydrology and Water Quality, the City of Merced would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. The NPDES stormwater permitting programs regulates stormwater quality from construction sites, which includes erosion and sedimentation. Under the NPDES permitting program, the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) is required for construction activities that would disturb an area of one acre or more. The SWPPP must identify potential sources of erosion or sedimentation that may be reasonably expected to affect the quality of stormwater discharges as well as identify and implement Best Management Practices (BMPs) that ensure the reduction of these pollutants during stormwater discharges. Typical BMPs intended to control erosion include sand bags, detention basins, silt fencing, storm drain inlet protection, street sweeping, and monitoring of water bodies. The implementation of an SWPPP and its associated BMPs would reduce potential erosion impacts to a level of less than significant.

Conclusion: Construction activities associated with the proposed project may cause potentially significant impacts from erosion. Compliance with regulatory measures would reduce impacts to a ***less than significant*** level.

Mitigation Measures: None are required.

Unstable Geologic Units (c): Infrastructure improvements proposed by the project would require soil engineering in accordance with California and City of Merced standards and specifications. This process would involve removal of any unsuitable soils, the placement of engineered fill, and compaction in order to ensure that the structures to be constructed as proposed by the project are adequately supported. These practices would ensure the proposed

project is located on stable soils and geologic units and would not be susceptible to settlement or ground failure.

Conclusion: Impacts would be ***less than significant***.

Mitigation Measures: None are required.

Expansive Soil Hazards (d): The project site contains the Honcut silt loam soil type. This type of soil occurs on alluvial fans, at slopes varying from 0 to 5 percent. This type of soil has low-clay content and possess low shrink-swell properties and are not considered expansive. Therefore, the development of the proposed project would not expose persons or structures to hazards associated with shrinking and swelling of expansive soils.

Conclusion: Impacts would be ***less than significant.***

Mitigation Measures: None are required.

Wastewater Disposal (e): No permanent wastewater facilities using septic tanks or alternative wastewater disposal systems would be required by the project. During construction, portable sanitation facilities (portable toilets) would be used. Sanitation waste would be disposed of in accordance with sanitation waste management practices at an approved wastewater treatment plant.

Conclusion: Impacts would be ***less than significant***.

Mitigation Measures: None are required.

3.7 Greenhouse Gas Emissions:

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

Response:

Greenhouse gases (GHG) are identified as any gas that absorbs infrared radiation in the atmosphere. GHGs include water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), halogenated fluorocarbons (HCFCs), ozone (O3), perfluorinated carbons (PFCs), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF6). On December 7, 2009, the U.S. Environmental Protection Agency (EPA) issued an Endangerment Finding on the above referenced key well-mixed GHGs. These GHGs are considered "pollutants" under the Endangerment Finding. However, these findings do not themselves impose any requirements on industry or other entities.

The Global Warming Solutions Act (AB 32) was passed by the California Legislature and signed into law by the Governor in 2006. AB 32 requires that GHG emissions in 2020 be reduced to 1990 levels. GHG rules and market mechanisms for emissions reduction are required to be in place by January 1, 2012.

Greenhouse Gas Emissions (a): During construction activities, greenhouse gases would be emitted from construction equipment, vehicle, and truck exhaust. The SJVAPCD does not have thresholds or guidance regarding the significance of construction related emissions. However, that does not mean a significance finding should not be identified. For purposes of estimating GHG impacts the construction year was estimated to be 2013, if construction were to occur in later years, emissions would decrease slightly. Project construction would occur prior to the year 2020. The Sacramento Metropolitan Air Quality Management District's Road Construction model was used to estimate emissions from the proposed project. Project GHG emissions are shown below:

Table 3.7-1
Greenhouse Gas Construction Emissions (2013)

	Emissions (tons)	
	CO_2	$MTCO_2e$
2013 Bridge Construction	246.50	301
2013 Roadway Construction	241.61	184
Total	**488.11**	**485**

MTCO2e = (short tons of gas) x (global warming potential) x (0.9072 metric tons per short ton)

Global climate change is a cumulative impact. A project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHG emissions. However, the impacts on global warming and climate change are indirect, not direct, and the emissions cannot be correlated with specific impacts based on currently available science.

A level of significance has not been established for temporary CO_2 emissions. The State of California has implemented regulations that require reporting of CO2 emissions from stationary sources with emissions of CO_2 that exceeds 25,000 metric tons per year from combustion sources. The proposed project will have less than 2 percent of this reporting threshold.

Emissions from construction are temporary in nature. The SJVAPCD has implemented a guidance policy for development projects within their jurisdiction. This policy, "Guidance for Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," approved by the Board on December 17, 2009, does not address temporary GHG emissions from construction, nor does this policy establish numeric thresholds for ongoing GHG emissions. AB 32 requires that emissions within the State be reduced to 1990 levels by the year 2020. These construction emissions are minimal and would mainly occur prior to 2020; therefore, construction-generated GHGs are less than significant and no mitigation is required.

Conclusion: The impact would be ***less than significant***.

Mitigation Measures: There are none required.

Conflict with Plans (b): The proposed bridge project complies with the City's adopted Climate Action Plan (CAP). Mobility or Transportation is one of the 5 main greenhouse gas reduction sectors described in the Merced Climate Action Plan. The Plan describes strategies and actions to fulfill the strategies to reduce greenhouse gases at a more micro level. The proposed bridge follows several of the Plan's actions and will allow for reduced traffic congestion at other nearby bridge crossings and intersections and reduce vehicle miles travelled (VMT's) for travelers in this proximity. The Plan also describes many possible actions that involve pedestrian connectivity throughout the City. This project also implements a pedestrian and bikeway linkage across the bridge to increase connectivity within the neighborhoods. As discussed previously,

AB 32 requires that emissions within the State be reduced to 1990 levels by the year 2020. The project would generate only temporary construction emissions prior to the year 2020; therefore, impacts would be less than significant.

Conclusion: This impact would be ***less than significant***.

Mitigation Measures: There are none required.

3.8 Hazards/Hazardous Materials

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

involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Response:

Hazardous Materials (a, b,): Project construction activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction. The use of such materials would be considered minimal and would not require these materials to be stored in bulk form. As such, the project would not create a significant hazard to the public through the routine use, transport, or disposal of hazardous materials. Since hazardous materials will not be stored in bulk form, no impacts are expected regarding potential upset and accidental conditions involving the release of hazardous materials into the environment. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. In addition, mitigation measures are incorporated which requires the project applicant to implement a Stormwater Pollution Prevention Plan during construction activities to prevent contaminated runoff from leaving the project site.

Conclusion: Impacts would be ***less than significant***.

Mitigation Measures: None are required.

Exposure of Schools to Hazardous Materials (c): The nearest school, Ada Givens Elementary School, is to the southwest of the project location, approximately 0.25 miles. However, the use of such hazardous materials would be considered minimal and would not require these materials to be stored in bulk form. As such, the project would not create a significant hazard to the school staff/students at Ada Givens Elementary School.

Conclusion: There would be ***no impact.***

Mitigation Measures: None are required.

Hazardous Materials Site (d): The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As such, no impacts would occur that would create a significant hazard to the public or the environment.

Conclusion: There would be ***no impact.***

Mitigation Measures: None are required.

Airport Land Use (e, f): Based on review of the 2030 General Plan, the project site is approximately 3.2 miles northeast of the Merced Regional Airport. The airport is a general utility airport located at an elevation of 150 feet with a 1.2 mile long runway stretching from the

northwest to southeast. Land use controls for this area are provided by the City of Merced General Plan and Zoning Ordinance, and the Merced County General Plan and Zoning Ordinance, Part 77.21. The City of Merced has also prepared an airport master plan for the Merced Municipal Airport. The project is outside the height and safety restriction zones imposed by these plans.

Conclusion: There would be ***no impact***.

Mitigation Measures: None are required.

Adopted Emergency Response Plan or Emergency Evacuation Plan (g): Temporary construction activity would be expected to create temporary delays in traffic. Such delays would be typical for a construction project of this nature and would not be expected to interfere with an adopted emergency response plan or emergency evacuation plan; furthermore, construction contract provisions would require the preparation of a traffic management plan to address and minimize potential delays to emergency response plans. As such, impacts would be less than significant. Potential traffic impacts are discussed further in the Traffic/Transportation section.

Conclusion: Impacts would be ***less than significant***.

Mitigation Measures: None are required.

Wildfires (h): According to the California Department of Forestry and Fire Protection, the project site is not located in any fire hazard zone. The areas surrounding the project site contains developed/disturbed land consisting of recreational and residential uses. Habitat immediately adjacent to the current bridge structure and proposed bridge consists of riparian habitat, shrubs and trees. There is a low potential for wildland fires within these parameters, nevertheless, typical construction related impacts include the potential fire threat associated with equipment and vehicles coming in contact with wildland/vegetative areas. Construction vehicles and equipment such as welders, torches, and grinders may accidentally spark and ignite vegetation within the study area.

Conclusion: The increased risk of fire during the construction of the project would be similar to that found at other roadway construction sites and would be considered potentially significant.

Mitigation Measure #3.8-1: Construction contractors shall ensure that any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.

Mitigation Measure #3.8-2: Construction contractors shall ensure that during construction, staging areas, building areas, and/or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fuel for combustion. To the extent feasible, the contractor shall keep these areas clear of combustible materials to maintain a firebreak.

Effectiveness of Measures: With the implementation of Mitigation Measure #3.8-1 and #3.8-2, potential wildland fires would be reduced to a level of ***less than significant with mitigation incorporated***.

3.9 Hydrology/Water Quality

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☒	☐	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal flood	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Response:

Water Quality (a, f): Potential short-term impacts to surface waters may occur during construction, mainly from exposure of loose soil during construction-related activities, such as grading and excavation. Suspended solids, dissolved solids, and organic pollutants may enter surface water bodies while soils are disturbed and dust is generated. In addition, construction activities have the potential to generate waste materials (concrete, metal, rubble, etc) or discharge pollutants to surface waters from construction wastes and fuel spills/leaks.

To mitigate these potential effects, required erosion and pollutant control measures would be implemented in compliance with the NPDES General Permit prior to commencement of construction. Provisions of the General Permit require a site-specific plan to be developed that would address each construction component of the project. A Stormwater Pollution Prevention Plan (SWPPP) would be developed prior to any ground disturbance at the project site and would include practices to reduce erosion and surface water contamination during construction. The SWPPP would identify Best Management Practices (BMPs) to address erosion and discharge of construction pollutants as well as the location of such control measures.

Water quality BMPs identified in the SWPPP may include, but would not be limited to the following:

- Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place during the winter and spring months;

- Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures;

- A spill prevention and countermeasure plan shall be developed which will identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used onsite. The plan will also require the proper storage, handling, use, and disposal of petroleum products;

- Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Soil conservation practices shall be completed during the fall or late winter to reduce erosion during spring runoff. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction;

- Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Construction materials, including topsoil and chemicals, shall be stored, covered, and isolated to prevent runoff losses and contamination of groundwater;

- Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events;

- Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff;

- Disturbed areas will be revegetated after completion of construction activities;

- All necessary permits and approvals shall be obtained;

- Sanitary facilities shall be provided for construction workers; and

- Hazardous materials shall be stored in appropriate and approved containers, maintaining required clearances, and handling materials in accordance with the applicable federal, state and/or local regulatory agency protocols.

Water quality standards will also be addressed through compliance with regulatory requirements described in permits, such as the Clean Water Act (CWA) Section 401 certification and the 1600 Streambed Alternation Agreement. The contractor will assign a water pollution control manager, who will train workers, and manage a project plan based on state and federal requirements, to reduce potential impacts to water quality, soils, and other resources. The contractor(s) will perform water pollution control work in conformance with the requirements in the SWPPP and Water Pollution Control Program (WPCP) Preparation Manual and its addenda in effect on the day the Notice to Contractors is dated.

Conclusion: Compliance with regulatory measures would ensure that impacts to water quality are ***less than significant***.

Mitigation Measures: None are required.

Groundwater (b): The proposed project would require minimal amounts of water for dust control purposes during construction. All water required during construction of the project would be imported to the proposed project site from adjacent sources with existing entitlements. Upon completion, the proposed project would not draw water and deplete existing groundwater supplies.

Conclusion: There would be ***no impact***.

Mitigation Measures: None are required.

Drainage Pattern/Surface Runoff (c, d): The Parsons Avenue Bridge crosses Bear Creek, which flows through the central portion of the City, and is one of the principal watercourses in Merced County. Minor streambed alteration of the north and south banks would occur to accommodate the project. Construction will occur during the warmest months (May 1 through October 15), when the water is at its lowest level and flows are reduced. Should water be present during this period, a temporary cofferdam will be used to divert the stream. The existing channel on the project site is capable of accommodating a 100-year storm event. Although the project will potentially introduce a new minor obstruction within the creek, the project will be designed with erosion control features at the abutments and will not impede flows at a significant level. To clear existing creek and supply the required freeboard portions of Parsons Avenue, North Bear Creek Drive and South Bear Creek Drive will need to be raised and reconstructed at the intersection approaches. As identified in **Mitigation Measure #3.4-8**, the City will be required to secure appropriate permits from CDFW, ACOE, and RWQCB prior to any streambed activity. The contractor will take necessary precautions to assure that water quality from the project construction does not impact the quality of surface water.

Conclusion: The proposed project would not substantially alter the existing drainage pattern at the completion of the project. Erosion, siltation, and/or increased runoff in Bear Creek would not result from the project.

Mitigation Measure #3.9-1: If construction or demolition is necessary during a time when the River is flowing, a small cofferdam would be constructed to divert the water.

Effectiveness of Mitigation Measure #3.9-1: The impact would be ***less than significant with mitigation incorporated.***

Stormwater (e): Development of the proposed project would result in a small amount of impervious surface area and a small increase in rate and volume of storm water runoff from the site. Construction will not require the use of significant amounts of water that would result in an increase in runoff or result in flooding. Additionally, the contractor(s) will perform water pollution control work in conformance with the requirements in the "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual"

and its addenda in effect on the day the Notice to Contractors is dated. Compliance with regulatory measures would ensure that stormwater impacts are less than significant.

Conclusion: Impacts would be ***less than significant***.

Mitigation Measures: None are required.

100-Year Flood Hazard (g, h): According to the Flood Insurance Rate Map (Community Panel 06107C1642E), the project area is in Zone AE, the 100-year flood zone. However, the project would not place any housing within the 100-year flood zone. No buildings or other structures would be placed in the project area which would impede or redirect the flood flows.

Conclusion: ***No impacts*** would occur.

Mitigation Measures: None are required.

Dam/Levee Failure (i): The proposed bridge project falls within the Bear Reservoir Dam inundation area. Dam failure is usually the result of neglect, poor design, or structural damage caused by a major event such as an earthquake. Dams must be operated and maintained in a safe manner, which is ensured through inspections for safety deficiencies, analyses using current technologies and designs, and taking corrective actions as needed based on current engineering practices.

The project site is located within the Bear Reservoir Dam inundation area, as shown on Figure 11-3 of the Merced Vision 2030 General Plan. This inundation area runs through Merced to the west end of the city limits. The failure of this dam would be gradual because of the design and initial flood wave would reach the SUDP/SOI six hours after failure. In the event of a dam failure, the County Evacuation Plan shows the Merced County Fairgrounds as the evacuee assembly points and addresses what evacuation routes, priorities, and procedures should be followed. As such, impacts related to exposure of people or structures to a risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam would be less than significant.

Conclusion: This impact would be ***less than significant.***

Mitigation Measures: None are required.

Seiche/Tsunami (j): The Bear Reservoir Dam is of earthen-fill design and is more resistant to earthquake, however they are more likely to fail if over-topped. The County Evacuation Plan shows the Merced County Fairgrounds as the evacuee assembly points and addresses what evacuation routes, priorities, and procedures should be followed. The project site is more than 100 miles from the Pacific Ocean, a condition that precludes the possibility of inundation by tsunami. There are no steep slopes that would be susceptible to a mudflow in the project vicinity, nor are there any volcanically active features that could produce a mudflow in the City of Merced. This precludes the possibility of a mudflow inundating the project site. No impacts would occur.

Conclusion: There would be ***no impact.***

Mitigation Measures: None are required.

3.10 Land Use/Planning

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Response:

Divide Established Community (a): The City of Merced has identified construction of the Parsons Avenue Bridge and the bridge approaches in its Merced Vision 2030 General Plan. The project would alleviate congestion, improve the level of service, and reduce commute times for motorists. The Parsons Avenue approach north of Bear Creek Drive will require demolition of a vacant residential house located on city-owned property. The lot is located at the northeast corner of N. Bear Creek Drive and Parsons Avenue. Since demolition of the structure will occur, the City will be required to apply for a demolition permit with the San Joaquin Valley Air Pollution Control District. This impact will not divide an established community as this is an expansion of an already existing street division.

Conclusion: There would be ***no impact***.

Mitigation Measures: None are required.

Conflicts with Land Use and Zoning (b): The project does not involve any change to, or conflict with, applicable land use plans, policies, or regulations.

Conclusion: There would be ***no impact***.

Mitigation Measures: None are required.

Conservation Plan (c): A review of the Merced Vision 2030 General Plan, indicates the project site is not within an adopted or proposed conservation plan area. There would be no impact to an adopted or proposed conservation plan area.

Conclusion: There would be ***no impact***.

Mitigation Measures: None are required.

3.11 Mineral Resources

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Response:

Mineral Resources (a, b): The Open Space section of the 2030 Merced General Plan states that the City of Merced does not contain any mineral resources that require managed production, according to the State Mining and Geology Board. No Mineral Resource Zones (MRZ) exist within the City of Merced or in the area designated for future expansion of the City. As such, the project would have no impacts on mineral resources.

Conclusion: This impact would be ***no impact.***

Mitigation Measures: None are required.

3.12 Noise

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Response:

The following analysis is based on information contained in the General Plan EIR.

FEDERAL HIGHWAY ADMINISTRATION AND CALTRANS STANDARDS

According to Title 23 Code of Federal Regulations (CFR) Part 772.5 of the Federal Highway Administration (FHWA) standards, traffic noise impacts occur when the predicted traffic noise

level in the design year approaches or exceeds the Noise Abatement Criteria (NAC) specified by 23 CFR 772 or substantially exceeds the existing noise level. A noise level is considered to approach the NAC for a given activity if it is within 1 dB (A-weighted decibels) of the NAC.

A substantial noise increase occurs when the project's worst-hour design-year noise level, as defined by the equivalent sound level (Leq), exceeds the existing worst-hour noise level by 12 dB or more.

Table 3.12-1 summarizes NAC corresponding to various land use activity categories. Activity categories and related traffic noise impacts are determined based on the actual land use in a given area.

Table 3.12–1
Activity Categories and Noise Abatement Criteria (NAC)

Activity Category	NAC, Hourly A-Weighted Noise Level (dBA – Leq [h])	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 Exterior	Developed lands, properties, or activities not included in categories A or B above
D	--	Undeveloped lands
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Source: Noise Study Report, J.C. Brennan & Associates, Inc., August 2012

In identifying noise impacts, primary consideration is given to exterior areas of frequent human use. In situations where there are no exterior activities, or where the exterior activities are far from the roadway or physically shielded in a manner that prevents an impact on exterior activities, the interior criterion (Activity Category E) is used as the basis for determining a noise impact.

NOISE ABATEMENT CRITERIA

23CFR 772 of the FHWA standards and the Caltrans Traffic Noise Analysis Protocol (Protocol) require that noise abatement be considered for projects that are predicted to result in traffic noise impacts. A traffic noise impact is considered to occur when future predicted design-year noise levels with the project "approach or exceed" Noise Abatement Criteria (NAC) defined in 23 CFR 772 (refer to Table 3.12-1) or when the predicted design-year noise levels with the project substantially exceed existing noise levels.

Where traffic noise impacts are identified, noise abatement must be considered for reasonableness and feasibility as required by 23 CFR 772 and the Protocol. The overall reasonableness of noise abatement is determined by considering factors such as cost, absolute predicted noise levels, predicted future increase in noise levels, expected noise abatement benefits, build date of surrounding residential development along the highway, environmental impacts of abatement construction, opinions of affected residents, input from the public and local agencies, and social, legal, and technological factors.

23 CFR 772 states that for noise abatement to be considered acoustically feasible, it must be predicted to provide at least a 5 dB minimum reduction at an impacted receptor. Additionally, 23 CFR 772 now requires an acoustic design goal for abatement. The Caltrans acoustic design goal is that noise abatement must be predicted to provide at least 7 dB of noise reduction at one or more benefited receptors. In addition, barriers should be designed to intercept the line-of-sight from the exhaust stack of a truck to the first tier of receivers, as required by the Highway Design Manual, Chapter 1100. Other factors that affect feasibility include topography, access requirements for driveways and ramps, presence of local cross streets, utility conflicts, other noise sources in the area, and safety considerations.

The Protocol defines the procedure for assessing reasonableness of noise barriers from a cost perspective. A cost-per-residence allowance is calculated for each benefited residence (i.e., residences that receive at least 5 dB of noise reduction from a noise barrier). The 2011 base allowance is $55,000. Additional allowance dollars are added to the base allowance based on absolute noise levels, the increase in noise levels resulting from the project, achievable noise reduction, and the date of building construction in the area. Total allowances are calculated by multiplying the cost-per-residence by the number of benefited residences. If the total allowance for all evaluated noise barriers is more than 50 percent of the estimated construction cost, the allowance per residence is modified to a reduced value.

CONSTRUCTION NOISE AND VIBRATION

There are no Caltrans or FHWA standards for construction noise or vibration. One reference suggesting vibration standards is the Federal Transit Administration (FTA) publication concerning noise and vibration impact assessment from transit activities. Although the FTA guidelines are to be applied to transit activities and construction, they may be reasonably applied to the assessment of the potential for annoyance or structural damage resulting from other activities. To prevent vibration annoyance in residences, a vibration velocity level of 80 VdB or less is suggested when there are fewer than 70 vibration events per day. A level of 100 VdB or less is suggested by the FTA guidelines to prevent damage to fragile buildings.

LOCAL NOISE STANDARDS

City of Merced General Plan Update

Under the Merced Vision 2030 General Plan Noise Element, noise levels from 50 dB to 60 dB are considered “normally acceptable” for unshielded single-family residential development. Noise levels from 60 dB to 70 dB are considered within the “conditionally acceptable” range,

while noise levels 70 dB to 75 dB are considered "normally unacceptable" for single-family residential use. Noise levels from 50 dB to 70 dB are considered acceptable for commercial retail and office uses along with public uses such as schools, churches, hospitals, and neighborhood parks. Noise levels above 80 dB are considered "clearly unacceptable" for most uses.

EXISTING NOISE LEVELS

The predominant existing noise source affecting the project site and surrounding area is traffic on Parsons Avenue and other more distant roadways. Existing land uses adjacent to Parsons Avenue in the project area include residences and open space. The closest potentially impacted receivers in the project area are single-family residences on the east and west sides of Parsons Avenue, which are located directly north and south of the proposed bridge.

The posted vehicle speed limit on Parsons Avenue in the project area is 35 miles per hour (mph). It was observed through vehicle pacing that 35 mph closely represents the speed actually travelled by vehicles on the section of Parsons Avenue affected by the project. The project roadway is generally flat relative to adjacent uses.

Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (a):

The dominant noise source affecting the project site is traffic from Parsons Avenue. Residential land uses in the project area are represented by single-family residences located north and south of the proposed Parsons Avenue bridge. In order to determine the potential noise impacts of the project, several receivers were analyzed for the single-family residences north and south of the proposed Parsons Avenue bridge.

PROJECT-RELATED NOISE LEVELS

Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5 (TNM 2.5). TNM 2.5 is a computer model based on two FHWA reports: FHWA-PD-96-009 and FHWA-PD-96-010 (FHWA 1998a, 1998b). Key inputs to the traffic noise model were the locations of roadways, shielding features (e.g., topography and buildings), noise barriers, ground type, and receivers.

Traffic noise was evaluated under existing conditions and future (2030) conditions. Existing and Future Average Daily Traffic (ADT) traffic volumes were provided by the City of Merced. Posted speed limits are 35 miles per hours. Table 3.12-2 summarizes the traffic volumes and assumptions used for modeling existing and future conditions.

Table 3.12-2
Parsons Avenue Bridge – Traffic Noise Modeling Assumptions

	Existing	Project (2030)
Annual Avenue Daily Traffic (AADT)-both directions	15,630	30,000

Sources: J.C. Brennan & Associates, Inc, August 2012; City of Merced

Table 3.12-3 summarizes the traffic noise modeling results for existing conditions (Year 2010) and future conditions (2030). The comparison to existing conditions is included in the analysis to identify traffic noise impacts under 23 CFR 772. These future build out results include all improvements along Parsons Avenue and does not exceed the threshold of conditionally acceptable.

Table 3.12-3
Parsons Avenue Bridge – Predicted Existing and Future Noise Levels

			Traffic Noise (dBA, Ldn)	
Roadway	**Segment**	**Distance**	**Existing**	**General Plan Build Out**
Parsons Ave	SR 140 to Bear Creek	100'	60.3	65.3
Parsons Ave	Bear Creek to Olive	100'	56.1	64.5

FHWA AND CALTRANS

Modeling results in Table 3.12-3, indicate that predicted changes in future traffic noise levels with the project would be less than substantial (less than 12 dB) and would not be considered significant.

The predicted traffic noise levels for the future (2030) with-project conditions do not exceed the NAC of 67 dBA Leq(h) for Activity Category B land uses and would not be considered significant.

NOISE ABATEMENT ANALYSIS

The Merced General Plan EIR has anticipated that roadway improvement projects will be needed to accommodate build-out of the General Plan. Therefore, existing noise-sensitive uses may be exposed to increased noise levels due to roadway improvement projects as a result of increased roadway capacity, increases in travel speeds, etc. The existing noise levels in the area are between 56.1 and 60.3 dBA, Ldn. The EIR states, where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +5 dB Ldn increase in noise levels due to roadway improvement projects should be mitigated to the extent feasible. The increase calculated in the Noise study reflects full build out of Parsons Avenue. The proposed bridge project will create a minimal impact on operational noise levels and therefore mitigation is not required at this phase of the General Plan build-out.

Conclusion: The project would result in a less than significant impact with regards to the City of Merced's noise standards; therefore, no mitigation is required. With respect to FHWA and Caltrans noise standards, the project has no impact. Therefore, there are l*ess than significant impacts.*

Mitigation Measures: None are required.

Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (b): Vibration from construction activities could be detected at the closest sensitive land uses, especially during pile driving activities and movements by heavy equipment or loaded trucks. Typical vibration levels at a reference distance of 25 feet are summarized by Table 3.12-4. For comparison purposes, reference vibration levels have been projected for a distance of 100 feet to more closely represent the closest critical receivers, especially with reference to pile driving vibration.

Table 3.12-4
Parsons Avenue Bridge – Estimated Vibration Levels During Construction

Equipment	PPV (in/sec)		RMS Velocity (VdB)	
	@ 25 feet	@ 100 feet	@ 25 feet	@ 100 feet
Pile Driver (Impact)	0.6 – 1.5	0.08 – 0.19	104-112	86-94
Pile Driver (Sonic)	0.2 – 0.7	0.025 – 0.088	93-105	70-82
Bulldozer (Large)	0.09	0.011	87	69
Bulldozer (Small)	0.003	0.0004	58	40
Loaded Truck	0.08	0.01	86	68
Jackhammer	0.04	0.005	79	61

Source: Transit Noise and Vibration Assessment, FTA-VA-90-103006, May 2006

Nevertheless, vibration levels would be below normal thresholds of annoyance for all activities except pile driving (at a distance of 25 feet). However, the closest sensitive receptor is greater than 100 feet, and therefore vibration levels would be below the 0.2 PPV and 100 VdB thresholds typically applied. Accordingly, impacts will be less than significant.

Conclusion: The project would not expose persons to or generation of excessive groundborne vibrations or groundborne noise levels. Impacts will be ***less than significant***.

Mitigation Measure: None is required.

Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project (c): The project's potential to substantially increase ambient noise levels at nearby properties is defined by using the term "substantial." The term "substantial" is not defined in the CEQA guidelines. However, research into the human perception of increased sound level indicates the following:

- A 1-dBA, or less, increase is difficult to perceive;
- A 3-dBA increase is just perceptible;

- A 5-dBA increase is clearly perceptible; and
- A 10-dBA increase is perceived as being twice as loud.

Therefore, under typical outdoor ambient conditions, where constantly varying noise levels are occurring over time, people typically cannot clearly perceive increases in ambient noise levels until they reach approximately +3 dBA. As such, 3 dBA is generally accepted as the threshold beyond which increases to local ambient noise levels resulting from projects are considered "substantial."

As stated in section (a), this project will have minimal increase in traffic noise. However, the complete General Plan build-out of Parsons Avenue will create the potential for a substantial increase in traffic noise and certain mitigation measures may be required at a future time depending on General Plan buildout.

Conclusion: The project would not result in a substantial permanent increase in ambient noise levels. Impacts will be ***less than significant***.

Mitigation Measures: No mitigation is necessary.

Substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (d):

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase **would be of short duration, and would likely occur primarily during daytime hours.**

The City of Merced General Plan Noise Element provides policies and implementing actions for reducing equipment noise levels.

Table 3.12-5
Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Level, dBA (50 feet)
Backhoe	78
Concrete Saw	90
Crane	81
Excavator	81
Front End Loader	79
Jackhammer	89
Paver	77
Pneumatic Tools	85
Bulldozer	82

Source: FHWA

Conclusion: Construction activities would temporarily increase the ambient noise levels in the project vicinity. This is a potentially significant impact.

Mitigation Measure #3.12-1: Construction activities shall be limited to between 6:00 A.M. and 9 P.M. Monday through Friday and between 7:00 A.M. and 5:00 PM on Saturday or Sunday to avoid noise-sensitive hours of the day.

Mitigation Measure #3.12-2: The construction contract shall require the construction contractor to ensure that construction equipment noise is minimized by muffling and shielding intakes and exhaust on construction equipment (in accordance with the manufacturer's specifications) and by shrouding or shielding impact tools.

Effectiveness of Measure: With the implementation of Mitigation Measures #3.12-1 and 3#.12-2 temporary noise increases would be ***less than significant with mitigation incorporated.***

Airport Noise (e): The project site is not located within two miles of a public or public use airport. The nearest airport, The Merced Regional Airport/Macready Field, is located 3.2 miles southwest of the project site. According to the City of Merced General Plan Update Chapter 9-Noise, the project site is located outside the 55-dB CNEL noise contour for the Merced Regional Airport; as such, impacts would be less than significant.

Conclusion: Impacts would be ***less than significant***.

Mitigation Measures: None are required.

Airport Noise (f): The proposed project is not located within 2 miles of a private airstrip. No impacts would occur.

Conclusion: There is ***no impact***.

Mitigation Measures: None are required.

3.13 Population and Housing

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

Response:

Population Growth and Displacement (a, b, c): Replacement or reconstruction of the bridge and associated roadway improvements are in response to the City's determination that the bridge and roadway improvements are necessary to relieve congestion. Local workers would be utilized for the construction of the proposed project and would not require additional permanent housing. Therefore, no additional housing would be required as a result of the project. As a result, the project would not induce substantial population growth. Construction of the project would create a minimal impact on existing residential housing along Parsons Avenue by removing a residential home at the northeast corner of Parsons Avenue and N. Bear Creek. This impact will not substantially impact the housing and population figures and therefore is a ***less than significant*** impact.

Conclusion: There would be ***less than significant impact*** to population or housing.

Mitigation Measures: None are required.

3.14 Public Services

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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 impact, in order to maintain acceptable service ratios for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Response:

Fire Protection Services (a): The City of Merced Fire Department provides fire and life safety services for residents located within the City limits. The proposed project would result in the construction of a bridge and would be constructed in accordance local and state fire codes. Any calls for service during construction would cause only temporary effects to fire services, and impacts would not result in a notable increase in fire risk and service demand for the area. Construction and staging activities associated with the proposed project could have the potential to interfere with emergency response plans by obstructing response and evacuation routes on existing roads. However, the proposed project will require construction contract special provisions requiring that a traffic management plan be prepared. The traffic management plan will include construction staging and traffic control measures to be implemented during construction to maintain and minimize impacts to traffic. Minor traffic stoppages or delays may be allowed if necessary during project construction. Full roadway closures will be avoided during project construction and provisions for emergency vehicle movement through the project area will be provided at all times during construction. Furthermore, the City or its construction contractors will conduct early coordination with utility service providers, law enforcement, and emergency service providers to ensure minimal disruption to service during construction. As a result of this coordination, emergency service would be aware of project construction and the potential for any emergency vehicle movement delays with the project area and measures to avoid such delays would be determined. The proposed project's construction would not affect the provision of emergency services or evacuation of the project area in the event of a major

emergency. One of the primary objectives of the proposed project is to improve the flow of traffic through the existing community, which would in turn improve emergency vehicle access. Since the proposed project would not include the construction of residential or commercial land uses, the construction of new or physically altered fire protection facilities would not be required. The proposed project would improve circulation in the Parsons Avenue and nearby area thereby reducing delay times that the Fire Department may encounter.

Conclusion: The project would not create a significant demand for additional fire services. Impacts would be ***less than significant***

Mitigation Measures: None are required.

Police Protection (a): The City of Merced Police Department provides law enforcement within the jurisdictional boundaries of the City of Merced, including the project site. Construction of the proposed project could create significant interference with emergency plans by obstructing response and evacuation routes on existing roads. However, construction contract special provisions will require that a traffic management plan be prepared. The traffic management plan will include construction staging and traffic control measures to be implemented during construction to maintain and minimize impacts to traffic. Minor traffic stoppages or delays may be allowed if necessary during project construction. Full roadway closures will be avoided during project construction and provisions for emergency vehicle movement through the project area will be provided at all times during construction. Furthermore, the City or its construction contractors will conduct early coordination with utility service providers, law enforcement, and emergency service providers to ensure minimal disruption to service during construction. As a result of this coordination, law enforcement service providers would be aware of project construction and the potential for any emergency vehicle movement delays within the project area and measures to avoid such delays would be determined. The proposed project's construction and use would not affect the provision of police services or area evacuation in the event of a major emergency. Since the proposed project would not include the construction of residential or commercial land uses, the construction of new or physically altered police protection facilities would not be required. It is not anticipated that construction of the proposed project, which is designed to improve congestion in the project vicinity would have a negative impact or would impede the continued protection and service to residents by the Police Department.

Conclusion: The project would not create a significant demand for additional police protection services. Impacts would be ***less than significant***.

Mitigation Measures: None are required.

School Facilities (a): The proposed project is located within the Merced City School District and Merced Union High School District (for grades K-12). Construction of the proposed project could interfere with existing school bus travel by creating temporary route delays that reduce the flow of vehicular traffic at certain times of the day. Delays would occur only during the construction phase and implementation of the traffic management plan would ensure that a through-route is provided at all times. Since the construction period and resulting delays would

be temporary, impacts would be less than significant. The direct increase in demand for schools is normally associated with new residential projects that bring new families with school-aged children to a region. The proposed project does not contain any residential uses. The project, therefore, would not result in an influx of new students in the project area and is not expected to result in an increased demand upon District resources and would not require the construction of new facilities.

Conclusion: The project would result in a ***less than significant impact*** to school facilities.

Mitigation Measures: None are required.

Park Facilities (a): The project would not result in an increase in demand for parks and recreation facilities because it would not result in an increase in population. Accordingly, the proposed project would have no impacts on parks.

Conclusion: There would be ***no impact***.

Mitigation Measures: None are required.

Other Public Facilities (a): The proposed project does not propose residential, commercial, or industrial development. The project, therefore, would not result in increased demand for, or impacts on, other public facilities such as library services. Accordingly, no impact would occur.

Conclusion: There would be ***no impact***.

Mitigation Measures: None are required.

3.15 Recreation

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

Response:

Recreational Facilities (a): The proposed project does not include the construction of residential uses and would not directly induce population growth. Therefore, the project would not cause physical deterioration of existing recreational facilities from increased usage or result in the need for new or expanded recreational facilities.

Conclusion: ***No impacts*** would occur.

Mitigation Measures: None are required.

Recreational Facilities (b): The existing pedestrian pathways that extend east and west along Bear Creek will have a minimal impact during the construction of the bridge. The impact will be within the bridge design footprint. The impacted pathways will be reconstructed to match up to the existing trail after the bridge is constructed.

Conclusion: ***Less than significant impact*** would occur.

Mitigation Measures: None are required.

3.16 *Transportation/Traffic*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?)	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation?	☐	☐	☒	☐

Response:

Increase in Traffic (a, b): The proposed project consists of construction of either a 2-lane or a 4 lane bridge with sidewalks, and Class II (on-street) bike lanes over Bear Creek, reconstruction of pathways alongside Bear Creek under the proposed bridge, and construction of the Parsons Avenue street approaches at the Bear Creek and Parsons Avenue intersections. Pathway connections will be provided from the Michael O. Sullivan Bike Path to the Parsons Avenue and N. Bear Creek Drive and S. Bear Creek Drive intersections. The Michael O. Sullivan pathway will become connected with the sidewalks on Parsons Avenue on the north and south sides of the

bridge. The area of potential effect includes approximately 100 feet-plus on the north and 350 feet-plus on the south approach. The approaches are proposed to be re-aligned and restriped to four-lanes to tie into the existing segments of Parsons Avenue. Potential improvements to the approaches would include realignment, overlay, restriping, and shoulder work within the existing right-of-way.

The Parsons Avenue extension over Bear Creek was identified in the City's General Plan Circulation Element as a major north-south route.

Much of the City's growth over the past several decades has taken place to the north, above Bear Creek.

Because no major north-south routes are completed east of "G" Street, the City's north-south circulation system has become increasingly unbalanced. Expanding traffic from Merced's newer, northern growth areas increasingly impacts the existing north-south grid system. Much of this traffic travels south towards downtown, other older parts of the community like McKee Road, or to the region's highway network (Highways 99, 140 and 59) during morning peak hour.

At the same time, traffic from East Merced traveling towards the same destinations has limited options. Constraints funnel much of this traffic to a limited number of east-west routes such as East 26th Street, North Bear Creek Drive, East Alexander and East Olive Avenues, then westward to already heavily burdened north-south routes at "G" Street or beyond.

Currently there are five bridges for local traffic over Bear Creek in the Merced urban area: 16th, "R", "M", and "G" Streets, and McKee Road. All but 16th Street serve north-south bound traffic and are critical circulation points in a community that is planning for extended north-south growth. As traffic increases substantially with future growth, the bridge locations will become increasing bottlenecks. Because of significant size and cost constraints, expansion of these bridges could be difficult.

Completion of the Parsons corridor, which includes an additional crossing at Bear Creek, would assist in distributing cross-town traffic more evenly across Bear Creek and reduce congestion throughout the urban area. With the new Parsons Avenue bridge, additional traffic is anticipated on Stretch Road between Green Street and McKee Road for traffic that will be connecting to Santa Fe Avenue or the highways. Parsons Avenue between Stretch Road and Olive Avenue will also see an increase in traffic with the new Parsons Avenue bridge crossing. This will create a short term drop in LOS on Stretch Road between Green Street and McKee Road and on Parsons Avenue between Stretch Road and Olive Avenue until the full 4-lane buildout of Parsons Avenue is completed.

After completion of the bridge, the intersections of Parsons Avenue/N. Bear Creek Avenue and Parsons Avenue/S. Bear Creek Avenue will consist of 3-way stops. This traffic control will be similar to the way the McKee Road bridge is controlled over the Creek. At the discretion of the City Engineer, a complete warrant study in accordance with the most recent edition of the CA MUTCD may be required to evaluate the need for traffic signals.

The City's General Plan identifies a minimum LOS D in urban areas. As such, the General Plan EIR found that the Parsons Avenue extension over Bear Creek would, despite improving overall traffic in the area, be a significant and unavoidable impact. The same determination is true for other

road segments in the area. North Bear Creek Drive from "G" Street to Parsons/Gardner is expected to operate at LOS F in 2030.

Conclusion: In certifying the City's 2030 General Plan EIR, the City acknowledged that growth within the urban area would result in traffic impacts that exceed established thresholds. As this impact was determined to be a significant environmental effect which could not be avoided if the General Plan was implemented, the City of Merced adopted a Statement of Overriding Conditions.

The proposed project will not result in any new significant and unavoidable impacts not previously identified in the City's 2030 General Plan EIR. Therefore, it is determined that there are ***no significant impacts***.

Mitigation Measures: None are required.

Air Traffic Patterns (c): The project site is not located in close proximity to an airport, the nearest airport is the Merced Regional Airport/Macready Field located 3.2 miles southwest of the project site. The proposed project will not change or effect any air traffic patterns or airport land use plan.

Conclusion: There are ***no impacts***.

Mitigation Measures: None are required.

Hazards, Emergency Access and Parking (d, e, f): Construction and staging activities associated with the proposed project could have the potential to interfere with emergency response plans by obstructing response and evacuation routes on existing roads. However, the proposed project will require construction contract special provisions requiring that a traffic management plan be prepared. The traffic management plan will include construction staging and traffic control measures to be implemented during construction to maintain and minimize impacts to traffic. Minor traffic stoppages or delays may be allowed if necessary during project construction. Full roadway closures will be avoided during project construction and provisions for emergency vehicle movement through the project area will be provided at all times during construction. Furthermore, the City or its construction contractors will conduct early coordination with utility service providers, law enforcement, and emergency service providers to ensure minimal disruption to service during construction. As a result of this coordination, emergency service providers would be away of project construction and the potential for any emergency vehicle movement delays with the project area and measures to avoid such delays would be determined. The proposed project's construction would not affect the provision of emergency services or evacuation of the project area in the event of major emergency.

Conclusion: Impacts are ***less than significant***.

Mitigation Measures: None are required.

Alternative Transportation (g): The construction of the bridge will create temporary impacts to the pathways along Bear Creek. The traffic management plans will need to incorporate necessary staging and control measures to minimize such impacts. There will also be new class

II (on-street) bike lanes striped along the Parsons Avenue bridge. The temporary construction impacts will create minimal impacts only.

Conclusion: There will be *less than significant impact* to alternative transportation.

Mitigation Measures: None are required.

3.17 *Utilities/Service Systems*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) 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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Response:

Wastewater (a, b, e): During construction, portable restroom facilities would be provided by the construction contractor for the construction workers. Wastewater would be contained within portable toilet facilities and disposed of at an approved site according to regulations. The applicant would contract with a local service provider to dispose of the wastewater at an approved wastewater treatment plant. No other sources of wastewater are anticipated during the proposed project construction activities, and operation of the proposed project would not require the use of water or the generation of wastewater. The negligible amount of wastewater generated during construction would not affect the wastewater treatment facility's ability to meet their applicable wastewater treatment requirements. The proposed project would not require the construction of new water or wastewater treatment facilities. Water would be required for dust control purposes, but would be acquired from persons with existing entitlements to water, and no new entitlements will be required. All applicable local, state, and federal requirements and best management practices would be incorporated into construction of the project.

Conclusion: There would be ***no impacts***.

Mitigation Measures: None are required.

Storm Water (c): The project will not require construction of new stormwater facilities. Construction will not require the use of significant amounts of water that would result in an increase in runoff or result in flooding. Additionally, the contractor(s) will perform water pollution control work in conformance with the requirements in the "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" and its addenda in effect on the day the Notice to Contractors is dated. Compliance with regulatory measures would ensure that stormwater impacts are less than significant.

Conclusion: The Project's stormwater impact is ***less than significant***.

Mitigation Measures: None are required.

Water Service (d): The project would require minimal amounts of water for dust control purposes during construction. During construction, all non-potable water required would be supplied by truck from existing entitlements. No new resources or entitlements will be needed.

Conclusion: The project would have a ***less than significant impact*** on the City's ability to serve existing water users.

Mitigation Measures: None are required.

Solid Waste (f, g): The project would include some construction material waste. structure. The proposed construction is expected to generate construction debris including concrete, metal, and asphalt. Solid waste materials will be transported to the permitted landfill in Merced County. In compliance with state, federal, and local regulations, materials will be recycled to the extent possible.

Conclusion: The proposed project would not generate the need for new solid waste facilities and the impacts would be ***less than significant***.

Mitigation Measures: None are required.

3.18 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☒	☐
c) Have possible environmental effects that are individually limited but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.	☐	☐	☒	☐
d) Include environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Response:

(a): The proposed project has the potential to significantly impact several species during the construction phase. Risk of significant impact can be reduced to less than significant by implementing measures as outlined under Section 3.4, so that no long-term affects to any species will occur. The proposed project is consistent with long-range plans for the City's transportation system and would not be inconsistent with existing environmental plans.

(b): The project is in response to priorities for transportation related projects, as outlined by Federal Transportation Improvement Program. There will be no impacts to long term environmental goals.

(c): CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. The proposed project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc).

(d): The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly.

Mitigation measures have been incorporated in the project design to reduce all potentially significant impacts to less than significant.

SECTION FOUR

MITIGATION REPORTING/MONITORING PLAN

SECTION FOUR – MITIGATION MONITORING PLAN

State and local agencies are required by Section 21081.6 of the California Public Resources Code to establish a monitoring and reporting program for all projects which are approved and which require CEQA processing.

Local agencies are given broad latitude in developing programs to meet the requirements of Public Resources Code Section 21081.6. The mitigation monitoring program outlined in this document is based upon guidance issued by the Governor's Office of Planning and Research.

The mitigation monitoring and reporting program for the proposed project corresponds to mitigation measures outlined in the project Mitigated Negative Declaration (MND). The Program summarizes the environmental issues identified in the MND, the mitigation measures required to reduce each potentially significant impact and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
3.4 Biological Resources				
3.4-1	Pre-construction surveys shall be performed on the project site in areas where there is a potential for western pond turtle to occur. These areas include a 500-foot buffer upstream and downstream along the creek corridor from the project site. If western pond turtles are found, appropriate mitigation measures will be developed in consultation with CDFW.	City of Merced	CDFW	Less Than Significant
3.4-2	Pre-construction surveys shall be performed on the project site in areas where there is a potential for western red bat to occur. These include all areas of the project site that contain or are within 500 feet of power poles or trees that are suitable for the establishment of roosts. Surveyors will look for roosts and potential roosts as well as guano for signs of the western red bat. If roosts are found acoustic monitoring shall be performed to identify species.	City of Merced	CDFW	Less Than Significant
3.4-3	▪ Standard measures for the protection of burrowing owls provided in Burrowing Owl Consortium's April 1995 *Burrowing Owl Survey Protocol and Mitigation Guidelines* and the CDFW's March 12, 2012 *Staff Report on Burrowing Owl Mitigation* shall be implemented. ▪ In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), pre-construction	City of Merced	CDFW	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	surveys shall be conducted to determine the presence of occupied burrows if ground clearing or construction activities will be initiated during the nesting season or during the non-breeding season. The portion of the project site on which construction is to take place and potential nesting areas within 500 meters of the proposed construction area shall be surveyed no more than 30 days prior to the initiation of construction. Surveys shall be performed by a qualified biologist or ornithologist to verify the presence or absence of nesting birds. Construction shall not occur within a 500 foot buffer surrounding active nests of raptors or a 250 foot buffer surrounding active nests of migratory birds. If construction within these buffer areas is required or if nests must be removed to allow continuation of construction, then approval and specific removal methodologies shall be obtained from CDFW. ▪ If during pre-construction nest surveys, burrowing owls are found to be present, the following measures will be implemented: ▪ Compensation for the loss of burrowing owl habitat will be negotiated with the responsible wildlife agencies. Appropriate mitigation may include participation in an approved mitigation bank, establishing a conservation easement, or other means acceptable to the responsible agency.			

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	▪ Exclusion areas will be established around occupied burrows in which no construction activities would occur. During the non-breeding season (September 1 through January 31), the exclusion area would extend 160 feet around any occupied burrows. During the breeding season of burrowing owls (February 1 through August 31), exclusion areas of 250 feet surrounding occupied burrows would be installed. ▪ If construction must occur within these buffer areas, passive relocation of burrowing owls may be implemented as an alternative, but only during the non-breeding season and only with the concurrence of the CDFW. Passive relocation of burrowing owls would be implemented by a qualified biologist using accepted techniques. Burrows from which owls had been relocated would be excavated using hand tools and under direct supervision of a qualified biologist. ▪ Compensation for the loss of burrowing owl burrows removed during construction will be negotiated with the responsible wildlife agency. This may require that replacement burrows be constructed on compensation lands.			
3.4-4	▪ Pre-construction surveys shall be performed on the project site in areas where there is a potential for nesting raptors and nesting migratory birds to occur if construction occurs during the breeding season (loosely defined as February 15 to August 15). These	City of Merced	CDFW	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	include all areas of the project site that contain or are within 500 feet of power poles or trees that are suitable for the establishment of nests. These areas should also include the non-native annual grassland habitat, which provides potential breeding habitat for ground-nesting birds such northern harriers and horned larks. The pre-construction survey shall be performed within 14 days of construction to identify active nests and mark those nests for avoidance. During the nesting period, raptor nests shall be avoided by 500 feet and all other migratory bird nests should be avoided by 250 feet. ▪ Any trees scheduled for removal during the nesting season from February 15th to September 1st must first be inspected by a qualified biologist prior to removal. Active nest trees cannot be removed until nesting has been completed or removal has been deemed permissible by a biologist.			
3.4-5	Because there is the potential for San Joaquin kit foxes to occur on site, the USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance shall be followed (see Appendix C of the Biological Survey Report). The measures that are listed below have been excerpted from those guidelines and will protect San Joaquin kit foxes from direct mortality and from destruction of active dens and natal or pupping dens. The Lead Agency or Designee shall determine the	City of Merced	CDFW, US Army Corps of Engineers, Caltrans, Regional Water Quality Control Board	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	applicability of the following measures depending on specific construction activities and shall implement such measures when required. ▪ Pre-construction surveys shall be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities, or any project activity likely to impact the San Joaquin kit fox. Exclusion zones shall be placed in accordance with USFWS Recommendations using the following: Potential Den..... 50 foot radius Known Den ..... 100 foot radius Natal/Pupping Den (Occupied and Unoccupied) ..... Contact U.S. Fish and Wildlife Service for guidance Atypical Den ..... 50 foot radius If dens must be removed, they must be appropriately monitored and excavated by a trained wildlife biologist. Replacement dens will be required. Destruction of natal dens and other "known" kit fox dens must not occur until authorized by USFWS. ▪ Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at			

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited. ▪ To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFW) shall be contacted as noted under measure 13 referenced below. ▪ Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe			

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped. ▪ All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site. ▪ No firearms shall be allowed on the project site. ▪ No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens. ▪ Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.			

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	▪ A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service. ▪ An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.			

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	▪ Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFW), and revegetation experts. ▪ In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance. ▪ Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.			

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	▪ The Sacramento Fish and Wildlife Office and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309. The above listed measures would also protect American badgers. ▪ New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below. Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division 2800 Cottage Way, Suite W2605 Sacramento, California 95825-1846 (916) 414-6620 or (916) 414-6600			

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
3.4-6	▪ Removal of vegetation to be avoided when possible; when avoidance is untenable, revegetation and replacement is necessary; and ▪ Disturbance to the riparian habitat (approximately 0.393 acres) will require a Lake and Streambed Alteration Agreement (LSAA form 1602) from CDFW. Typical requirements of a LSAA require a compensatory planting ratio (typically a minimum 4:1 ratio) as determined by CDFW. A revegetation plan will be prepared as a requirement of the LSAA.	City of Merced	City of Merced	Less Than Significant
3.4-7	The City of Merced should reduce impacts (e.g., removal, construction beneath the canopy, and trimming) to oak trees and riparian trees to the extent feasible. To facilitate avoidance, high visibility construction fencing shall be placed around the two valley oak trees. All fencing must provide a buffer area around each oak tree that is not less than the aerial cover of the canopy. When avoidance and full protection is not possible, The City of Merced shall provide mitigation for the loss of oak trees as outlined below (1-4). Neither the City of Merced nor Merced County has adopted an Oak Woodland Management Plan or other plan that specifies adopted compensation for the loss of oak trees. However, to mitigate for impacts to valley oak trees per Section 21083.1 of the Public Resources Code, implementation of one or more of the following mitigation measures is recommended:	City of Merced	City of Merced	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	1. Conserve oak woodlands through the use of conservation easements; 2. A. Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees (typically a minimum 4:1 ratio) B. The requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted C. Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project D. The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands. 3. Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. Required funds are			

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	determined by size, health, and amount of oak trees that are impacted. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project 4. Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. Required funds are determined by size, health, and amount of oak trees that are impacted. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project			
3.4-8	Consult with CDFW and RWQCB to verify respective jurisdictional claims, and if required obtain proper permitting through CDFW Section 1602 LSAA and RWQCB Section 401.	City of Merced	City of Merced	Less Than Significant
3.4-9	To facilitate avoidance, high visibility construction fencing should be placed around trees to be avoided. All fencing must provide a buffer area around each tree that is	City of Merced	City of Merced	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	not less that the aerial cover of the canopy. Removal of standing trees with DBH over 4 inches should be avoided whenever possible; similarly, the project footprint will be designed to avoid areas containing trees over 4 inches DBH. It is also recommended that the project footprint avoid areas and the removal of trees that will undermine stable slopes or increase slope instability; managing the slope stability of the stream banks will likely be addressed in the CDFW LSAA.			
3.5 Cultural Resources				
3.5-1	Although there is no recorded evidence of historic or archaeological sites on the project site, there is the potential during project-related excavation and construction for the discovery of cultural resources. The City of Merced shall incorporate into the construction contract(s) for the project a provision that includes the following measures: ▪ Before initiation of construction or ground-disturbing activities associated with the project, the project proponent for all project phases shall require all construction personnel to be alerted to the possibility of buried cultural resources, including historic, archeological and paleontological resources; ▪ The general contractor and its supervisory staff shall be responsible for monitoring the construction project for disturbance of cultural resources; and	City of Merced	City of Merced	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	▪ If a potentially significant historical, archaeological, or paleontological resource, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains or trash deposits are encountered during subsurface construction activities (i.e., trenching, grading), all construction activities within a 100-foot radius of the identified potential resource shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation (DPR) forms. The archaeologist shall determine whether the item requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under California Environmental Quality Act, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public Resources Code section 21083.2. The City of Merced shall implement said measures.			
3.5-2	The City of Merced will incorporate into the construction contract(s) a provision that in the event a fossil or fossil formations are discovered during any subsurface construction activities for the proposed project (i.e., trenching, grading), all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at the City of	City of Merced	City of Merced	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	Merced, who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the City shall implement those measures, which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code section 21083.2.			
3.5-3	If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed: There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Merced County Coroner is contacted. Duly authorized representatives of the Coroner shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Section 27460, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines the remains are Native American, the Coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person	City of Merced	City of Merced	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
	responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.			
3.8 Hazards/Hazardous Materials				
3.8-1	Construction contractors shall ensure that any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.	City of Merced	City of Merced	Less Than Significant
3.8-2	Construction contractors shall ensure that during construction, staging areas, building areas, and/or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fuel for combustion. To the extent feasible, the contractor shall keep these areas clear of combustible materials to maintain a firebreak.	City of Merced	City of Merced	Less Than Significant
3.9 Hydrology/Water Quality				
3.9-1	If construction or demolition is necessary during a time when the River is flowing, a small cofferdam would be constructed to divert the water.	City of Merced	City of Merced	Less Than Significant
3.12 Noise				
3.12-1	Construction activities shall be limited to between 6:00 A.M. and 9 P.M. Monday through Friday and between 7:00 A.M. and 5:00 PM on Saturday or Sunday to avoid noise-sensitive hours of the day.	City of Merced	City of Merced	Less Than Significant

Impact Number	Mitigation Measure	Implementing Agency	Monitoring Agency	Level of Significance After Mitigation
3.12-2	The construction contract shall require the construction contractor to ensure that construction equipment noise is minimized by muffling and shielding intakes and exhaust on construction equipment (in accordance with the manufacturer's specifications) and by shrouding or shielding impact tools.	City of Merced	City of Merced	Less Than Significant

SECTION FIVE

PERSONS AND SOURCES CONSULTED

SECTION FIVE – PERSONS AND SOURCES CONSULTED

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SECTION SIX

LIST OF PREPARERS

SECTION SIX – LIST OF PREPARERS

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Travis Crawford, AICP, Senior Environmental Planner

David Duda, GISP, Senior Associate Planner and Cartographic Design

Vanessa Williams, Project Administrator

APPENDICES

Appendix A

Air Quality Modeling Results

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> Parsons Avenue Bridge approaches Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	3.2	13.1	36.5	2.6	1.6	1.0	1.7	1.5	0.2	2,877.4
Grading/Excavation	4.9	21.2	55.1	3.5	2.5	1.0	2.5	2.3	0.2	4,448.4
Drainage/Utilities/Sub-Grade	3.7	14.5	38.3	2.9	1.9	1.0	2.0	1.8	0.2	3,015.8
Paving	1.6	8.3	14.3	0.8	0.8	-	0.8	0.8	-	1,406.6
Maximum (pounds/day)	4.9	21.2	55.1	3.5	2.5	1.0	2.5	2.3	0.2	4,448.4
Total (tons/construction project)	0.3	1.1	2.8	0.2	0.1	0.1	0.1	0.1	0.0	228.2

Notes:

Project Start Year ->	2013
Project Length (months) ->	6
Total Project Area (acres) ->	2
Maximum Area Disturbed/Day (acres) ->	0
Total Soil Imported/Exported (yd^3/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Parsons Avenue Bridge approaches Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	1.5	6.0	16.6	1.2	0.7	0.5	0.8	0.7	0.1	1,307.9
Grading/Excavation	2.2	9.6	25.0	1.6	1.1	0.5	1.1	1.0	0.1	2,022.0
Drainage/Utilities/Sub-Grade	1.7	6.6	17.4	1.3	0.9	0.5	0.9	0.8	0.1	1,370.8
Paving	0.7	3.8	6.5	0.4	0.4	-	0.3	0.3	-	639.4
Maximum (kilograms/day)	2.2	9.6	25.0	1.6	1.1	0.5	1.1	1.0	0.1	2,022.0
Total (megagrams/construction project)	0.2	1.0	2.5	0.2	0.1	0.1	0.1	0.1	0.0	207.0

Notes:

Project Start Year ->	2013
Project Length (months) ->	6
Total Project Area (hectares) ->	1
Maximum Area Disturbed/Day (hectares) ->	0
Total Soil Imported/Exported ($meters^3$/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 7.1.2

Emission Estimates for -> Parsons Avenue Bridge Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	3.1	12.6	36.0	2.5	1.6	0.9	1.6	1.4	0.2	2,819.4
Grading/Excavation	5.4	25.1	62.5	3.7	2.8	0.9	2.8	2.6	0.2	5,426.4
Drainage/Utilities/Sub-Grade	3.5	14.0	37.9	2.8	1.9	0.9	1.9	1.7	0.2	2,957.8
Paving	1.4	7.8	13.9	0.8	0.8	-	0.7	0.7	-	1,348.6
Maximum (pounds/day)	5.4	25.1	62.5	3.7	2.8	0.9	2.8	2.6	0.2	5,426.4
Total (tons/construction project)	0.3	1.2	3.0	0.2	0.1	0.1	0.1	0.1	0.0	255.2

Notes:

Project Start Year ->	2013
Project Length (months) ->	6
Total Project Area (acres) ->	0
Maximum Area Disturbed/Day (acres) ->	0
Total Soil Imported/Exported (yd^3/day)->	23

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Parsons Avenue Bridge Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	1.4	5.7	16.4	1.1	0.7	0.4	0.7	0.6	0.1	1,281.5
Grading/Excavation	2.4	11.4	28.4	1.7	1.3	0.4	1.3	1.2	0.1	2,466.5
Drainage/Utilities/Sub-Grade	1.6	6.4	17.2	1.3	0.9	0.4	0.9	0.8	0.1	1,344.5
Paving	0.6	3.6	6.3	0.4	0.4	-	0.3	0.3	-	613.0
Maximum (kilograms/day)	2.4	11.4	28.4	1.7	1.3	0.4	1.3	1.2	0.1	2,466.5
Total (megagrams/construction project)	0.2	1.1	2.7	0.2	0.1	0.0	0.1	0.1	0.0	231.5

Notes:

Project Start Year ->	2013
Project Length (months) ->	6
Total Project Area (hectares) ->	0
Maximum Area Disturbed/Day (hectares) ->	0
Total Soil Imported/Exported ($meters^3$/day)->	17

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Appendix B

Biological Reports

CITY OF MERCED

BIOLOGICAL ANALYSIS OF THE PARSONS BRIDGE SITE MERCED COUNTY, CALIFORNIA

August 2012

Quad Knopf

Biological Analysis of the
Parsons Bridge Site
Merced County, California

Prepared for:
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August 2012

120034

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EXECUTIVE SUMMARY

The City of Merced proposes to build Parsons Bridge across Bear Creek proving a new crossing at Parsons Avenue in the City of Merced, Merced County. The existing Bear Creek is approximately 90 feet wide and 20 feet deep with fairly steep banks overgrown with vegetation. It is anticipated that 1,000 feet of Parsons Avenue, 500 feet of North Bear Creek Drive, and 500 feet of South Bear Creek Drive will need to be reconstructed as part of this project. In all, the bridge will be 140 feet long and 80 feet wide.

A literature and database review was conducted, and field surveys were performed on the project site to evaluate the potential presence of sensitive biological resources and to delineate the boundaries of Bear Creek's Ordinary High Water Mark. The on-site field survey was conducted on May 24th, 2012. It consisted of "windshield" surveys along roads throughout the project site vicinity and of pedestrian surveys on and near the project site.

The project site is located in a dense residential part of the city of Merced. The surrounding residential areas contain a significant number of native and introduced trees, including oaks, pines, maples, sycamores, and ornamentals. Power lines run across the project site, and cars regularly traverse both East North Bear Creek Drive and East South Bear Creek Drive. The project site vicinity generally consists of mostly degraded habitat that offers little cover; however, the south bank is vegetated with willows, walnut trees, scrub oaks, giant reed, and Himalayan blackberries. There are valley oaks, palm trees, peppertrees, and redwood trees upslope of the creek banks. The less dense north bank contains willows, mulberry trees, walnuts, and valley oaks. A total of 55 trees $\geq$ 4 inches in diameter at breast height (DBH) were identified within the project footprint. Of these trees, 4 were located in the riparian corridor.

General wildlife activity observed on the project site was relatively minimal. There was no evidence that sensitive natural vegetation communities or special status plant or wildlife species occur on the site. However, there is potential for some special status wildlife species to occur as transients or foragers from time to time. These may include the San Joaquin kit fox, American badger, western red bat, western pond turtle, and western burrowing owl. Raptors and migratory birds may also be present, although we did not locate any such nests during the surveys.

To ensure that project impacts to sensitive biological resources are reduced to a level that is less than significant, the following mitigation measures are recommended:

1. To protect nesting raptors and nesting migratory birds, we recommend conducting pre-construction surveys if construction will occur during the bird breeding season (February 15 to August 15). During the nesting period, raptor nests should be avoided by 500 feet and all other migratory bird nests should be avoided by 250 feet.

2. To protect the San Joaquin kit fox and American badgers, which may occur on the site as transients, we recommend implementation of the USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance (2011). These measures will also protect the American badger.

3. To protect riparian habitat within the project site, we recommend consulting with the Department of Fish and Game through the Section 1602 permitting process.

4. To protect oak trees, we recommend either avoiding them or mitigating impacts to them through compensatory planting at an appropriate replacement ratio.

5. To protect the western red bat, we recommend conducting pre-construction surveys for roosts, and if found, completing acoustic monitoring to verify the species utilizing the roost(s). If western red bats are found roosting on the project site, the Department of Fish and Game should be consulted.

6. To protect the western pond turtle, we recommend conducting pre-construction surveys along Bear Creek and the adjoining upland habitat. If this species is found, the Department of Fish and Game should be consulted.

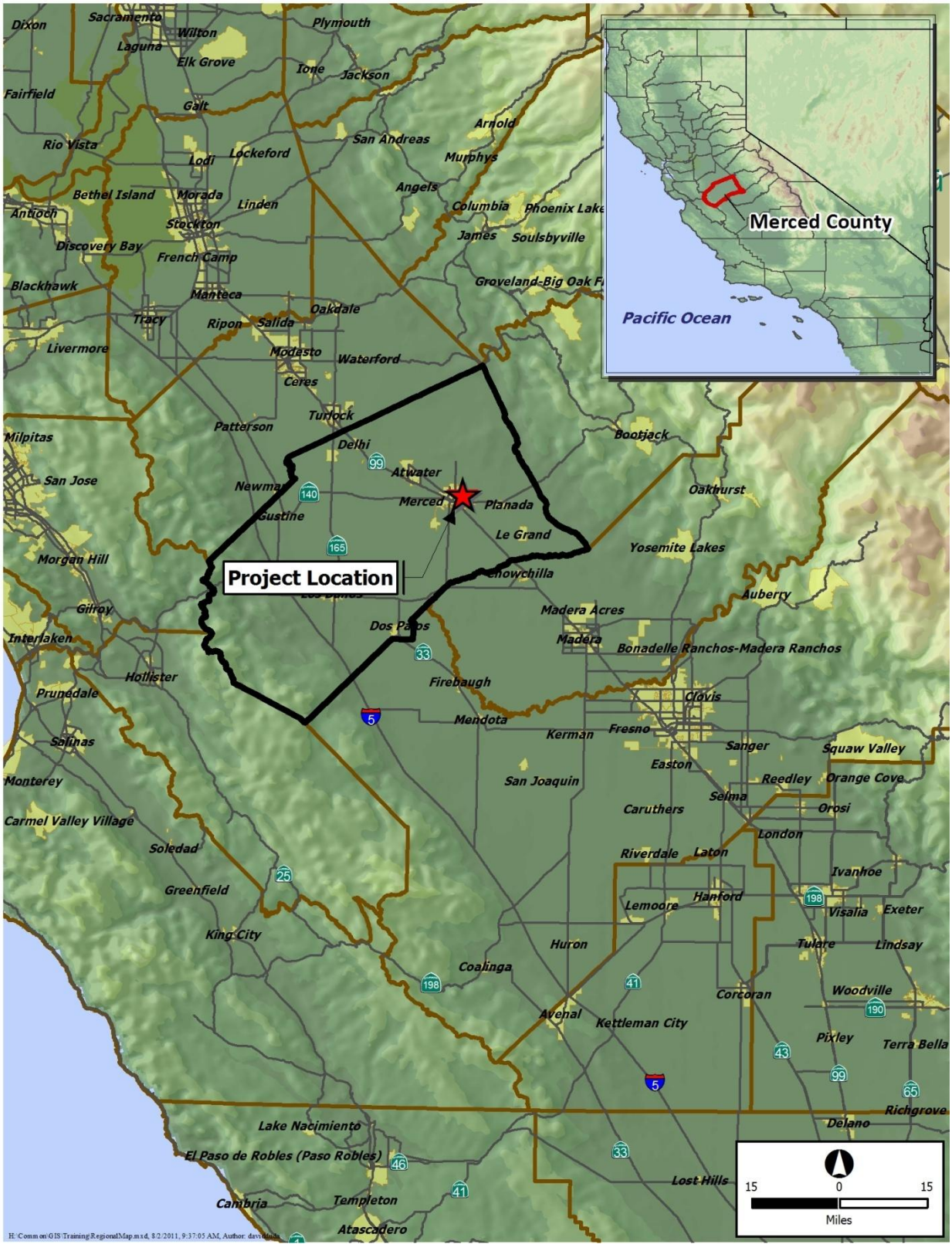
1.0 INTRODUCTION

1.1 Project Description

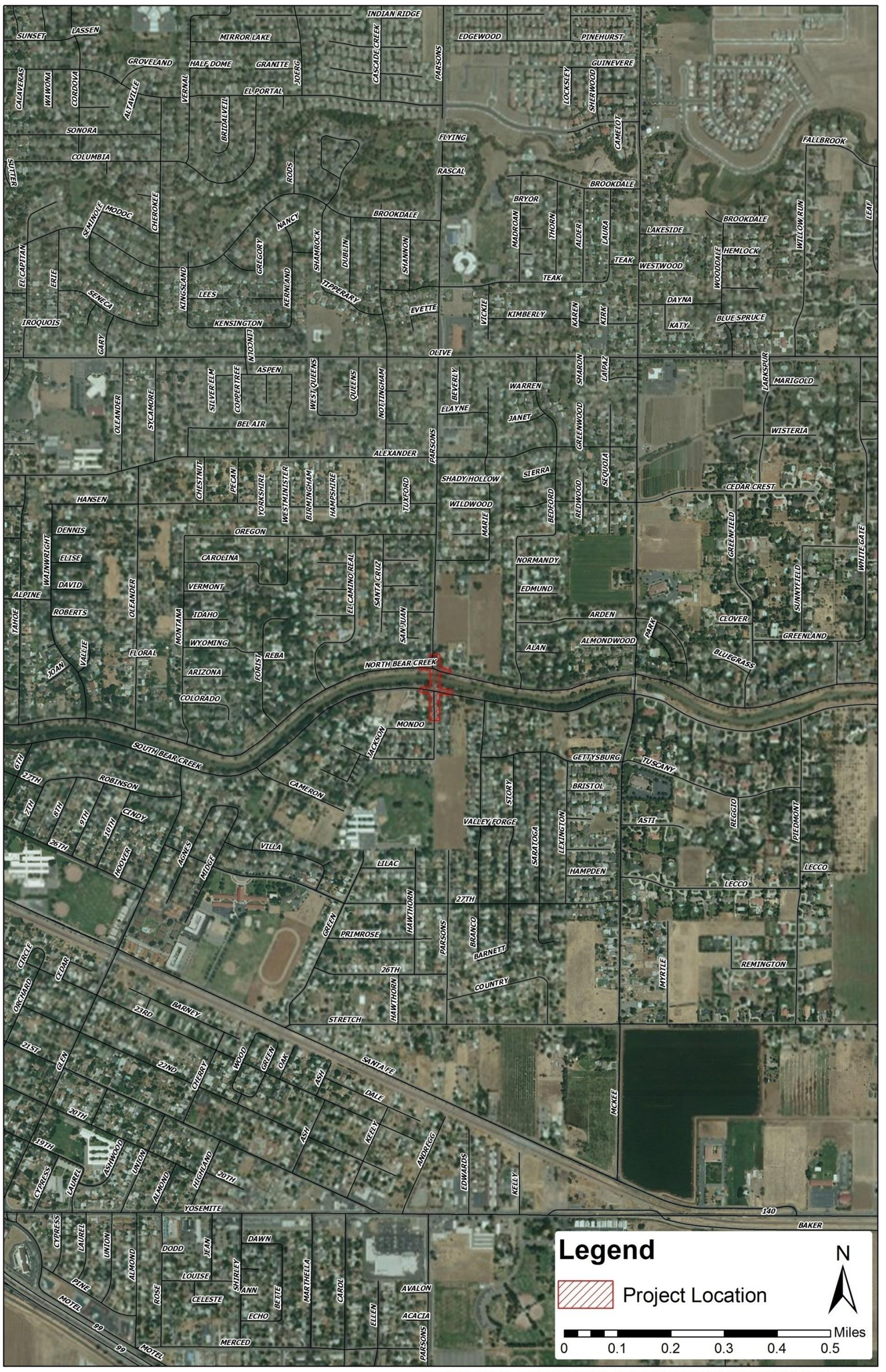
The Parsons Bridge Project Site (project site) is located in Section 20 on the Gregg U.S. Geological Survey (USGS) 7.5 minute quadrangle, Township 7 South and Range 14 East, Mount Diablo Base and Meridian in the City of Merced, Merced County, California (Figure 1). The City of Merced proposes to build a new 2-lane or 4-lane concrete bridge (depending on funding at the time) across Bear Creek to provide a new crossing at Parsons Avenue (Figure 2). Bear Creek is approximately 90 feet wide and 20 feet deep with fairly steep banks overgrown with vegetation. The bridge design consists of the construction of a 2-lane or a 4-lane bridge structure (depending on funding at the time) with sidewalks and bike lanes (class II on-street) on Parsons Avenue over Bear Creek. The bridge structure will consist of a 80 foot by 140 foot design, which includes support columns within the creek bed (Figure 3). Additionally, the project will include reconstruction and widening of the street approaches at the Bear Creek and Parsons Avenue intersections. The bridge will also include class II (on-street) bike lanes to the north and south ends of the proposed bridge as well as improving the street approaches to South Bear Creek and North Bear Creek Avenues.

The new bridge will accommodate four lanes of traffic (two each way). To clear the existing creek and supply the required hydraulic freeboard, portions of Parsons Avenue, North Bear Creek Drive, and South Bear Creek Drive will need to be raised and reconstructed. It is anticipated that 1,000 feet of Parsons Avenue, 500 feet of North Bear Creek Drive and 500 feet of South Bear Creek Drive, will need to be reconstructed as part of this project.

The project analysis contained in this Biological Analysis will review the option of a 4-lane bridge, which would have the greatest environmental impact among available options.



Quad Knopf	REGIONAL LOCATION OF THE PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA	Figure 1



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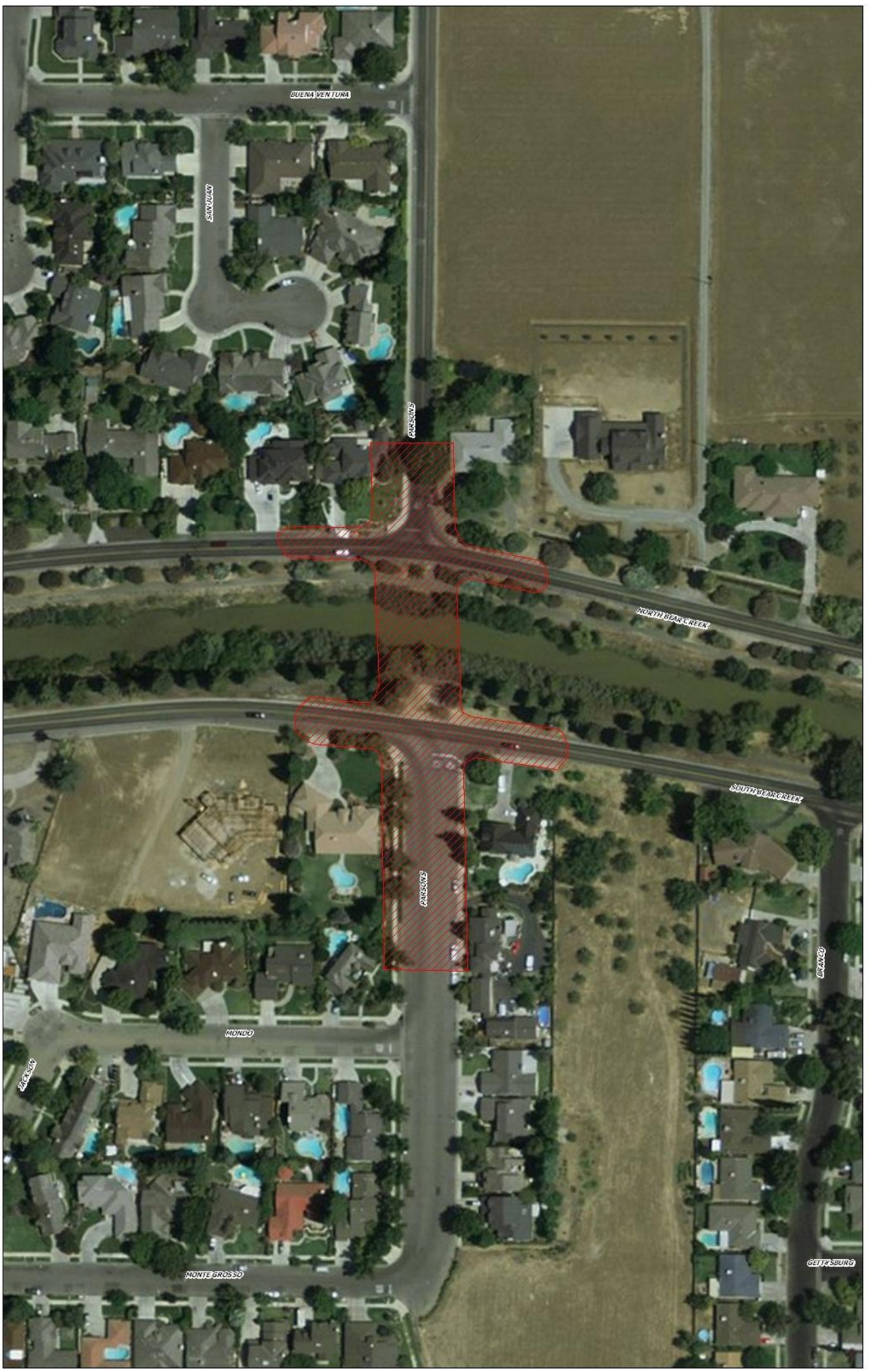
LOCAL VICINITY OF THE PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA

Figure 2



Quad Knopf	PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA	Figure 3

1.2 Purpose of Analysis

Quad Knopf prepared this Biological Evaluation of the project site to determine whether there are sensitive biological resources that will be adversely impacted by the proposed bridge development and associated construction areas. The analysis is based upon existing site conditions, the potential for sensitive biological resources to occur on and in the vicinity of the project site, and any respective impacts that could potentially occur. Appropriate avoidance and mitigation measures are recommended where warranted. Sensitive biological resources generally include:

- ***Special Status Species*.** These taxa may fall into one or more of the following categories:

  - Species that are officially listed or proposed for listing under the Federal and/or State Endangered Species Acts;
  - Species that are tracked by the California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB);
  - State or Federal candidates for possible listing;
  - Taxa considered by the CDFG to be a "Species of Special Concern";
  - Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring;
  - Populations in California that may be on the periphery of a taxon's range but are threatened with extirpation in California;
  - Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g. wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools); and
  - Taxa designated as special status, sensitive, or declining by other State or federal agencies, or a non-governmental organization.

- ***Sensitive Habitats*.** Sensitive habitats may include the following:

  - Native habitats of limited distribution (e.g. wetlands of various types, riparian habitat, native grasslands);
  - Native habitats used by state or federally listed threatened or endangered species;
  - Habitats supporting particularly high concentrations of native plants and animals; and
  - Habitat that is within the jurisdiction of one or more State and federal resource agencies (i.e. wetland, endangered species habitat).

- ***Migratory Corridors of Native Fish and Wildlife Species*.** Wildlife movement corridors (also referred to as dispersal corridors or landscape linkages) are linear features that connect at least two significant habitat areas. Examples of such corridors include the following:

  - Rivers and associated riparian habitats;
  - Irrigation canals and associated levies;
  - Ridge lines; and
  - Adjoining green space areas in urbanized landscapes.

2.0 METHODOLOGY

2.1 Literature Review and Database Search

Literature reviews and database searches were conducted in support of this Biological Evaluation. The California Natural Diversity Database (CNDDB May 2012), California Native Plant Society (CNPS) database (May 2012), and USFWS Threatened and Endangered Species List (May 2012) were reviewed to assess whether occurrences of special status species have been documented within the Merced 7.5-minute topographical U.S. Geological Survey (USGS) quadrangle, which encompasses the project site, as well as the surrounding eight 7.5-minute USGS quadrangles. These included the Atwater, El Nido, Haystack Mountain, Merced, Plainsburg, Planada, Sandy Mush, Winton, and Yosemite Lake quadrangles. The CNDDB was also queried for additional records within 10 miles of the project site to satisfy CDFG requirements. The CNDDB provides element-specific spatial information on individual documented occurrences of special status species and sensitive natural vegetation communities. The CNPS database provides similar information, but at a much lower spatial resolution, for additional sensitive plant species tracked by the CNPS. The USFWS query generates a list of federally protected species known to potentially occur within individual USGS quadrangles. Wildlife species designated as "Fully Protected" by California Fish and Game Code Sections 5050 (Fully Protected reptiles and amphibians), 3511 (Fully Protected birds), and 4700 (Fully Protected mammals) are also included on this list.

Additional databases that were accessed included the USFWS National Wetlands Inventory (NWI) Map (May 2012), U.S. Department of Agriculture (USDA) Web Soil Survey (May 2012), and Federal Emergency Management Agency (FEMA) 100-year floodplain database (May 2012). The potential for sensitive biological resources to occur on the project site, or within its vicinity, was primarily evaluated during on-site surveys. Regional hydrologic information was obtained from the Geospatial Data Gateway website of the Natural Resources Conservation Service (NRCS). Weather and precipitation data were obtained from the Western Regional Climate Center.

2.2 On-site Surveys

An on-site reconnaissance-level survey of the project site was conducted by Quad Knopf Biologists Andy Glass and Tyler Schade on May 24, 2012. The survey primarily consisted of completing pedestrian transects throughout the project site and its vicinity to map habitats, complete a species inventory, and evaluate the potential for special status species to occur. "Windshield surveys," however, were also completed along roads within 0.5 mile of the project site. General tasks completed during these efforts included:

- Characterizing vegetation associations and habitat conditions present on the project site;
- Inventorying plant and wildlife species, including raptor and nest surveys on the project site;
- Assessing the potential for special status species to occur or near the project site;

- Delineating the boundaries of Ordinary High Water Marks (OHWM), banks, and riparian habitats along Bear Creek (HUC12: 180400011801) using a sub-meter GPS Unit (Trimble GeoExplorer); and
- Identifying, measuring, and mapping trees within the project vicinity.

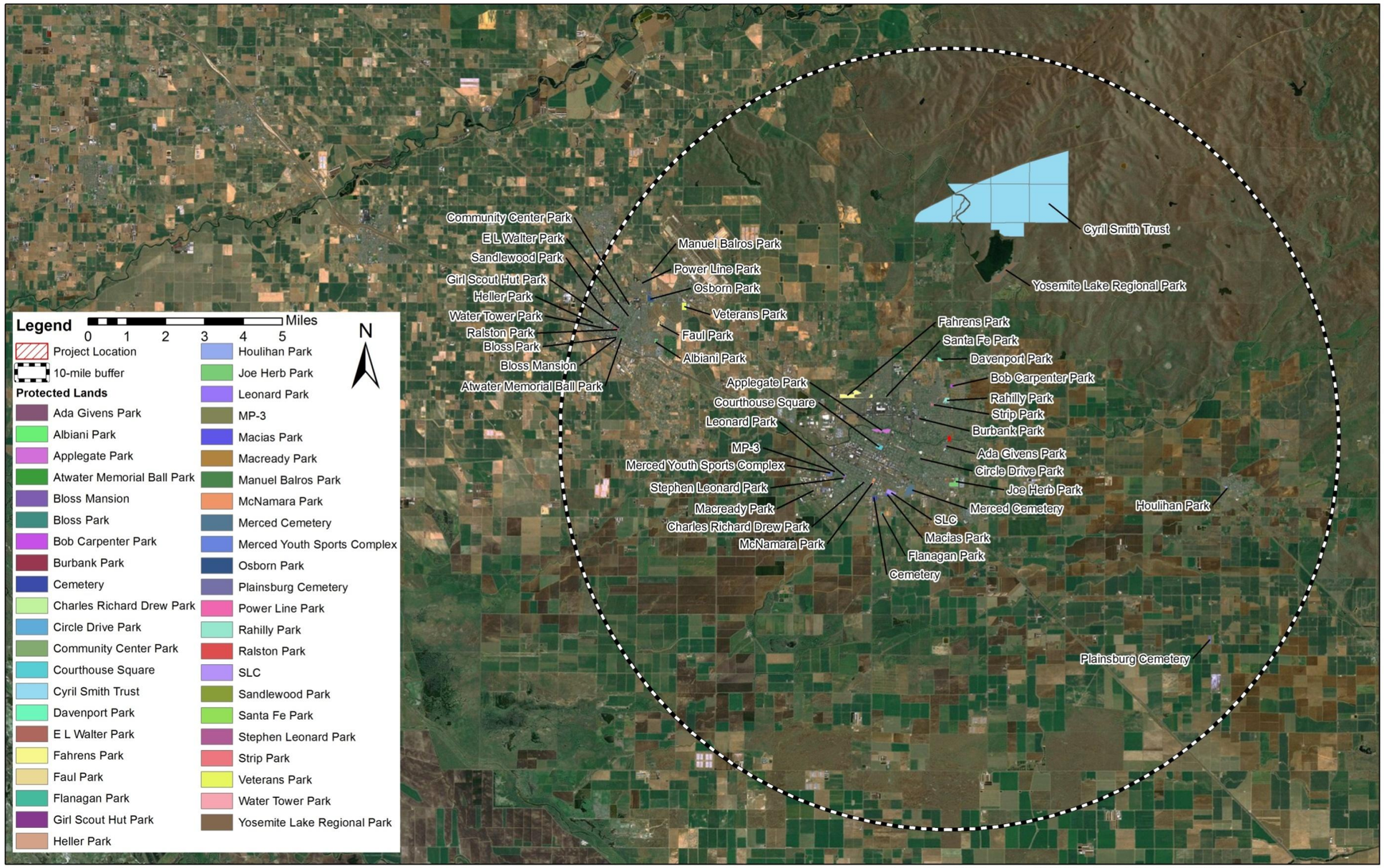
Representative photographs of the project site and adjacent lands were taken during the surveys (Photos, Appendix A).

3.0 FINDINGS

3.1 Geographic Area and Climate

The Parsons Bridge project is situated in Merced County, which encompasses 1,935 square miles in the center of California, and is bordered by Stanislaus County to the north, Mariposa County to the East, Madera and Fresno Counties to the south, Santa Clara and San Benito Counties to the west, and to the northeast by a corner of Tuolumne County. A total of 44 protected lands exist within a 10-mile radius of the project site. The closest protected land is Ada Givens Park, a 10-acre community park, which is located approximately 500 feet from the project site (Figure 4).

The climate of the region varies greatly from the foothills of the Sierra Nevada Mountains to the foothills of Coastal Ranges. Merced, which is the county seat and city within which sits the project site, has average January temperatures ranging between a low of 36.0 degrees and maximum of 54.9 degrees Fahrenheit. In July, average temperatures range between a low of 60.9 degrees and 97.1 degrees Fahrenheit. Average annual rainfall is 12.27 (WRCC). Most of the annual precipitation, which occurs almost entirely as rain, falls between the months of October and May.



Quad Knopf

PROTECTED PUBLIC LANDS IN THE VICINITY OF THE PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA

Figure 4

3.2 Land Use and Topography

The project site is located in a dense residential part of the city of Merced. The site is surrounded by residential developments with native, introduced, and ornamental trees. Power lines run across the project site, and cars regularly traverse both East North Bear Creek Drive and East South Bear Creek Drive. An approximately 10.6-acre disked field lies to the north of the project site (Figure 5).

Bear Creek bisects the center of the project site along an east-west axis. Recreational hiking and biking trails, which are regularly utilized by local residents, bound both the north and south creek banks. The elevation of the site ranges from approximately 160 feet above mean sea level (AMSL) at the bottom of the creek to about 200 feet AMSL at the south perimeter of the project site. Water levels are known to rise to 180 feet AMSL during extreme flood events. The project site includes mostly degraded habitat that supports fragmented cover on the north side and thick, but generally low-lying, cover on the south side.

3.3 Site Specific Conditions

SOILS

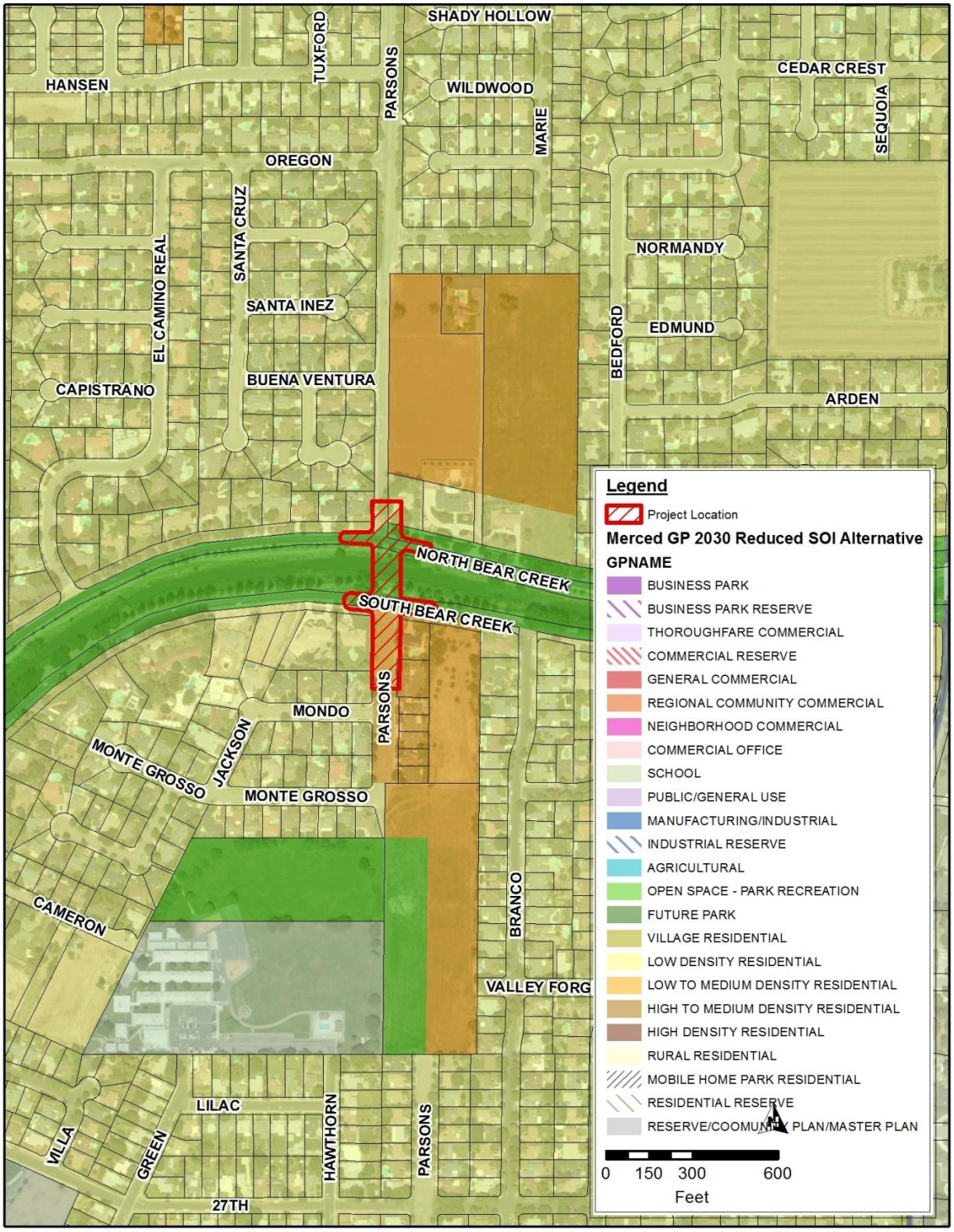
There is only one soil type occurring within the project site, though many others exist beyond the site within a 2-mile radius (Figure 6). The lone soil type on the project site is silty loam (Table 1).

Table 1
Soils on the Parsons Bridge Project Site, Merced County, California

Soil Symbol and Description		Coverage Area
HtA	Honcut silt loam, 0-1% slopes	87.8%
W	Water	12.2%

Honcut silt loam: The Honcut soil series consists of very deep, well drained soils on flood plains. These soils are formed in moderately coarse-loamy textured alluvium derived from basic igneous and granitic rocks. Honcut soils are on floodplains and moderately sloping alluvial fans. They are well drained, have slow to medium runoff, and have moderately rapid permeability. If irrigated, this soil type can be prime farmland.

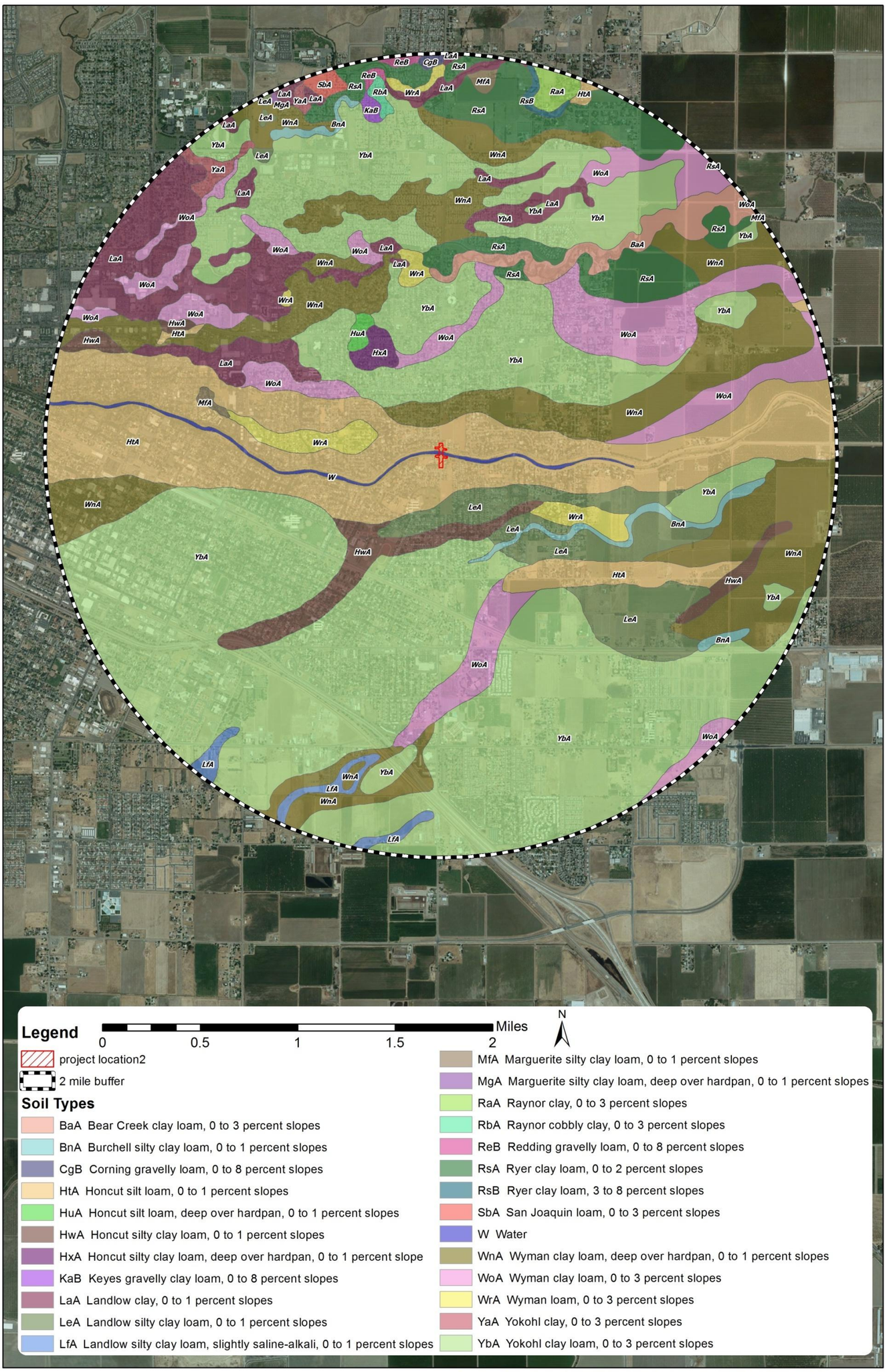
This site is not located within a hundred-year flood zone (Figure 7).



Quad Knopf

LAND USE IN THE VICINITY OF THE PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA

Figure 5



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Quad Knopf

SOIL MAPPING UNITS ON THE PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA

Figure 6

Quad Knopf

100-YEAR FLOODPLAIN IN THE VICINITY OF THE PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA

Figure 7

VEGETATION

The project site habitat is relatively low quality because it is generally very narrow, fragmented, and disturbed. It perhaps historically supported more species characteristic of a Great Valley Mixed Riparian Forest (Holland Code 61420), but it now supports a riparian habitat that is mixed with ornamental and non-native plants (Table 2). The south bank is heavily vegetated with sandbar willow (*Salix exigua)*, red willow *(Salix laevigata*), false willow (*Baccharis neglecta*), black walnut (*Juglans californica var. californica)*, scrub oak (*Quercus berberidifolia*), giant reed (*Arundo donax)*, and Himalayan blackberry (*Rubus armeniacus)*. Valley oak (*Quercus lobata)*, California fan palm (*Washingtonia filifera)*, date palm (*Phoenix dactylifera)*, peppertree (*Schinus molle)*, and California redwood (*Sequoia sempervirens)* are located upslope south of the bank. The north bank has less vegetation than the south bank; it is vegetated with sandbar willow, mulberry (*Morus alba)*, black walnut, and valley oak. Valley oak, magnolia (*Magnolia grandiflora)*, and relatively larger walnut trees are located upslope north of the bank. The surrounding residential areas contain a significant number of trees including gray pine (*Pinus sabiniana*), maple (*Acer* spp), sycamores (*Plantanus* spp), and various ornamentals.

Table 2
Plants Observed on the Parsons Bridge Project Site, Merced County, California

Scientific Name	Common Name
Phoenix dactylifera	date palm
Washingtonia filifera	California fan palm
Rubus armeniacus	Himalyan blackberry
Sorghum halepense	johnson grass
Rumes crispus	curly dock
Schinus molle	peppertree
Magnolia grandiflora	magnolia
Quercus berberidifolia	California scrub oak
Baccharis neglecta	false willow
Salix exigua	sandbar willow
Salix laevigata	red willow
Equisetum hyemale	horsetail
Juglans nigra	black walnut
Sequoia sempervirens	California redwood
Equisetum hyemale	Oregon ash
Artemisia douglasiana	mugwort
Quercus lobata	valley oak
Arundo donax	giant reed
Morus alba	mulberry
Liquidambar styraciflua	sweetgum

Aerial imagery suggests that the riparian habitat extends beyond the banks and walking trails to the streets. Field surveys, however, indicate that the riparian habitat generally does not extend past the stream banks of Bear Creek. The stream banks are much lower in elevation than the adjoining upland habitats that encompass the recreational trails. These upland habitats support non-riparian tree species (e.g. redwoods and palms) that have been artificially established. These trees are not dependent upon the hydrological regime of Bear Creek, which is far below their root zones.

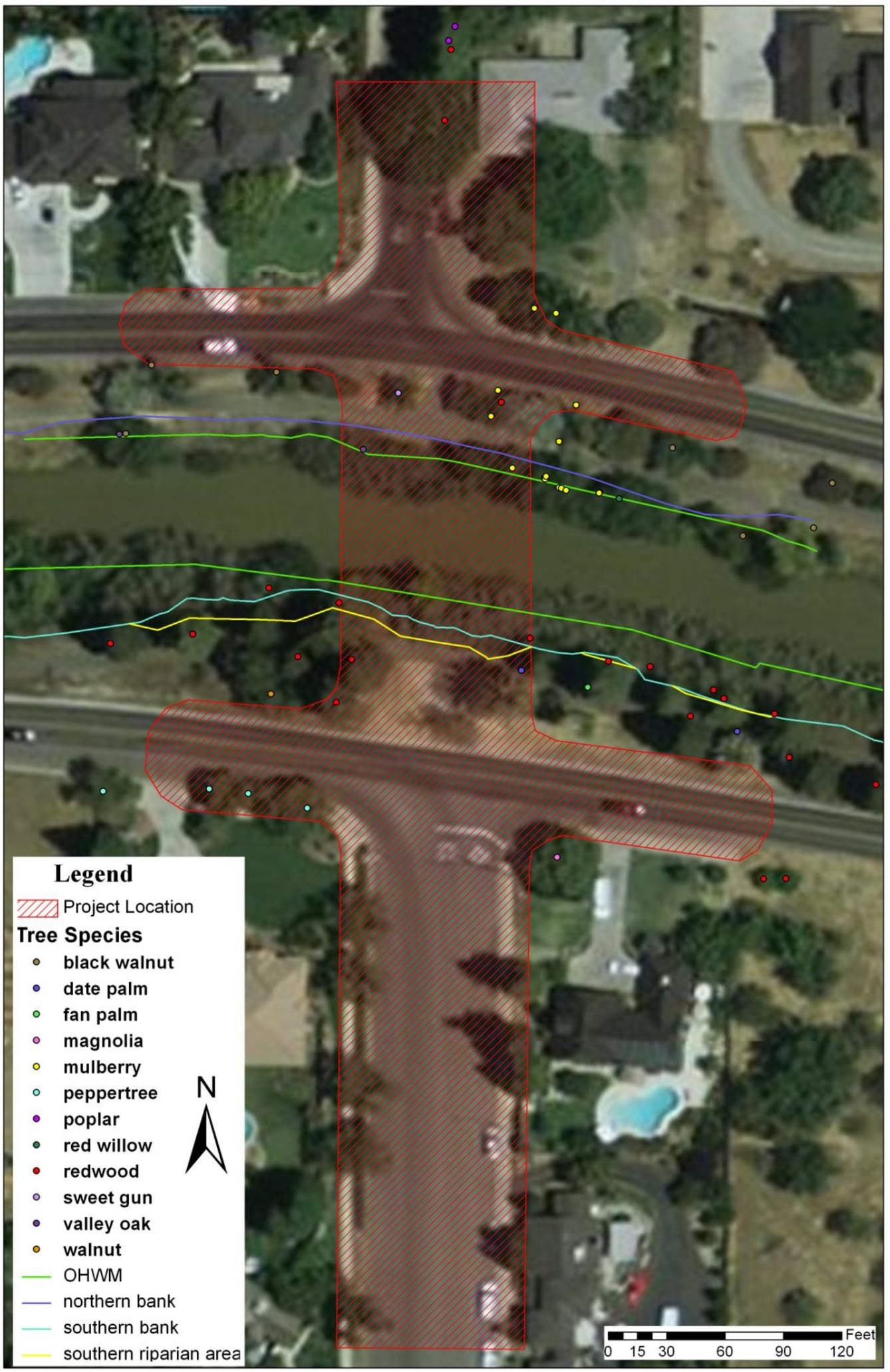
General wildlife activity observed on the project site was relatively minimal. Avian species identified on the project site during the survey included mourning doves (*Zenaida macroura*), American crows *(Corvus brachyrhynchos*), and barn swallows (*Hirundo rustica*). The California ground squirrel (*Spermophilus beecheyi)* was the only mammal species observed on the project site during the survey.

3.4 Sensitive Natural Communities and Special Status Species

The conversion of large expanses of native lands in the San Joaquin Valley has led to the State and federal listing of a multitude of plants and animals as Endangered, Threatened, of Special Concern, or otherwise being declared Sensitive. The database search listed historical occurrences of two Sensitive Communities, 24 special status plant species, and 27 special status wildlife species (Appendix B). There are no historical records of sensitive natural communities or special status species occurring on the project site (Figure 9). However, there are confirmed records of special status resources occurring within 10 miles of the project site (Figure 9). These special status resources include two vegetative communities, 15 plant species, and 18 wildlife species. Some of these species have the potential to occur on or immediately adjacent to the project site. A total of eight USFWS critical habitat units were located within 10 miles of the project site, but none occur on the project site (Figure 10). The closest critical habitat unit was for succulent owl's-clover (*Castilleja campestris ssp. Succulent)* located approximately 2.5 miles from the project site.

No Sensitive Natural Communities exist in the vicinity of the project site, but there are records of Northern Claypan Vernal Pool and Northern Hardpan Vernal Pool occurring within 10 miles of the project site (Figure 9). Although Bear Creek is not formally recognized as a Sensitive Natural Community, it meets the standard criteria of waters of the U.S., and its associated riparian habitat is generally considered to be a sensitive community.

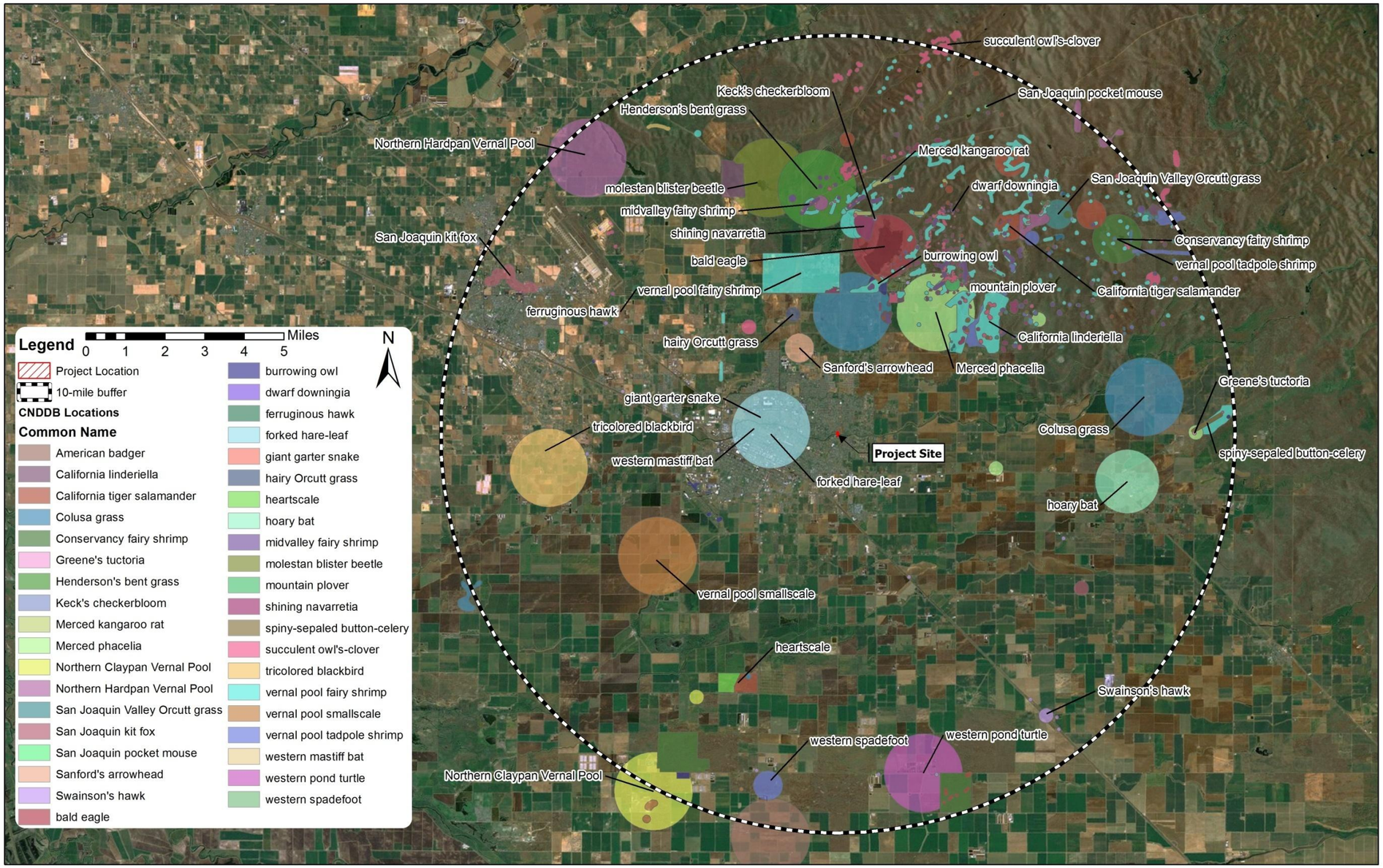
There are no historical records of special status species occurring on the project site. The nearest documented occurrence is forked hare-leaf (*Lagophylla dichotoma)* approximately 1.4 miles from the project site. There are confirmed records of other special status species occurring within 10 miles of the project site as well. Some of these special status species, as well as others, have the potential to occur on or adjacent to the project site, but these would be generally restricted to transient or foraging animals, as described below.



Quad Knopf

BIOLOGICAL RESOURCES WITHIN THE VICINITY OF THE PARSONS BRIDGE PROJECT, MERCED COUNTY, CA

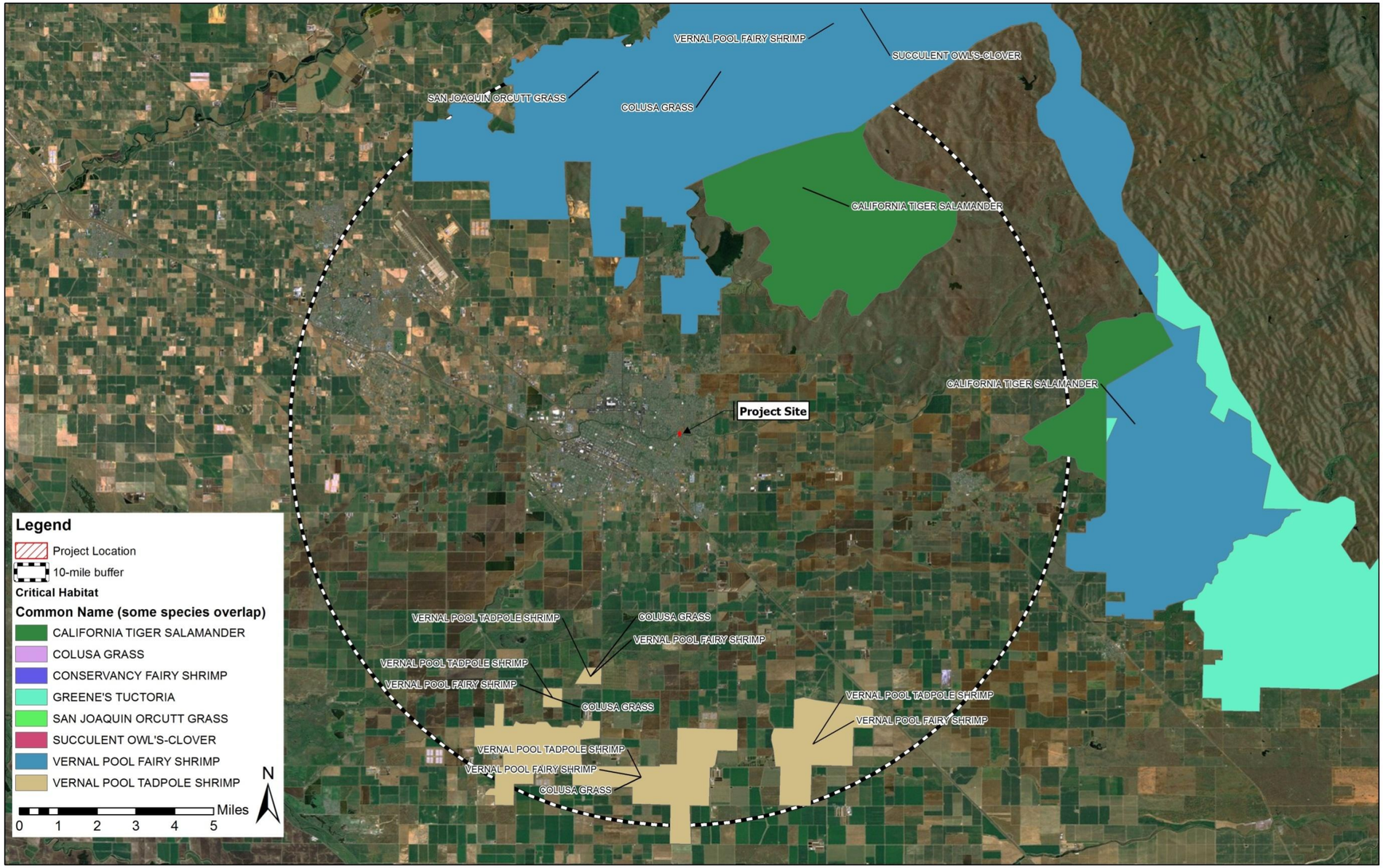
Figure 8



Quad Knopf

CNDDB 10-MILE RADIUS OF PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA

Figure 9



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Quad Knopf

USFWS CRITICAL HABITAT UNITS WITHIN TEN MILES OF THE PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA

Figure 10

WESTERN POND TURTLE

There are no known historical records of the western pond turtle (*Actinemys marmorata pallida*) on the project site, but there are two historical records occurring within 10 miles (see Figure 9). This aquatic turtle is limited to water sources that provide adequate breeding, basking sites, and that adjoin upland wintering habitat. While Bear Creek does provide slow seasonal flow, it provides few basking sites. Furthermore, the riparian habitat is largely degraded, and the surrounding upland habitat is highly disturbed with urban development. Therefore, though unlikely, this species could potentially occur on the project site as an occasional transient.

WESTERN RED BAT

There are no historical records of the western red bat (*Lasiurus blossevillii)* occurring within 10 miles of the project site (see Figure 9). This species prefers riparian habitat edges with walnuts, oaks, willows, cottonwoods, and sycamores for roosting. It prefers mosaics of trees, protected from above and open below, and open areas for foraging. Although highly disturbed, the Bear Creek corridor does provide marginal habitat for this species.

SAN JOAQUIN KIT FOX

There are no known historical records of the San Joaquin kit fox (*Vulpes macrotis mutica*) on the project site, but there are four historical record occurring within 10 miles (see Figure 9). No San Joaquin kit foxes or sign of San Joaquin kit foxes (e.g., dens, tracks, scat, characteristic scratch marks) were observed on the project site. San Joaquin kit foxes are known to utilize waterways as regional corridors. They are also known to utilize agricultural fields, such as the one nearby to the northeast, for foraging purposes. Therefore, due to the mobility of this species and its preferred foraging habitat, it could potentially occur on the project site as an occasional transient or forager. No evidence of the San Joaquin kit fox was observed during field surveys.

AMERICAN BADGER

There are no known historical records of the American badger (*Taxidea taxus*) on the project site, but there is one historical record occurring within 10 miles (see Figure 9). The badger is known to occur in low densities scattered throughout the San Joaquin Valley. No American badgers or sign of badgers (e.g., dens, tracks, scat, characteristic scratch marks) were observed on the project site. Due to the mobility of this species and its preferred foraging habitat, this species could potentially occur on the project site as an occasional transient or forager. No evidence of the American badger was observed during field surveys.

SWAINSON'S HAWK

There are 13 historical records of Swainson's hawks (*buteo swainsoni*) occurring within 10 miles of the project site (see Figure 9). Swainson's hawks generally breed within riparian forests and other forested areas. They roost in a variety of trees and forage widely over forests, grasslands, and shrublands. They are easily disturbed by human activities. Although riparian habitat is present on the project site, it is low quality and surrounded by urban development with little

foraging potential. No raptor nests were observed within a 0.5-mile radius of the project site. This species is unlikely to occur on or near the project site, but it could potentially nest within the vicinity.

WESTERN BURROWING OWL

There are no known historical records of the western burrowing owl (*Athene cunicularia*) occurring on the project site, but there are seven historical records occurring within 10 miles (see Figure 9). Burrowing owls typically utilize a variety of arid and semi-arid environments with well-drained, level to gently sloping areas characterized by grassland or fallow land with a sparse herbaceous layer and friable soils. These conditions do not occur within the project vicinity. The dense riparian vegetation, steep banks, extensive paved areas, and high use recreational trails are uncharacteristic of burrowing owl habitat. The western burrowing owl, though, is known to occur in sub-optimal habitats characterized by human disturbances. Although unlikely, it could potentially occur on or near the project site.

TRICOLORED BLACKBIRD

There are no known historical records of the tricolored blackbird (*Agelaius tricolor*) occurring on the project site, but there are two historical records occurring within 10 miles (see Figure 9). It is common locally throughout the Central Valley and in coastal districts from Sonoma County southward. The tricolored blackbird roosts in large flocks and breeds near fresh water, preferably in emergent wetland, with tall, dense cattails or tules, thickets of willow, blackberry, wild rose, and tall herbs. They forage on the ground in croplands, grassy fields, flooded land, and along edges of ponds looking for insects. Though the riparian corridor on the project site lacks cattails, thickets of willow are present; thus, marginal habitat is available for the species on the project site. Therefore, the tricolored blackbird could possibly occur as a transient forager on the project site.

MIGRATORY BIRDS AND OTHER RAPTORS

Various species of migratory birds and raptors, which are protected by the Migratory Bird Treaty Act and various provisions of the California Fish and Game Code, are likely to forage within the project site and may nest on the project site. Passerines and other small species could potentially nest within the riparian shrub layer or nearby trees. Raptors could also potentially nest within the trees in the vicinity. No active or inactive migratory bird nests were identified on the project site, and no active or inactive raptor nests were identified within 0.5 mile of the project site. Construction on the project site has the potential to impact to impact nesting and foraging migratory birds and raptors.

OAK TREES

While neither the City of Merced nor Merced County has an oak tree ordinance, the State has adopted regulations regarding oak woodland conservation. On September 24, 2004, Senate Bill No. 1334 added Section 21083.4 to the Public Resources Code to specifically include an

assessment of oak woodland impacts in California Environmental Quality Act (CEQA) determinations. "Oak" is defined as a native tree species in the genus *Quercus* that is ≥ 5 inches in diameter at breast height (DBH). "Oak woodlands" is defined by CDFG (Section 1360-1372) as an oak stand with a greater than 10% canopy cover or that may have historically supported greater than 10% canopy cover.

One oak tree with a DBH of ≥ 4 inches was identified within the proposed project footprint. Tree ID 35 had a DBH of 6 inches. This oak may need to be removed. One additional oak (tree ID 31 with DBH of 12 inches) occurring near the project site may need to be trimmed to allow unhindered construction. Exact impacts to oaks cannot be predicted at this time because the final bridge design and footprint has not been established.

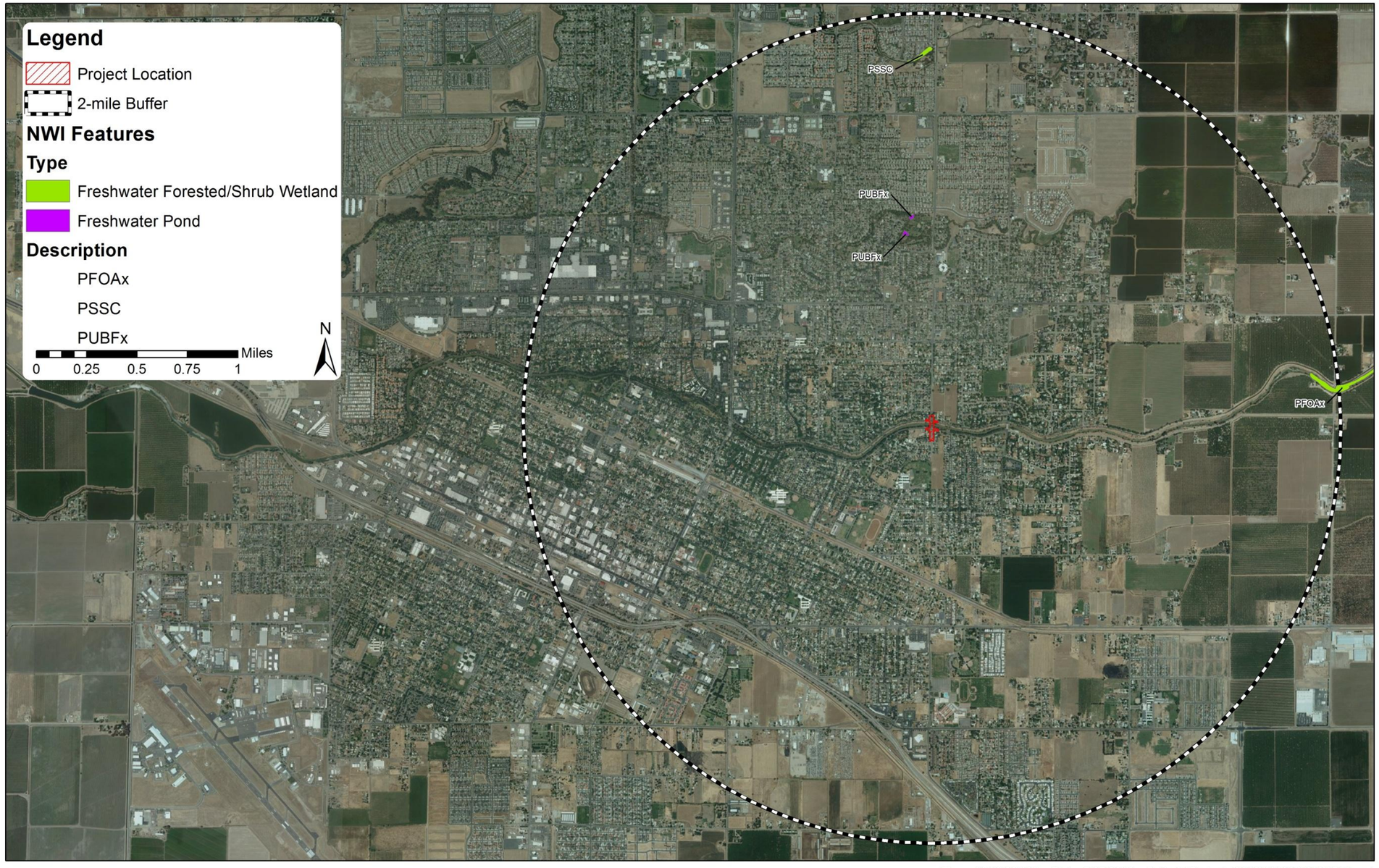
3.5 Wetlands and Waters of the United States

Existing data from the National Wetlands Inventory (NWI) indicates that no wetland features occur on the project site. There are four wetland features within two miles of the project site (Figure 11). The closest features were two freshwater ponds which occurred approximately 0.9 mile north of the site. These ponds were classified as palustrine unconsolidated bottom semi permanently flooded excavated (PUBFx) features. The other two freshwater wetland areas identified by NWI support tree and/or shrub layers (Figure 11). One was classified as a palustrine forested temporarily flooded excavated (PFOAx) area, which is located approximately two miles to the east of the site. The other was classified as a palustrine scrub-shrub seasonally flooded (PSSC) area, which was located approximately two miles north of the site.

Bear Creek is a 7.9-mile creek that starts in Hornitos and flows west, ending in Stevinson where it joins the San Joaquin River. This feature supports the riparian habitat that exists on the project site (Table 4). Bear Creek falls under the jurisdiction of the United States Army Corps of Engineers (ACOE) because it is a navigable water. On the project site, the ordinary high water mark (OHWM) of Bear Creek encompassed 0.1580 acres (see Figure 8). The bank-to-bank area, which was 45 feet wide, encompassed 0.2111 acres (see Figure 8). The banks were approximately 10 feet high from the creek bed.

3.6 Riparian Habitat

The CDFG regulates impacts to stream beds, banks, and associated riparian habitats through Sections 1600-1616 of the California Fish and Game Code. Impacts are typically quantified by identifying trees and shrubs with a DBH ≥ 4 inches. A total of 20 trees with a DBH ≥ 4 inches were identified within the project footprint. Of these 20 trees, two redwood trees, one mulberry tree, and one valley oak were located in the riparian corridor; four redwood trees, one date palm, two black walnut trees, one sweetgum tree, one poplar tree, three peppertrees, and four mulberry trees were located beyond the riparian corridor within upland habitat on the project footprint (Figure 8). No shrubs with a DBH ≥ 4 inches were identified in the riparian corridor. Exact impacts to riparian trees cannot be predicted at this time because the final bridge design and footprint has not been established, and because any reductions in disturbance provided by the implementation of recommended avoidance measures have not been considered.



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KNOWN WETLANDS ON AND IN THE VICINITY OF THE PARSONS BRIDGE PROJECT SITE, MERCED COUNTY, CA

Figure 11

4.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT IMPACT ANALYSIS

The purpose of the California Environmental Quality Act (CEQA) is to identify the significant effects on the environment of a project, to identify alternatives to a project, and to indicate the manner in which significant effects can be mitigated or avoided. The mechanism to ensure protection is the preparation and review of an environmental document that identifies the existing environmental conditions, describes a proposed project, assesses the types and significance of impact on the environment, and identifies mitigation that would mitigate, reduce, or avoid impacts where feasible. If significant impacts are found to be unmitigable, CEQA requires the lead agency to reject the project or make findings of fact and issue a statement of overriding findings. Various responsible and trustee agencies provide review, comments, and input into the decision making process. CEQA guidelines require that significant impacts to wetlands, sensitive natural communities, and special status plant and wildlife species be fully analyzed. A significant impact would occur if the project would:

1. 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.

2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

3. Have a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

4. 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.

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

6. 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 following analysis discusses potential impacts associated with the development of the project and recommends feasible mitigation measures, where appropriate.

1. 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?

Impact Finding: ***Less Than Significant with Mitigation Incorporated***.

Discussion: There is the potential for some special status species to be present on the project site and be significantly impacted by the project. Each subject is discussed below and appropriate measures to reduce impacts to below significant levels are provided where appropriate.

Sensitive/Special Status Plant Species

No sensitive plant species were observed during the reconnaissance-level surveys. The project site has been heavily degraded and is currently surrounded by residential development. No observations of sensitive plant species were observed during surveys, and thus ***no impact*** to existing sensitive or special status plants would occur.

Special Status Wildlife Species

No special-status species were observed on the project site during the surveys and none are likely to be present on the site; however, the project site could potentially be used by the western red bat or the western pond turtle. Other transient foragers to the site could include the tricolored blackbird, nesting migratory birds and raptors, the San Joaquin kit fox, and the American badger. Implementation of standard mitigation measures for avoidance and minimization will reduce potential biological impacts to ***less than significant***.

Mitigation Measure BIO-1. Pre-construction surveys shall be performed on the project site in areas where there is a potential for nesting raptors and nesting migratory birds to occur if construction occurs during the breeding season (loosely defined as February 15 to August 15). These include all areas of the project site that contain or are within 500 feet of power poles or trees that are suitable for the establishment of nests. These areas should also include the non-native annual grassland habitat, which provides potential breeding habitat for ground-nesting birds such northern harriers and horned larks. The pre-construction survey shall be performed within 14 days of construction to identify active nests and mark those nests for avoidance. During the nesting period, raptor nests shall be avoided by 500 feet and all other migratory bird nests should be avoided by 250 feet.

Mitigation Measure BIO-2. Because there is the potential for San Joaquin kit foxes to occur on site, the USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance shall be followed (see Appendix C). The measures that are listed below have been excerpted from those guidelines and will protect San Joaquin kit foxes from direct mortality and from destruction of active dens and natal or pupping dens. The Lead Agency or Designee shall determine the applicability of the following measures depending on specific construction activities and shall implement such measures when required.

- Pre-construction surveys shall be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities, or any project activity likely to impact the San Joaquin kit fox or American badger. Exclusion zones shall be placed in accordance with USFWS Recommendations using the following:

Potential Den	50 foot radius
Known Den	100 foot radius
Natal/Pupping Den (Occupied and Unoccupied)	Contact U.S. Fish and Wildlife Service for guidance
Atypical Den	50 foot radius

If dens must be removed, they must be appropriately monitored and excavated by a trained wildlife biologist. Replacement dens will be required. Destruction of natal dens and other "known" kit fox dens must not occur until authorized by USFWS.

- Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.

- To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.

- Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.

- No firearms shall be allowed on the project site.

- No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.

- Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions

mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.

- A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.

- An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.

- Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

- In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.

- Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.

- The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers

below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309. The above listed measures would also protect American badgers.

- New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

Mitigation Measure BIO-3: Pre-construction surveys shall be performed on the project site in areas where there is a potential for western red bat to occur. These include all areas of the project site that contain or are within 500 feet of power poles or trees that are suitable for the establishment of roosts. Surveyors will look for roosts and potential roosts as well as guano for signs of the western red bat. If roosts are found acoustic monitoring shall be performed to identify species.

- Acoustic monitoring will use auto-triggering D240x Pettersson Elektronik time expansion bat detectors and Handy Recorder H2© digital player/recorders. Each bat call, recorded as a separate audio file, will later be downloaded from the recorder into a computer. Each file will be imported into Sonobat™ software for batch call analysis.

The pre-construction survey shall be performed within 14 days of construction to identify active roosts and mark them for avoidance. If western red bat roosts are found, appropriate mitigation measures will be developed in consultation with CDFG.

Mitigation Measure BIO-4: Pre-construction surveys shall be performed on the project site in areas where there is a potential for western pond turtle to occur. These areas include a 500-foot buffer upstream and downstream along the creek corridor from the project site. If western pond turtles are found, appropriate mitigation measures will be developed in consultation with CDFG.

Mitigation Measure BIO-5. Standard measures for the protection of burrowing owls provided in Burrowing Owl Consortium's April 1995 *Burrowing Owl Survey Protocol and Mitigation Guidelines* and the CDFW's March 12, 2012 *Staff Report on Burrowing Owl Mitigation* shall be implemented.

1. In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), pre-construction surveys shall be conducted to determine the presence of occupied burrows if ground clearing or construction activities will be initiated during the nesting season or

during the non-breeding season. The portion of the project site on which construction is to take place and potential nesting areas within 500 meters of the proposed construction area shall be surveyed no more than 30 days prior to the initiation of construction. Surveys shall be performed by a qualified biologist or ornithologist to verify the presence or absence of nesting birds. Construction shall not occur within a 500 foot buffer surrounding active nests of raptors or a 250 foot buffer surrounding active nests of migratory birds. If construction within these buffer areas is required or if nests must be removed to allow continuation of construction, then approval and specific removal methodologies shall be obtained from CDFW.

2. If during pre-construction nest surveys, burrowing owls are found to be present, the following measures will be implemented:

   a. Compensation for the loss of burrowing owl habitat will be negotiated with the responsible wildlife agencies. Appropriate mitigation may include participation in an approved mitigation bank, establishing a conservation easement, or other means acceptable to the responsible agency.

   b. Exclusion areas will be established around occupied burrows in which no construction activities would occur. During the non-breeding season (September 1 through January 31), the exclusion area would extend 160 feet around any occupied burrows. During the breeding season of burrowing owls (February 1 through August 31), exclusion areas of 250 feet surrounding occupied burrows would be installed.

   c. If construction must occur within these buffer areas, passive relocation of burrowing owls may be implemented as an alternative, but only during the non-breeding season and only with the concurrence of the CDFW. Passive relocation of burrowing owls would be implemented by a qualified biologist using accepted techniques. Burrows from which owls had been relocated would be excavated using hand tools and under direct supervision of a qualified biologist.

   d. Compensation for the loss of burrowing owl burrows removed during construction will be negotiated with the responsible wildlife agency. This may require that replacement burrows be constructed on compensation lands.

Effectiveness of Mitigation Measures. Implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5 would reduce potential impacts to special status species to ***less than significant***.

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

Impact Finding: ***Less Than Significant with Mitigation Incorporated***.

Riparian Habitat

Riparian habitat is defined as lands that are influenced by a river, specifically the land area that encompasses the river channel and its current or potential floodplain. There is riparian habitat occurring on the project site along Bear Creek. Temporary and permanent impacts to riparian habitat, riparian trees, and oak trees are anticipated due to potential tree removal, root disturbance, soil erosion, and sediment deposition. Accordingly, without mitigation measures, ***significant impacts*** would occur.

Mitigation Measures: Impacts will be reduced to ***less than significant*** by:

- Removal of vegetation to be avoided when possible; when avoidance is untenable, revegetation and replacement is necessary; and
- Disturbance to the riparian habitat (approximately 0.393 acres) will require a Lake and Streambed Alteration Agreement (LSAA form 1602) from CDFG. Typical requirements of a LSAA require a compensatory planting ratio (typically a minimum 4:1 ratio) as determined by CDFG.

Sensitive Communities

It is likely the project habitat once contained valley oak canopy of 10% or greater, and thus is defined as an oak woodland through CDFG (Section 1360-1372). Oak woodlands are protected through CEQA. One valley oak tree exists both within the project footprint and the riparian area. One other valley oak tree exists near the proposed project footprint and may need to be trimmed. Accordingly, without mitigation measures, ***significant impacts*** would occur.

Mitigation Measures: The City of Merced should reduce impacts (e.g., removal, construction beneath the canopy, and trimming) to oak trees and riparian trees to the extent feasible. To facilitate avoidance, high visibility construction fencing shall be placed around the two valley oak trees. All fencing must provide a buffer area around each oak tree that is not less that the aerial cover of the canopy. When avoidance and full protection is not possible, The City of Merced shall provide compensation for the loss of oak trees. Neither the City of Merced nor Merced County has adopted an Oak Woodland Management Plan or other plan that specifies adopted compensation for the loss of oak trees. However, to mitigate for impacts to valley oak trees per Section 21083.4 of the Public Resources Code, implementation of one or more of the following mitigation measures is recommended:

1. Conserve oak woodlands through the use of conservation easements;

2.
   A. Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees (typically a minimum 4:1 ratio)
   B. The requirement to maintain trees pursuant to 2A terminates seven years after the trees are planted
   C. Mitigation pursuant to 2A shall not fulfill more than one-half of the mitigation requirement for the project
   D. The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands.

3. Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project

4. Other mitigation measures developed by the County.

Option 2 is the recommended mitigation measure to reduce impacts to oak woodlands on the project site. Per Option 4, the County can fulfill all mitigation requirements through Option 2, if desired. The other options include purchasing conservation easements or contributing funds to the Oak Woodlands Conservation Fund. Consultation with CDFG in regards to the oak trees and LSAA is also recommended.

Effectiveness of Mitigation Measures: Implementation of Mitigation Measures for riparian habitat and valley oak trees would reduce impacts to ***less than significant*** by protecting existing trees to the extent feasible, and by providing in-kind compensation commensurate with project impacts.

3. Would the project have a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact Finding: ***Less than significant.***

Discussion: The project will not result in impacts to wetlands. However, the project site crosses Bear Creek, which is a jurisdictional Waters of the United States. The project site encompasses approximately 0.257 acres within the OHWM of Bear Creek. Design plans include bridge support columns within the creek bed to support the bridge. Given the impact size from this project, ACOE Nationwide Permit 14 will likely be applicable. Construction is expected to minimally impact riparian vegetation, including stream banks. As such, the California Department of Fish and Game (CDFG) is expected to claim jurisdiction of the streambanks and

channel under CDFG Code Section 1600. The City of Merced should procure a section 1602 Lake and Streambed Alteration Agreement (LSAA) from CDFG prior to beginning construction.

Bear Creek is also considered to be a waters of the state under the jurisdiction of the Regional Water Quality Control Board (RWQCB). In accordance with the Porter-Cologne Act, the RWQCB typically claims jurisdiction of all surface waters. Accordingly, The City of Merced should also procure a Section 401 permit from the Regional Water Quality Control Board (RWQCB).

Mitigation Measure WET-1. Consult with CDFG, ACOE, and RWQCB to verify respective jurisdictional claims, and if required proceed with CDFG Section 1602 LSAA, Nationwide Permit 14 (including pre-construction notification), and RWQCB Section 401 permitting.

Effectiveness of Mitigation Measure WET-1. Implementation of mitigation measures required through CDFG and RWQCB would reduce potential impacts to waters and riparian habitat to ***less than significant***.

4. 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?

Impact Finding: ***No impact.***

Discussion: Wildlife movement corridors are routes that provide shelter and sufficient food supplies to support wildlife species during migration. Movement corridors generally consist of riparian, woodlands, or forested habitats that span contiguous acres of undisturbed habitat, and are important elements of resident species' home ranges. The project site would not be considered a wildlife movement corridor due to highly disturbed habitat. The reconnaissance surveys conducted for the proposed project found no evidence of wildlife nursery sites on the project site, and the aquatic habitat does not support special status fish species. Because the project site does not serve as a wildlife movement corridor or as a wildlife nursery site, project development would not impede wildlife movement or the use of a wildlife nursery site. ***No impacts*** would occur.

5. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Finding: ***Less than significant.***

Discussion: The project will not conflict with any local policies or ordinances protecting biological resources. The Oak Woodlands Conservation Act protects the valley oak trees present on the project site and are addressed in question 2. The Conservation Element in the General Plan of the City of Merced directs that removal of vegetation that stabilizes slopes should be minimized. Furthermore, the Subdivision Ordinance of states that subdivision design should minimize cutting of existing trees. Additionally, South Bear Creek Drive is considered by the City of Merced to be a designated Scenic Corridor (1.3b) by Policy OS-1.3; eight guidelines

exist, of which the most pertinent is f: Every effort should be made to preserve and properly maintain existing stands of trees and other plant materials of outstanding value (1.3c). The project will not conflict with the recovery plan for upland species of the San Joaquin Valley (USFWS 1998). Mitigation measures will reduce impacts to ***less than significant***.

Mitigation Measures: To facilitate avoidance, high visibility construction fencing should be placed around trees to be avoided. All fencing must provide a buffer area around each tree that is not less that the aerial cover of the canopy. Removal of standing trees with DBH over 4 inches should be avoided whenever possible; similarly, the project footprint will be designed to avoid areas containing trees over 4 inches DBH. It is also recommended that the project footprint avoid areas and the removal of trees that will undermine stable slopes or increase slope instability; managing the slope stability of the stream banks will likely be addressed in the CDFG LSAA.

6. 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?

Impact Finding: ***No Impact.***

Discussion: The project site is not located within the boundaries of any adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan or any other local, regional, or state conservation plan. As such, ***no impact*** would occur.

5.0 CONCLUSION

The Parson's Bridge project site will potentially impact wildlife, vegetation, and the riparian corridor of Bear Creek. Western red bats, San Joaquin kit foxes, and western pond turtles could possibly occur on the project site. Mitigation measures for these species include pre-construction surveys for tree roosts, potential kit fox dens, and pond turtles. The project site includes riparian habit and valley oak trees that will likely be impacted by project construction. Mitigation measures recommending avoidance and compensation for vegetation will reduce impacts to less than significant. Construction on the project site will potentially impact stream banks. To comply with regulatory requirements pertaining to aquatic habitats, a Lake and Streambed Alteration Agreement (Section 1602) should be obtained from CDFG prior to starting any work. Additionally, a Nationwide Permit 14 should be obtained from the ACOE through Section 404 permitting, and the RWQCB should be notified through Section 401 permitting. With mitigation measures and pertinent permitting in place, there are no biological issues that would preclude the construction of a bridge on the project site. Appropriate surveys and avoidance measures have been proposed to ensure that the project results in less than significant impacts to all biological resources.

6.0 REFERENCES

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APPENDICES

Appendix A

Representative Photographs of Project Site

NW view of riparian vegetation

NE view of riparian vegetation

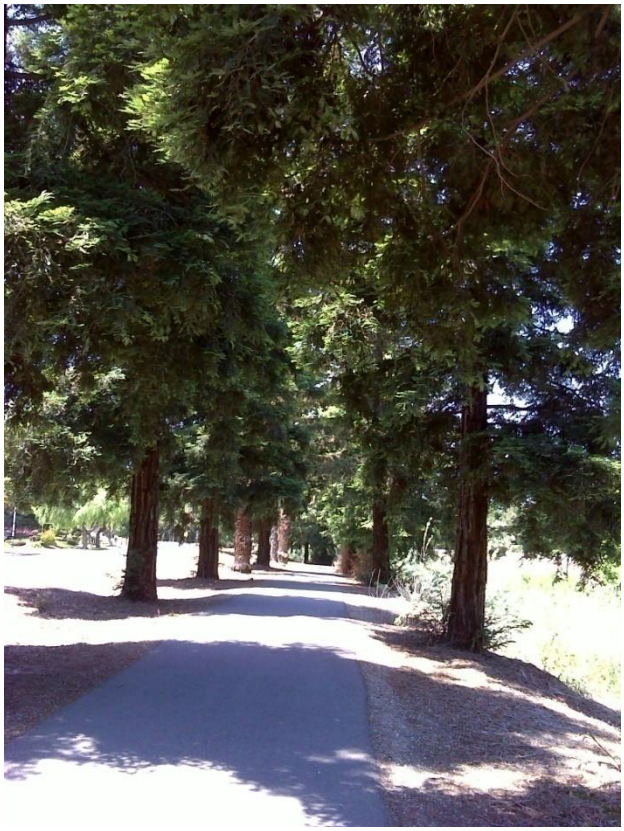
Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 1

East view down corridor/trail path, south side

NE view overlooking creek to north bank

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 2

N view overlooking creek to north bank



West view down corridor/trail path, south side

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 3

SE view of creek/habitat

South view where proposed bridge crosses over creek

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 5

South view where proposed bridge crosses over creek

South view where proposed bridge crosses over creek

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 6

North view where proposed bridge crosses over creek

East view of corridor path, north side

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 7

West view down corridor/trail path, north side

South view of riparian bank and redwoods upland

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 8

South view down the slope

East view from bank of creek, upstream

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 9

Ag field on north side on Parsons Avenue

North view where proposed bridge crosses over creek

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 10

North view where proposed bridge crosses over creek

North view where proposed bridge crosses over creek

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 11

North view where proposed bridge crosses over creek

North view where proposed bridge crosses over creek and power lines overhead

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 12

South view up bank to road where bridge will be

West street view of corridor, south side

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 13

East street view of corridor, south side

Quad Knopf	REPRESENTATIVE PHOTOGRAPHS OF PROJECT SITE - APPENDIX A	Photo Plate 14

Appendix B

Special Status Species List

Special-Status Species Potentially Present on the Parson's Bridge Project Site, May 2012

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
SENSITIVE NATURAL COMMUNITIES				
Northern Claypan Vernal Pool	*Northern Claypan Vernal Pool*	RARE	Northern Claypan Vernal Pools communities consist of a low, herbaceous community dominated by annual herbs and grasses. Germination and growth begin with winter rains, often continuing even when inundated. Rising spring temperatures evaporate the pools, leaving concentric bands of vegetation. Claypan vernal pools are typically small and contain less cover than northern hardpan vernal pools.	**Absent.** Although similar to northern hardpan vernal pools, northern claypan vernal pools are found in lower terraces and valley troughs, to the west of the project site. There were no records of this natural community occurring within 10 miles of the project site. There will be no impacts to this natural community.
Northern Hardpan Vernal Pool	*Northern Hardpan Vernal Pool*	RARE	A low, amphibious, herbaceous community dominated by annual herbs and grasses. Germination and growth begin with winter rains, often continuing even when inundated. Rising spring temperatures evaporate the pools, leaving concentric bands of vegetation that colorfully encircle the drying pool.	**Absent.** Soil type and topography on the project site were not suitable for this natural community, and therefore this community is not present on the project site. There were 3 CNDDB records of this natural community occurring within ten miles of the project site. There will be no impacts to this natural community.
SPECIAL-STATUS PLANTS				
Atriplex cordulata	heartscale	1B.2	This annual plant occurs in Chenopod scrubland and grassland habitats, but it also is known to occur in wet areas. It is most common on alkaline soils. It flowers between May and October, and it ranges in elevation from 1 to 1,000 feet.	**Absent:** No suitable habitat for this species occurs on the site. The project site does not contain soils that would support this species. There was ono CNDDB record of this species occurring within ten miles of the project site.
Atriplex depressa	brittlescale	1B.2	This annual plant occurs in Chenopod scrubland, grassland, and alkali sink habitats, but it also is known to occur in	**Absent:** No suitable habitat for this species occurs on the site. There were no CNDDB records of this species occurring

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
			wet areas. It flowers from April to October, and it ranges in elevation from 1 to 1050 feet.	within ten miles of the project site.
Atriplex minuscula	lesser saltscale	1B.1	This annual plant occurs in Chenopod scrubland, grassland, and alkali sink habitats, but it also is known to occur in wet areas. It is most common on sandy soils in alkaline areas. It flowers between May and October, and it ranges in elevation from 1 to 330 feet.	**Absent:** No suitable habitat for this species occurs on the site. The project site does not contain soils that would support this species. There were no CNDDB records of this species occurring within ten miles of the project site.
Atriplex persistens	vernal pool smallscale	1B.2	This plant is restricted to alkaline vernal pools on the floor of the San Joaquin Valley and is endemic to California. It is most common in northern Claypan soils. It flowers between July and September, and it ranges in elevation from 25 to 345 feet.	**Absent.** No suitable habitat for this species occurs on the site. The project site does not contain soils or vernal pools that would support this species. There were three CNDDB records of this species occurring within ten miles of the project site.
Atriplex subtilis	subtle orache	1B.2	This annual plant occurs in Chenopod scrubland, grassland, and alkali sink habitats, but it also is known to occur in wet areas. It flowers from June to August, and it ranges in elevation from 130 to 330 feet.	**Absent.** No suitable habitat for this species occurs on the site. There were no CNDDB records of this species occurring within ten miles of the project site.
Calycadenia hooveri	Hoover's calycadenia	1B.3	Hoover's calycadenia occurs in cismontane woodland, Valley and foothill grassland in thin soils and small, soil filled cracks on and around rocky outcroppings, primarily on Ione sandstone cappings. It flowers from July through September, and it ranges in elevation from 1 to 985 feet.	**Absent.** No suitable habitat for this species occurs on the site. The project site does not contain soils that would support this species. There were no CNDDB records of this species occurring within ten miles of the project site.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
Castilleja campestris ssp. succulenta	succulent owl's-clover	FT, CE, 1B.2	Succulent owl's clover occurs in the margins of vernal pools, swales and some seasonal wetlands, often on acidic soils. It flowers from April to May, and it ranges in elevation from 80 to 2,300 feet.	**Absent.** No suitable habitat for this species occurs on the site. No vernal pools or vernal pool habitat is located within or near the project site. This species was not observed during surveys. There were 34 CNDDB records of this species occurring within ten miles of the project site. Critical habitat has been established for this species within ten miles of project site.
Chamaesyce hooveri	Hoover's spurge	FT, 1B.2	Hoover's spurge is restricted to vernal pools. It flowers from May to October, and it ranges in elevation from 1 to 650 feet.	**Absent.** No suitable habitat for this species occurs on the site. No vernal pools or vernal pool habitat is located within or near the project site. This species was not observed during surveys. There were no CNDDB records of this species occurring within ten miles of the project site. Critical habitat has been established within ten miles of project site. . .
Clarkia rostrata	beaked clarkia	1B.3	Beaked clarkia occurs in cismontane woodland and Valley and foothill grasslands near the Merced River drainage. It flowers from April to May, and it ranges in elevation from 200 to 1,640 feet.	**Absent:** No suitable habitat for this species occurs on the site. There were no CNDDB records of this species occurring within ten miles of the project site.
Delphinium recurvatum	recurved larkspur	1B.2	This plant species is commonly found in chenopod scrub, valley and foothill grassland and cismontane woodland. It flowers from March to June, and it ranges in elevation from 10 to 2,460 feet.	**Absent:** No suitable habitat for this species occurs on the site. There was one CNDDB record of this species occurring within ten miles of the project site.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
Eryngium racemosum	Delta button-celery	CE, 1B.1	Delta button-celery occurs in riparian scrub, clay soils on sparsely vegetated margins of seasonally flooded flood plains. It flowers from June to September, and it ranges in elevation from 15 to 75 feet.	**Absent.** No suitable habitat for this species occurs on the site. The project site elevation of 183 feet is above the range for this species. This species was not observed on the project site. No records of this species occurred within ten miles of the project site.
Eryngium spinosepalum	spiny-sepaled button-celery	1B.2	Spiny-sepaled button celery is associated with vernal pools and depressions within grasslands. It flowers from April to May, and it ranges in elevation from 330 to 840 feet.	**Absent:** No suitable habitat for this species occurs on the site. The project site does not contain vernal pools that would support this species. There were seven CNDDB records of this species occurring within ten miles of the project site.
Gratiola heterosepala	Bogg's Lake hedge-hyssop	CE,1B	Bogg's Lake hedge-hyssop occurs in vernal pools. It flowers from April to August, and it ranges in elevation from 33 to 7,800 feet.	**Absent:** No suitable habitat for this species occurs on the site. The project site does not contain vernal pools that would support this species. There was one CNDDB record of this species occurring within ten miles of the project site.
Lagophylla dichotoma	Forked-hare leaf	1B.1	Forked-hare leaf occurs in Cismontane woodland, Valley and foothill grassland, and sometimes in clay. Flowers from April through September, and it ranges in elevation from 160 to 2,500 feet.	**Absent:** No suitable habitat for this species occurs on the site. There was one CNDDB record of this species occurring within ten miles of the project site.
Navarretia myersii ssp. *Myersii*	pincushion navarretia	1B.1	Pincushion navarretia occurs in vernal pools. It flowers from April through May, and it ranges in elevation from 65 to 1,080 feet.	**Absent:** No suitable habitat for this species occurs on the site. The project site does not contain vernal pools that would support this species. There were no CNDDB records of this species occurring within ten miles of the project site.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
Navarretia nigelliformis ssp. *Radians*	shining navarretia	1B.2	Shining navarretia occurs in cismontane woodland, Valley and foothill grassland and vernal pools. It flowers from April through July and ranges in elevation from 250 to 3,280 feet.	**Absent:** No suitable habitat for this species occurs on the site. The project site does not contain vernal pools, grasslands, or woodlands that would support this species. There were 21 CNDDB records of this species occurring within ten miles of the project site.
Neostapfia colusana	Colusa grass	FT, CE, 1B.1	Colusa grass occurs in vernal pools with adobe soils. It is most common in alkali or acidic soils. It flowers from May to July, and it ranges in elevation from 16 to 345 feet.	**Absent.** No suitable habitat for this species occurs on the site. No vernal pools or vernal pool habitat is located within or near the project site. This species was not observed during surveys. There were twenty six CNDDB records of this species occurring within ten miles of the project site. Critical habitat has been established within ten miles of project site.
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	FT, CE, 1B.1	San Joaquin Valley orcutt grass occurs in vernal pools. It is most common in acidic soils that vary in texture from clay to sandy loam. It flowers from May through August, and it ranges in elevation from 100 to 2,500 feet.	**Absent.** No suitable habitat for this species occurs on the site. No vernal pools or vernal pool habitat is located within or near the project site. This species was not observed during surveys. There were thirteen CNDDB record sof this species occurring within ten miles of the project site. Critical habitat has been established within ten miles of project site.
Orcuttia pilosa	hairy Orcutt grass	FE, CE, 1B.1	Hairy orcutt grass occurs in vernal pools. It is most common in acidic and saline-alkaline soils. It flowers from May to September, and it ranges in elevation from 75 to 375 feet.	**Absent:** No suitable habitat for this species occurs on the site. The project site does not contain vernal pools that would support this species. There was one CNDDB record of this species occurring within ten miles of the project site.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
Phacelia ciliata var opaca	Merced phacelia	1B.2	Merced phacelia occurs in clay soils of Valley and foothill grassland, and sometimes in alkaline soil. It flowers from February to May, and it ranges in elevation from 200 to 500 feet.	**Absent:** No suitable habitat for this species occurs on the site. There were four CNDDB records of this species occurring within ten miles of the project site.
Pseudobahia bahiifolia	Hartweg's golden sunburst	FE,CE,1 B.1	Hartweg's golden sunburst occurs on clay soils in cismontane woodland and Valley and foothill grassland. It flowers between March and April, and it ranges in elevation from 50 to 500 feet.	**Absent:** No suitable habitat for this species occurs on the site. There was one CNDDB record of this species occurring within ten miles of the project site.
Sagittaria sanfordii	Sanford's arrowhead	1B.2	This perennial herb is endemic to California. It is occurs in sandy loam and clay soils. It is found in riparian habitats, and prefers marshes or swamps. It flowers from July to September, and it ranges in elevation from 10 to 100 feet.	**Absent.** No suitable habitat for this species occurs on the site. The project site elevation of 183 feet is above the range for this species. This species was not observed on the project site. There were two CNDDB records of this species occurring within ten miles of the project site.
Sidalcea keckii	Keck's checkerbloom	FE, 1B.1	Keck's checkerbloom occurs on 20 to 40 percent slopes of red or white-colored clay in sparsely-vegetated annual grasslands. The clays are thought to be derived from serpentine (magnesian or ultramafic) soils. It flowers from April to May, and it ranges in elevation from 400 to 1,400 feet.	**Absent:** No suitable habitat for this species occurs on the site. The project site does not contain soils that would support this species. There was one CNDDB record of this species occurring within ten miles of the project site.
Tuctoria greenei	Greene's tuctoria	FE, 1B.1	Greene's tuctoria occurs in small or shallow vernal pools or the early drying sections of large, deep vernal pools in the Central Valley. It is most common	**Absent.** No suitable habitat for this species occurs on the site. No vernal pools or vernal pool habitat is located within or near the project site. This

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
			in Anita clay and Tuscan loam soils. It flowers from May to July, and it ranges in elevation from 110 to 440 feet.	species was not observed during surveys. There was one CNDDB record of this species occurring within ten miles of the project site. Critical habitat has been established for this species within ten miles of project site.
SPECIAL-STATUS INVERTEBRATES				
Branchinecta conservatio	Conservancy fairy shrimp	FE	Endemic to the grasslands of the northern two-thirds of the central valley; found in large, turbid pools. Inhabits astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	**Absent.** Habitat suitable to support this species is absent from the project site. No vernal pools or vernal pool habitat is located within or near the project site. This species was not observed during surveys. There were five CNDDB records of this species occurring within ten miles of the project site.
Branchinecta longiantenna	longhorn fairy shrimp	FE	Endemic to the eastern margin of the central coast mountains, found seasonally in astatic grassland vernal pools. Inhabits small, clear-water depressions in sandstone and clear-to-turbid clay/grass-bottomed pools in shallow swales.	**Absent.** Habitat suitable to support this species is absent from the project site. No vernal pools or vernal pool habitat is located within or near the project site. This species was not observed during surveys. There were no CNDDB records of this species occurring within ten miles of the project site.
Branchinecta lynchi	vernal pool fairy shrimp	FT	Vernal pool fairy shrimp occur in a variety of vernal pool habitats from small, clear sandstone rock pools to large, turbid, alkaline, grassland valley floor pools.	**Absent.** Habitat suitable to support this species is absent from the project site. No vernal pools or vernal pool habitat is located within or near the project site. This species was not observed during surveys. There were 116 CNDDB records of this species occurring within ten miles of the project site.
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT	Valley elderberry longhorn beetles are associated with elderberry bushes (Sambucus spp.) in the Central Valley.	**Absent.** Habitat suitable to support this species is absent from the project site. No elderberries were located within or near

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
				the project site. Valley elderberry longhorn beetle were not observed during surveys. There were no CNDDB records of this species occurring within ten miles of the project site.
Lepidurus packardi	vernal pool tadpole shrimp	FE	Occur in vernal pools with clear to high turbidity.	**Absent.** Habitat suitable to support this species is absent from the project site. No vernal pools or vernal pool habitat is located within or near the project site. This species was not observed during surveys. There were twenty three CNDDB record of this species occurring within ten miles of the project site.
SPECIAL-STATUS FISH				
Hypomesus transpacificus	Delta smelt	FE, CT	Delta smelt are found only in the Sacramento and San Joaquin estuaries of the San Francisco Bay. Occurs primarily in main water bodies and sloughs of the Delta and Suisun Bay. Not directly associated with small stream systems.	**Absent.** Habitat suitable to support this species is absent from the project site. No large water bodies are located within or near the project site. This species was not observed during surveys. There were no CNDDB records of this species occurring within ten miles of the project site.
Mylopharodon conocephalus	hardhead	CSC	This small fish inhabits deep pools in slow moving streams and rivers in the San Joaquin and Sacramento Valleys from Modoc County in the north to Kern County in the south.	**Absent.** Habitat suitable to support this species is absent on the project site. This species was not observed during surveys. The closest occurrence is located in Merced River. There were no CNDDB records of this species occurring within ten miles of the project site.
Oncorhynchus mykiss	Central Valley steelhead	FT	Steelhead trout occur in stream and rivers with connections with the San Joaquin River.	**Absent.** Habitat suitable to support this species is absent from the project site. This species was not observed during surveys. There were no CNDDB records

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
				of this species occurring within ten miles of the project site.
Oncorhynchus tshawytscha	Central Valley spring-run chinook salmon	FT	Few wild spawning populations remain in the Sacramento River system, California; native populations extirpated in San Joaquin River drainage; dams block spawning habitat, and remaining spawning habitat is degraded by human activities.	**Absent.** Habitat suitable to support this species is absent from the project site. This species was not observed during surveys. There were no CNDDB records of this species occurring within ten miles of the project site.
Oncorhynchus tshawytscha	winter-run chinook salmon, Sacramento River	FE, CE,	These anadromous fish spawn in streams of the Sacramento and Joaquin river systems in California from July through August; threatened by habitat degradation, reduced water quality, loss of riparian and estuarine habitat, and the detrimental impacts of hatchery fishes.	**Absent.** Habitat suitable to support this species is absent from the project site. This species was not observed during surveys. There were no CNDDB records of this species occurring within ten miles of the project site.
SPECIAL-STATUS AMPHIBIANS				
Ambystoma californiense	California tiger salamander	FT, CT, CSC	California tiger salamanders occur in natural ephemeral pools or ponds that mimic them, that remain inundated for 12 weeks or more. They require nearby upland habitat containing small mammal burrows or crevices that provide refugia.	**Absent.** Habitat suitable to support this species is absent from the project site. No pools, ponds, or burrow refugia were present. This species was not observed during surveys. There were 30 CNDDB records of this species occurring within ten miles of the project site.
Rana aurora draytonii	California red-legged frog	FT, CSC	California red-legged frogs occur in small streams, ponds and marshes, preferably with dense shrubby vegetation such as cattails and willows near deep water pools.	**Absent.** Habitat suitable to support this species is absent from the project site. Habitat is limited and there is little to no connectivity to additional habitat for this species. Given that the nearest extant record is located 65 miles to the southwest from 1999, together with presumed extirpation in the San Joaquin Valley, this species can be presumed extirpated in the

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
				project area and is unlikely to occur within the project vicinity. There were no CNDDB records of this species occurring within ten miles of the project site.
Spea hammondii	western spadefoot	CSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	**Absent.** Habitat suitable to support this species is absent from the project site. No vernal pools occur within the project site. There were two CNDDB records of this species occurring within ten miles of the project site.
SPECIAL-STATUS BIRDS				
Agelaius tricolor	tricolored blackbird	CSC	Tricolored blackbirds live near fresh water, and prefer emergent wetland vegetation with tall, dense cattails or tules, but they also are found in thickets of willow, blackberry, wild rose, and tall herbs. They forage in grassland and agricultural fields.	**Possible as a transient forager:** Marginal foraging and upland habitat is available for this species within the project vicinity. However, this habitat is limited; no nesting habitat is present within the project site. There were two CNDDB records of this species occurring within ten miles of the project site.
Athene cunicularia	burrowing owl	CSC	This species inhabits open annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	**Unlikely.** Marginal foraging and upland habitat is available for this species within the project vicinity. No grassland, fallow land, sparse herbaceous layer, or friable soils were present; however, the species is known to occur in sub-optimal habitats characterized by human disturbances. There were seven CNDDB records of this species occurring within ten miles of the project site.
Buteo swainsoni	Swainson's hawk	CT	Swainson's hawks occur in riparian forests and other forested areas. They roost in a variety of trees and forage widely over forests, grasslands, and	**Unlikely.** This species may occur as transient foragers or nest in the power poles and trees located on and near the project site. Thirteen CNDDB records of

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
			shrublands. They are easily disturbed by human activities.	this species occurred within ten miles of the project site.
Charadrius montanus	Mountain plover	SSC	This bird inhabits plains and grassy or bare dirt fields. It winters in the Central Valley and coastal valleys, in open short grasslands and plowed agricultural fields, where it forages for seed and grain.	**Absent.** Habitat suitable to support this species is absent from the project site. No grassland or plowed fields exist within the project site. There was one CNDDB record of this species occurring within ten miles of the project site.
SPECIAL-STATUS REPTILES				
Anniella pulchra pulchra	silvery legless lizard	CSC	Occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	**Absent.** Habitat suitable to support this species is absent from the project site. There were no CNDDB records of this species occurring within ten miles of the project site.
Emys marmorata	western pond turtle	CSC	Western pond turtles can be found in ponds and small lakes with abundant vegetation; also found in marshes, slow moving streams, reservoirs, and brackish water. Require basking sites.	**Unlikely.** Marginal habitat for this species is available within the portions of Bear Creek that are located on site. There were two CNDDB records of this species occurring within ten miles of the project site.
Gambelia sila	blunt-nosed leopard lizard	FE, CE,	Blunt-nosed leopard lizards occur in sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. They seek cover in mammal burrows, under shrubs, or structures such as fence posts.	**Absent.** Habitat suitable to support this species is absent from the project site. No burrows or desert scrub habitat exist on the project site. There was one CNDDB record of this species occurring within ten miles of the project site.
Thamnophis gigas	giant garter snake	FT, CT,	Giant garter snakes require permanent or semi-permanent marshes and sloughs.	**Absent.** Habitat suitable to support this species is absent from the project site. No permanent or semi-permanent marshes or sloughs occur within the project site. There was one CNDDB record of this species occurring within ten miles of the

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
				project site.
SPECIAL-STATUS MAMMALS				
Antrozous pallidus	pallid bat	CSC	This bat is found in deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Absent.** Habitat suitable to support this species is absent from the project site. Marginal roosting habitat exists, and the project site is subject to regular, significant human disturbance. There were no CNDDB records of this species occurring within ten miles of the project site.
Dipodomys nitratoides exilis	Fresno kangaroo rat	FE, CE,	Fresno kangaroo rats historically occurred in alkali sink and open grassland habitats on the valley floor in Fresno County and portions of Tulare, Kings, and Madera counties. The last confirmed specimen was captured in 1992 and they may be extinct.	**Absent.** Habitat suitable to support this species is absent from the project site. Alkali sink habitat is absent from the project site. There were no CNDDB records of this species occurring within ten miles of the project site.
Eumops perotis californicus	western mastiff bat	CSC	Western mastiff bats are found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. They roost in crevices on cliff faces, high buildings, trees, and tunnels.	**Absent.** Habitat suitable to support this species is absent from the project site. Though marginal roosting habitat exists, no foraging habitat exists on the project site. There was one CNDDB record of this species occurring within ten miles of the project site.
Lasiurus blossevillii	western red bat	CSC	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers riparian habitat edges with walnuts, oaks, willows, cottonwoods, and sycamores where they roost, and mosaics with trees protected from above and open below with open areas for foraging.	**Possible as a transient forager.** Riparian habitat suitable to support this species occurs on the project site. However, this species was not observed on the project site and mosaics were marginal. There were no CNDDB records of this species occurring within ten miles of the project site.

Scientific Name	Common Name	Status	Habitat Requirements	Probability of Occurrence and Assessment of Impacts
Taxidea taxus	American Badger	CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food and open, uncultivated ground. Preys on burrowing rodents and digs burrows.	**Possible as a transient forager.** Marginal foraging habitat was present on the site. No dens or sign of this species were observed during the site survey. There was one CNDDB record of this species occurring within ten miles of the project site.
Vulpes macrotis mutica	San Joaquin Kit fox	FE, CT	Found in annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	**Possible as a transient forager.** Marginal foraging habitat was present on the site. No dens or sign of this species were observed during the site survey. There were four CNDDB records of this species occurring within ten miles of the project site.

Sources:
California Department of Fish and Game. 2012. California Natural Diversity Data Base
California Native Plant Society (CNPS). 2012. Inventory of Rare and Endangered Plants, Rare Plant Scientific Advisory Committee.
United States Fish and Wildlife Service (USFWS). 2012. Critical Habitat Portal, Critical Habitat Map, United States Fish and Wildlife Service, Sacramento, CA.
United States Fish and Wildlife Service (USFWS). 2012. Federal Endangered and Threatened Species List, Sacramento Fish and Wildlife Office.

USGS 7.5 Minute Quadrangles:
Atwater, El Nido, Haystack Mtn, Merced, Plainsburd, Planada, Sandy Mush, Winton, Yosemite Lake

Abbreviations:
FE Federal Endangered Species
FT Federal Threatened Species
MBTA Species Protected Under the Auspices of the Migratory Bird treaty Act
CE California Endangered Species
CT California Threatened Species
CSC California Department of Fish and Game Species of Special Concern
1B California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere

1B.1 California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere; Seriously Threatened in California
1B.2 California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California

*Potential Occurrence Definitions:
Present: Species or sign of their presence observed on site at time of the field survey.
Likely: Species not observed on site, but may reasonably be expected to occur there on a regular basis. Or, species not observed on the site, exceptional habitat exists, and additional surveys needed to verify presence.
Possible: Species not observed on site, but could occur there from time to time. Or, species not observed on the site, suitable habitat exists, and additional surveys needed to verify presence.
Unlikely: Species not observed on site, and would not be expected to occur there except, perhaps, as a transient. Or, species not observed on the site, marginally suitable habitat exists, and additional surveys needed to verify presence.
Absent: Species or sign of their presence not observed on site, and precluded from occurring there because habitat requirements are not met.

Appendix C

U.S. Fish and Wildlife Service Standardized Recommendations for the Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance

U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process. All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to an6y survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied and unoccupied)	Service must be contacted

*Known den: To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

**Potential and Atypical dens: Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection. **Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service**.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.

2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.

3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.

5. No firearms shall be allowed on the project site.

6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.

7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.

8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.

9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.

10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.

12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.

13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.

14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT "A" - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Appendix C

Cultural Resources Report

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

April 3, 2012

Ms. Elena Nuño, Associate Senior Planner
Quad Knopf
6051 N. Fresno Street, Suite 200
Fresno, CA 93710

Sent by FAX to: 559-435-2905
No. of Pages: 4

Re: Sacred Lands File Search and Native American Contacts list for the **"Parsons Avenue Bridge Over Bear Creek Project;"** located in the City of Merced; Merced County, California

Dear Ms. Nuño:

The Native American Heritage Commission (NAHC) conducted a Sacred Lands File search of the 'area of potential effect,' (APE) based on the USGS coordinates provided and **Native American cultural resources were not identified** in the project area of potential effect (e.g. APE): you specified. Also, please note; the NAHC Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any project groundbreaking activity.

California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to. California Government Code§6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential

effect (APE), and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list that the NAHC has provided in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider avoidance as defined in §15370 of the CEQA Guidelines when significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 2183.2 which requires documentation, data recovery of cultural resources.

The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 4(f), Section 110 (f)(k) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The NAHC remains concerned about the limitations and methods employed for NHPA Section 106 Consultation.

Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not

eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton

Attachment: Native American Contact List

Native American Contacts
Merced County
April 3, 2012

Southern Sierra Miwuk Nation
Jay Johnson, Spiritual Leader
5235 Allred Road
Mariposa , CA 95338
209-966-6038
Miwok
Pauite
Northern Valley Yokut

Southern Sierra Miwuk Nation
Anthony Brochini, Chairperson
P.O. Box 1200
Mariposa , CA 95338
tony_brochini@nps.gov
209-379-1120
209-628-0085 cell
Miwok
Pauite
Northern Valley Yokut

Amah MutsunTribal Band
Valentin Lopez, Chairperson
PO Box 5272
Galt , CA 95632
viopez@amahmutsun.org
916-743-5833
Ohlone/Costanoan

Choinumni Tribe; Choinumni/Mono
Lorrie Planas
2736 Palo Alto
Clovis , CA 93611
Choinumni
Mono

North Valley Yokuts Tribe
Katherine Erolinda Perez
PO Box 717
Linden , CA 95236
(209) 887-3415
canutes@verizon.net
Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

Southern Sierra Miwuk Nation
Les James, Spiritual Leader
PO Box 1200
Mariposa , CA 95338
209-966-3690
Miwok
Pauite
Northern Valley Yokut

Amah MutsunTribal Band
Edward Ketchum
35867 Yosemite Ave
Davis , CA 95616
aerieways@aol.com
Ohlone/Costanoan
Northern Valley Yokuts

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Parsons Avenue Bridge Over Bear Creek; located in the City of Merced; Merced County, California for which a Sacred Lands File search and Native American Contacts list were requested.

CENTRAL CALIFORNIA INFORMATION CENTER

California Historical Resources Information System
Department of Anthropology – California State University, Stanislaus
One University Circle, Turlock, California 95382
(209) 667-3307 - FAX (209) 667-3324

Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties

Date: April 2, 2012

CCIC File #: 8185 I
Project: Proposed new bridge construction (Parsons Avenue Bridge Project), Merced, Merced Co., CA

Elena Nuño, Sr. Associate Planner
Quad Knopf, Inc.
6051 North Fresno Street, Ste. 200
Fresno, CA 93710

Dear Ms. Nuño,

We have conducted a records search as per your request for the above-referenced project area located on the Merced USGS 7.5-minute quadrangle map in Merced County.

Search of our files includes review of our maps for the specific project area and a one-quarter-mile radius of the project area (as specified by the client), and review of the National Register of Historic Places, the California Register of Historical Resources, the *California Inventory of Historic Resources* (1976), the *California Historical Landmarks* (1990), and the California Points of Historical Interest listing (May 1992 and updates), the Directory of Properties in the Historic Property Data File (HPDF) and the Archaeological Determinations of Eligibility (ADOE) (Office of Historic Preservation current computer lists dated 08-15-2011 and 08-09-2011, respectively), the CALTRANS State and Local Bridge Survey (1989 and updates), the *Survey of Surveys* (1989), GLO Plats, and other pertinent historic data available at the CCIC for each specific county.

The following details the results of the records search:

Prehistoric or historic resources within the project area:

Prehistoric resources: None have been reported to the Information Center.

Historic archaeological resources: None have been reported.

Historic properties: None have been reported.

Other historic information:

1. The Merced Lateral Canal may be in the project's APE. This canal, over 50 years old, has been formally recorded and evaluated at three other points, outside of the search area. It has not been formally recorded or evaluated within this search area [project or radius]. The previous evaluations are reflected on page 9 of the HPDF printout, with a cultural resource status code of 6Y assigned by OHP in 2002 [ineligible for the NRHP, but not evaluated for either the CRHR or for local listing].
2. The GLO Plat map for T7S/R14E (sheet #44-477, dated 1853-1854) only references Bear Creek at this location.
3. The 1948 Merced USGS 7.5' map shows one building adjacent to the southern end of the proposed project area, and ca. thirteen other building locations scattered throughout the quarter-mile radius.
4. The 1961 Merced USGS 7.5' map shows one, maybe two, buildings adjacent to the southern end of the project area. Other buildings, and roads, are shown within the quarter-mile.

Prehistoric or historic resources within one-quarter-mile of the project area:

Prehistoric resources: None have been reported to the Information Center.
Historic archaeological resources: None have been reported.
Historic properties: None have been reported.
Other historic information: There may be buildings, structures, and objects over 45 years old within the quarter-mile, that may be considered potential cultural resources that have not yet been formally recorded or evaluated.

Resources that are known to have value to local cultural groups:

None have been formally reported to the Information Center.

Previous investigations within the project area:

None have been reported to the Information Center.

Previous investigations within one-quarter-mile of the project area:

None have been reported to the Information Center.

Recommendations/Comments:

Based on existing data in our files the project area has a low-to moderate sensitivity for the possible discovery of surface and (primarily) subsurface historical resources, including the remains of prehistoric occupation sites, "kitchen midden" soils and hearths, tools and lithic debitage, baked clay, and even human burials; and historic features such as structural remnants and refuse and artifact deposits. Survey by a qualified archaeologist is recommended prior to implementation of the project or issuance of any discretionary permit. An archaeologist should also be consulted as to whether on-site archaeological monitoring should be done during any excavation for the project.

The Statewide Referral List for Historical Resources Consultants is posted for your use on the internet at http://chrisinfo.org

Please be advised that a historical resource is defined as a building, structure, object, prehistoric or historic archaeological site, or district possessing physical evidence of human activities over 45 years old. There may be unidentified features involved in your project that are 45 years or older and considered as historical resources requiring further study and evaluation by a qualified professional of the appropriate discipline.

We advise you that in accordance with Federal and State law, if any historical resources are discovered during project-related activities, all work is to stop and the lead agency and a qualified professional are to be consulted to determine the importance and appropriate treatment of the find. If Native American remains are found the County Coroner and the Native American Heritage Commission, Sacramento (916-653-4082) are to be notified immediately for recommended procedures.

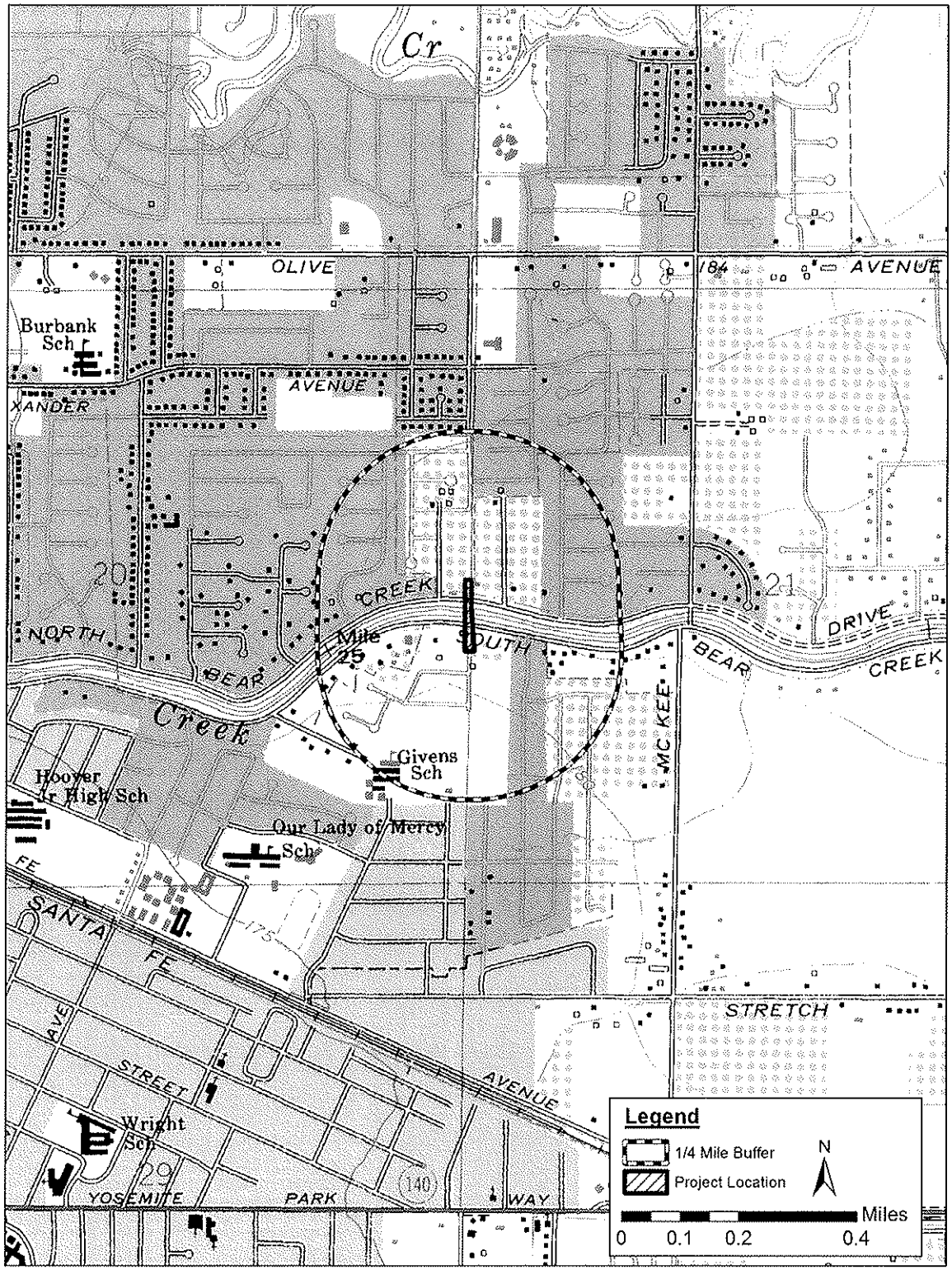
We further advise you that if you retain the services of a historical resources consultant, the firm or individual you retain is responsible for submitting any report of findings prepared for you to the Central California Information Center, including one copy of the narrative report and two copies of any records that document historical resources found as a result of field work. If the consultant wishes to obtain copies of materials not included with this records search reply, additional copy or records search fees may apply.

We thank you for contacting this office regarding historical resource preservation. Please let us know when we can be of further service. As requested, the original invoice will be sent to the Quad Knopf office in Visalia, California; but a courtesy copy is attached for your reference.

Sincerely,

R. Hards

Robin Hards, Assistant Research Technician
E. A. Greathouse, Coordinator
Central California Information Center
California Historical Resources Information System



Quad Knopf	PROJECT LOCATION USGS 7.5-minute Merced Quadrangle	Figure 1

CCIC # 8185 I

CENTRAL CALIFORNIA INFORMATION CENTER

California Historical Resources Information System

Department of Anthropology – California State University, Stanislaus
One University Circle, Turlock, California 95382
(209) 667-3307 - FAX (209) 667-3324

Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties

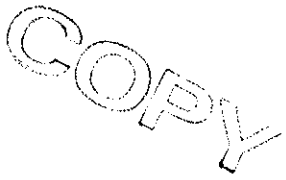
INVOICE FOR SERVICES RENDERED

DATE: April 2, 2012

CCIC File #: 8185 I
Project: Proposed new bridge construction (Parsons Avenue Bridge Project), Merced, Merced Co., CA

Submitted to:

Quad Knopf, Inc.
P.O. Box 3699
Visalia, CA 93278



Attn.: Accounts Payable Dept.

For record search requested by and sent to: Elena Nuño, Sr. Associate Planner, Quad Knopf, Inc., 6051 North Fresno Street, Ste. 200, Fresno, CA 93710

Please remit $150.00 for records search or other services rendered as outlined below.

1 hr x $150.00/hour	= $150.00
0 copies @ $.15/page	= $ --0--
Total	= $150.00

PLEASE MAKE REMITTANCE PAYABLE TO:

CENTRAL CALIFORNIA INFORMATION CENTER (State Trust TM317-20004)

Remittance payable within 60 days of receipt.

Thank you.

[CSUS Federal TAX ID #77-0207337]