PUBLIC REVIEW DRAFT

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

FOR THE

COBLES CORNER AND COUNTRY VILLA APARTMENTS WATER SYSTEM CONSOLIDATION PROJECT

City of Hughson, CA

FEBRUARY 2023

Prepared for:

City of Hughson
7018 Pine Street
Hughson, CA 95326
Attn: Carla Jauregui

Self-Help Enterprises P.O.
Box 6520 Visalia, CA
93290

Prepared by:

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

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LIST OF ACRONYMS USED IN THIS DOCUMENT

AB	Assembly Bill
APE	Area of Potential Effect
ARB	California Air Resources Board
BNSF	Burlington Northern Santa Fe
CalEnviroScreen	California Communities Environmental Health Screening Tool
CDFW	California Department Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO2e	carbon dioxide equivalent
dBA	A-weighted decibels
DTSC	California Department of Toxic Substances Control
DWSRF	Drinking Water State Revolving Fund
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
IS/MND	Initial Study/Mitigated Negative Declaration
NO_x	nitrogen oxide
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PVC	polyvinyl chloride
RCEM	Road Construction Emissions Model
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TID	Turlock Irrigation District
VMT	vehicle miles traveled

NEGATIVE DECLARATION

A. General Project Information

Project Title:	Cobles Corner and Country Villa Apartments Water System Consolidation Project
Lead Agency Name and Address:	City of Hughson 7018 Pine Street Hughson, CA 95326
Contact Person and Phone Number:	Carla Jauregui, Community Development Director (209) 883-4054
Project Location:	Generally along Whitmore Avenue in the City of Hughson and unincorporated Stanislaus County
Project Sponsor Name and Address:	Self-Help Enterprises P.O. Box 6520 Visalia, CA 93290 on behalf of: City of Hughson 7018 Pine Street Hughson, CA 95326
General Plan Designation:	Various urban commercial, residential and agricultural designations adjacent to project alignment
Zoning:	Various urban commercial, residential and agricultural zoning along project alignment, no zoning within public rights-of-way
Description of Project:	The project proposes to install a water pipeline along Whitmore Avenue from Tully Road to Geer Road, with extensions along Geer Road from Whitmore Avenue to the existing Country Villa Apartments complex, and along Whitmore Avenue east of Geer Road to the existing Cobles Corner mobile home park. An additional water pipeline would extend along Euclid Avenue north of Whitmore Avenue to complete a loop back to the City's existing water system. The total length of

	pipeline to be installed would be approximately 9,550 linear feet.
Surrounding Land Uses and Setting:	The project alignment would extend through portions of the predominantly urban area of the City into the predominantly agricultural lands to the east of the City. Additional commercial, light industrial, and residential development in the unincorporated area are located in the vicinity of the Geer Road/Whitmore Avenue intersection.
Other Public Agencies Whose Approval is Required:	Stanislaus County (construction plan approval and road encroachment permits)
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?	No tribes have requested consultation. See Appendix C regarding tribal outreach.

B. Environmental Factors Potentially Affected

The environmental factors checked below may be significantly affected by this project, involving at least one impact that is a "Potentially Significant Impact" prior to mitigation. Mitigation measures that would avoid potential effects or reduce them to a less than significant level have been prescribed for each of these effects, as described in the checklist and narrative on the following pages, and in the Summary Table at the end of Chapter 1.0.

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

C. Lead Agency 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 and/or mitigation measures that would reduce potential effects to a less than significant level 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.

CITY OF HUGHSON

Carla Jauregui, Director
Community Development Department

Date

1.0 INTRODUCTION

1.1 Project Brief

This document is an Initial Study/Mitigated Negative Declaration (IS/MND) for the Cobles Corner and Country Villa Apartments Water System Consolidation Project (project). The project is located partially within the City of Hughson and in the unincorporated area of Stanislaus County east of Hughson (Figures 1-1 through 1-4). The City of Hughson is the project proponent. The IS/MND has been prepared in compliance with the requirements of the California Environmental Quality Act (CEQA). For the purposes of CEQA, the City of Hughson (City) is the Lead Agency for the project.

The project proposes to connect an existing mobile home park and an existing apartment complex located in the unincorporated area east of Hughson to the City's potable water system. This would be accomplished by the installation of a new water pipeline along Whitmore Avenue from its intersection with Tully Road east to Geer Road; additionally, a pipeline would extend south along Geer Road from its intersection with Whitmore Avenue. Additional pipelines and related equipment may be installed as necessary. The project would require approvals from both the City and the County of Stanislaus (County).

1.2 Purpose of Initial Study

CEQA requires that public agencies document and consider the potential environmental effects of the agency's actions that meet CEQA's definition of a "project." Briefly summarized, a "project" is an action that has the potential to result in direct or indirect physical changes in the environment. A project includes the agency's direct activities as well as activities that involve public agency approvals or funding. Guidelines for an agency's implementation of CEQA are found in the CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3).

Provided that a project is not exempt from CEQA, the first step in the agency's consideration of its potential environmental effects is the preparation of an Initial Study. The purpose of an Initial Study is to determine whether the project would involve "significant" environmental effects, as defined by CEQA, and to describe any feasible mitigation measures that would avoid significant effects or reduce them to a level that is less than significant. If the Initial Study does not identify significant effects, then the agency ordinarily prepares a Negative Declaration. If the Initial Study notes significant effects but also identifies mitigation measures that would reduce these significant effects to a level that is less than significant, then the agency ordinarily prepares a Mitigated Negative Declaration. If a project would involve significant effects that cannot be readily mitigated, then the agency must prepare an Environmental Impact Report. The agency may also decide to proceed directly with the preparation of an Environmental Impact Report without first preparing an Initial Study.

The proposed project is a "project" as defined by CEQA and is not exempt from CEQA consideration. The City has determined that the project may potentially have significant environmental effects and therefore requires preparation of an Initial Study. This Initial Study describes the proposed project and its environmental setting, discusses the potential environmental effects of the project, and identifies feasible mitigation measures that would eliminate any potentially significant environmental effects of the project or reduce them to a level that would be less than significant. The Initial Study considers the project's potential for significant environmental effects in the following subject areas:

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

This Initial Study concludes that the project would have potentially significant environmental effects, but that recommended mitigation measures would reduce all of these effects to a level that would be less than significant. As of the distribution of the IS/MND for public review, the City has accepted and will implement all the mitigation measures recommended by the Initial Study. As a result, the City has prepared a Mitigated Negative Declaration and notified the public of the City's intent to adopt the Initial Study/Mitigated Negative Declaration. A copy of the City's Notice of Intent, which indicates the time available for comment, is inside the cover of this document.

1.3 Project Background

The project proposes to consolidate two existing private water systems with the City of Hughson's municipal public water system. The private water systems serve residential developments that are outside the Hughson city limits; no annexation of these developments is proposed because of their distance from the City. One of these residential developments is the Cobles Corner mobile home park, generally located southeast of the intersection of Geer Road and Whitmore Avenue. Cobles Corner currently has 18 spaces, most of which are occupied. The other residential development is the Country Villa apartment complex, which is adjacent to and west of Geer Road approximately 0.15 miles south of the intersection with Whitmore Avenue. The Country Villa complex currently has 20 apartment units.

The water needs at Cobles Corner and Country Villa Apartments are currently provided by existing private wells; all existing wells will be destroyed as a part of the project. The State

of California has expressed concern about the long-term use of wells as water supply for residential uses, mainly related to water quality concerns. Water quality testing of the private wells has shown the presence of contamination that exceeds state and federal drinking water requirements. State and local regulators recommend consolidation of these water systems with City of Hughson to mitigate the contamination.

The City is working with the State Water Resources Control Board (SWRCB) Drinking Water State Revolving Fund (DWSRF) to provide funding for the project, which will include the above-described project components. Self Help Enterprises is assisting the City in conduction environmental review, permitting and funding activities for the project. The DWSRF is funded in part with federal funds. As a result, the project will also be subject to review under the National Environmental Policy Act (NEPA).

1.4 Environmental Evaluation Checklist Terminology

The project's potential environmental effects are evaluated in the Environmental Evaluation Checklist presented in Chapter 3.0 of this IS/MND. The checklist includes a list of environmental considerations against which the project is evaluated. For each question, the City determines whether the project would involve 1) a Potentially Significant Impact, 2) a Less Than Significant Impact with Mitigation Incorporated, 3) a Less Than Significant Impact, or 4) No Impact.

> A Potentially Significant Impact occurs when there is substantial evidence that the project would involve a substantial adverse change to the physical environment, i.e., the environmental effect may be significant, and mitigation measures have not been defined that would reduce the impact to a level that would be less than significant. If there is a Potentially Significant Impact entry in the Initial Study, then an EIR is required. No Potentially Significant Impacts are identified in this Initial Study.
>
> An environmental effect that is Less Than Significant with Mitigation Incorporated is a Potentially Significant Impact that can be avoided or reduced to a level that is less than significant with the application of defined mitigation measures.
>
> A Less Than Significant Impact occurs when the project would involve an environmental impact, but the impact would not cause a substantial adverse change to the physical environment that would require mitigation.
>
> A determination of No Impact is self-explanatory.

This IS/MND identifies certain potentially significant environmental effects that would be mitigated by implementation of existing provisions of law and standards of practice related to land use planning and environmental protection. Such provisions are identified and considered in the environmental impact analysis, and the degree to which they would reduce potential environmental effects is discussed. These protections are considered part of the existing regulatory environment and are assumed to counter the potential environmental effects of the project as discussed. The need for additional mitigation measures described in this Initial Study occurs when such existing environmental

protections are not adequate to avoid potential environmental effects or to reduce them to a level that is less than significant.

1.5 Summary of Environmental Effects and Mitigation Measures

Table 1-1, which follows Figure 1-4, summarizes the results of the Environmental Evaluation Checklist and associated narrative discussion in Chapter 3.0 of this IS/MND. The potential environmental impacts of the proposed project are listed in the left-most column of this table. The level of significance of each impact is indicated in the second column. Feasible mitigation measures that are considered necessary to avoid or minimize the impacts are shown in the third column, and the significance of the impact after mitigation measures are applied is shown in the fourth column.

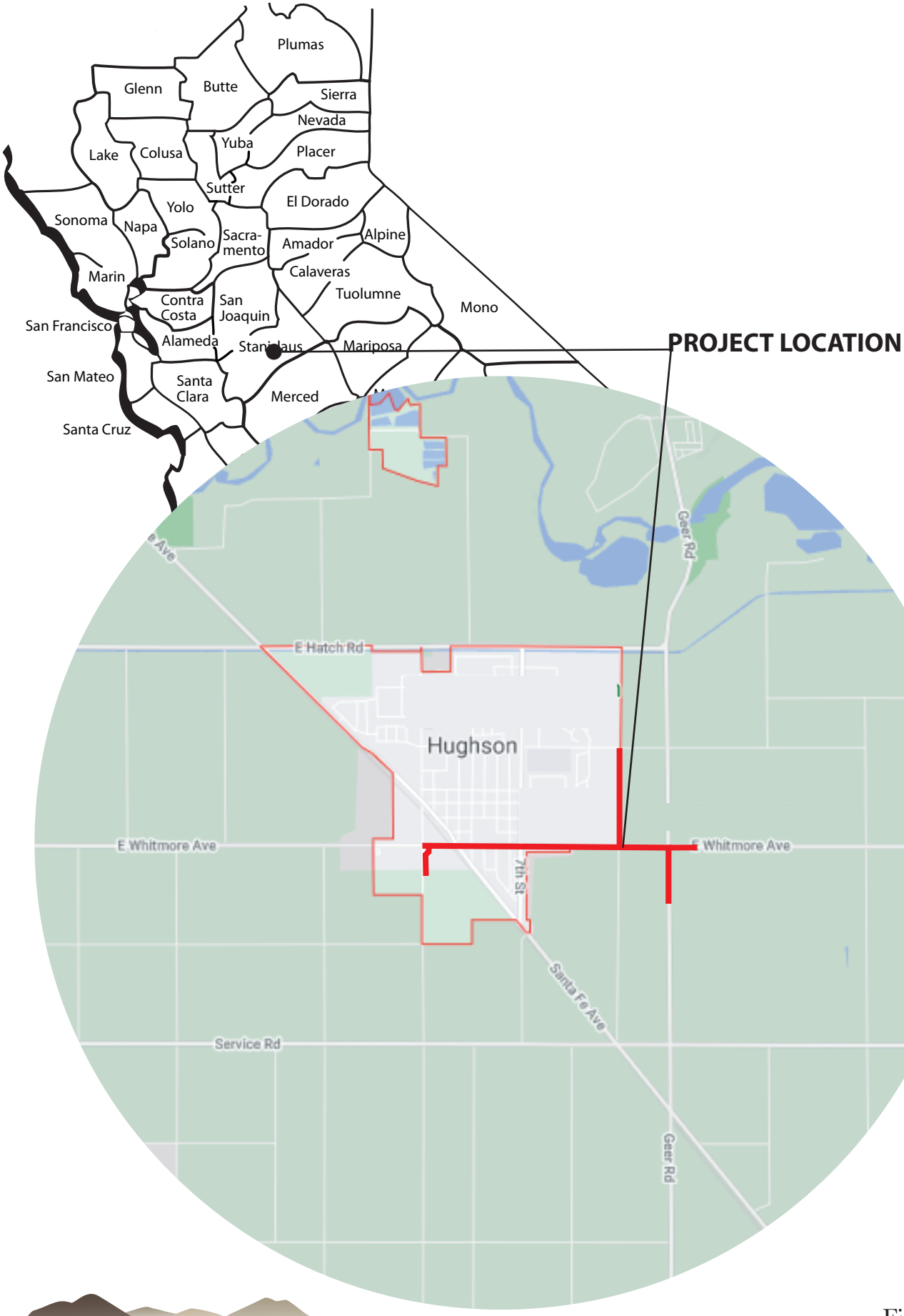

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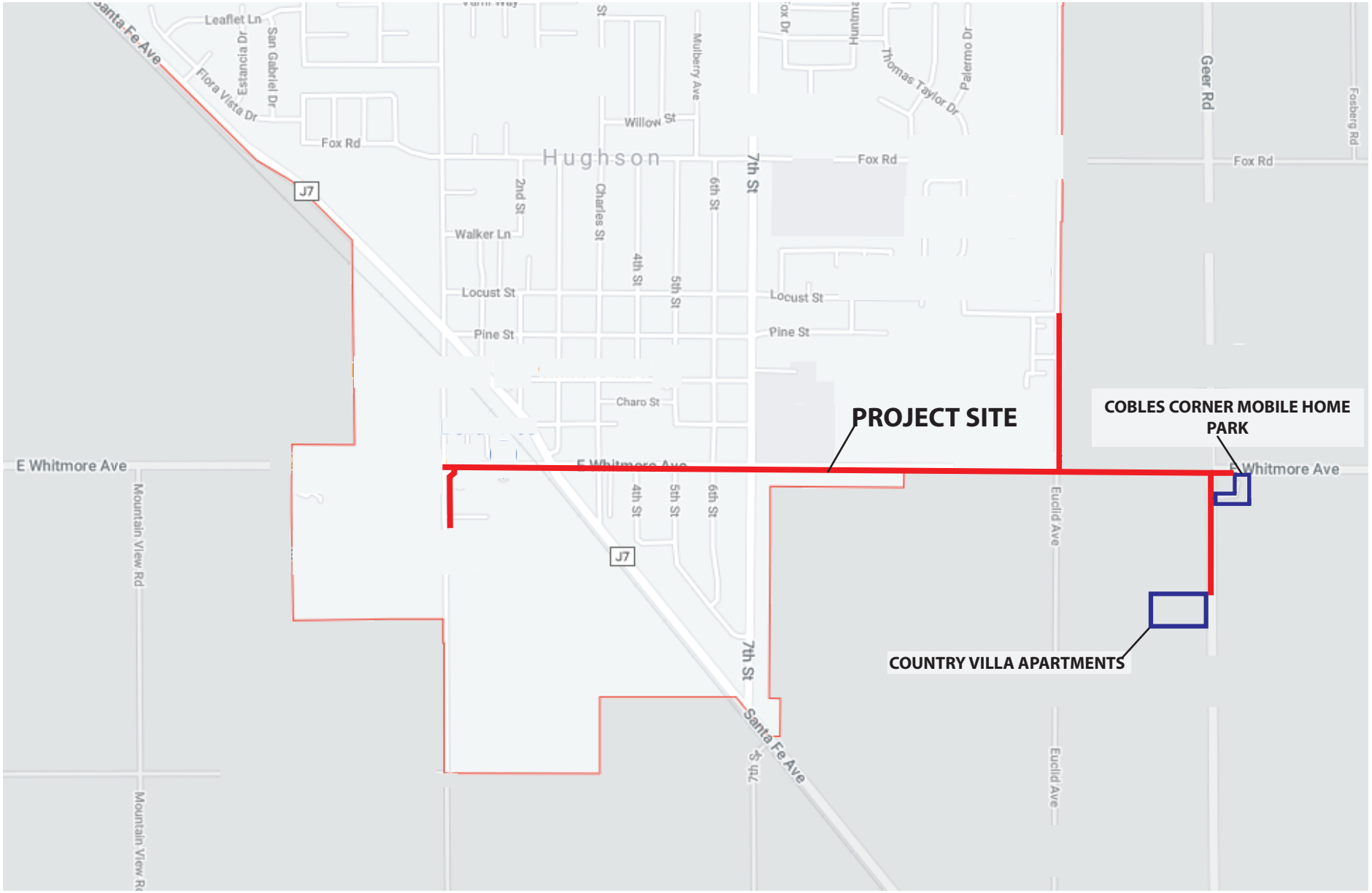
Figure 1-1
REGIONAL LOCATION MAP



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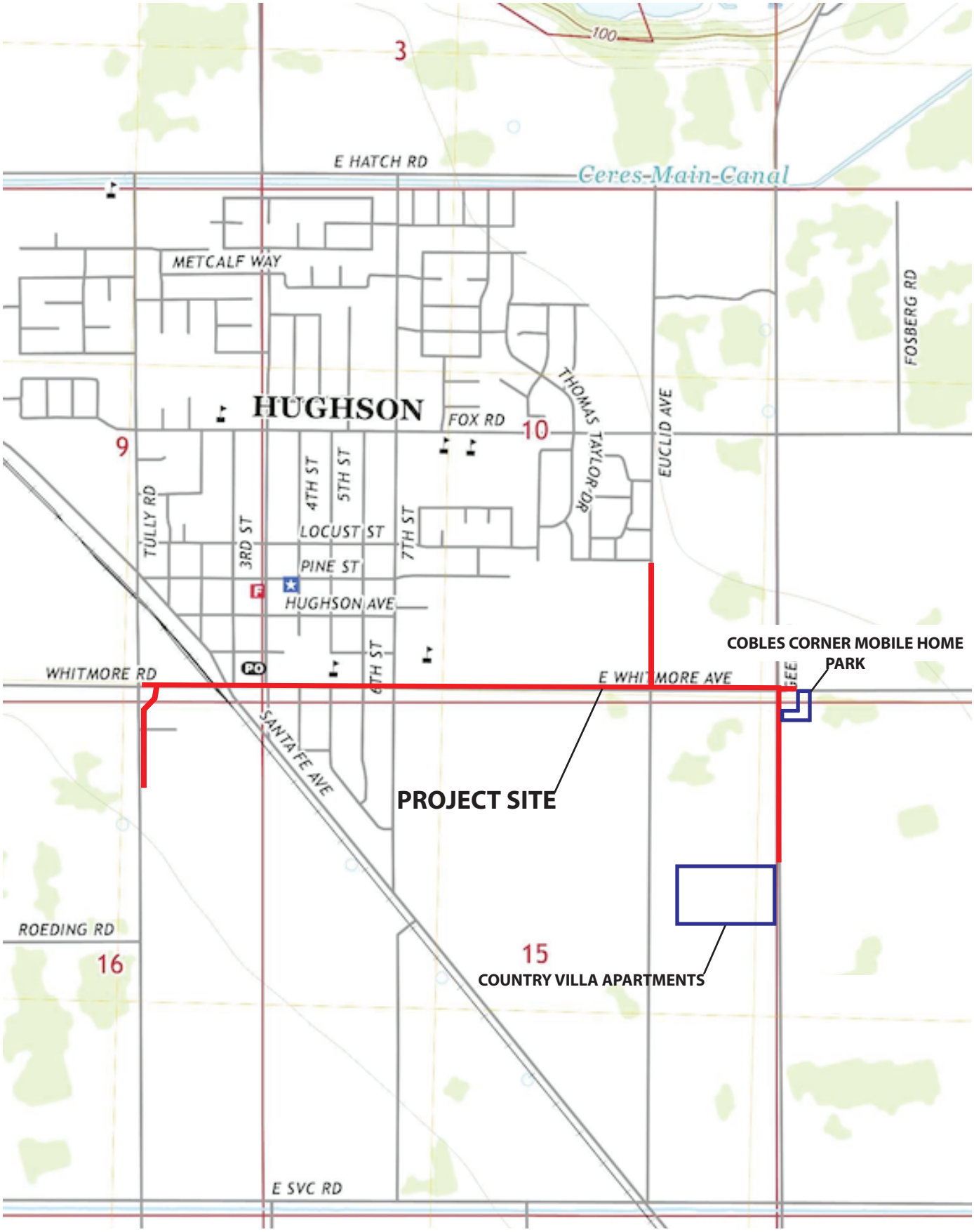
SOURCE: Google Maps

Proposed pipeline
Parcels to be serviced

Figure 1-2
STREET MAP



SOURCE: USGS Quadrangle Map, Denair, CA 2018. T4S, R10E, Section 15

Proposed pipeline
Parcels to be services

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Figure 1-3
USGS MAP

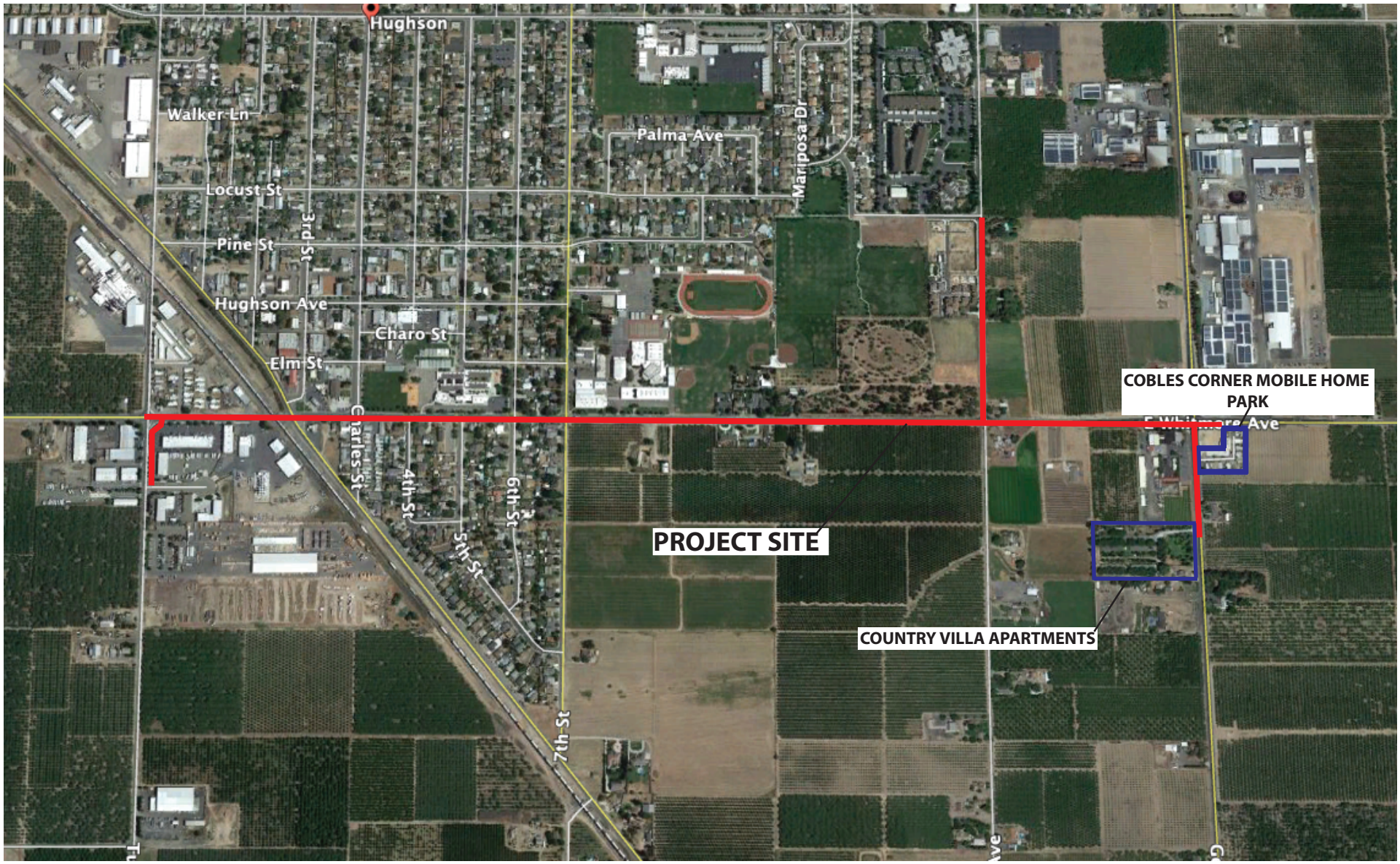

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Figure 1-4
AERIAL PHOTO

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.1 AESTHETICS			
a) Scenic Vistas	NI	None required.	-
b) Scenic Routes and Resources	NI	None required.	-
c) Visual Character and Quality	LS	None required.	-
d) Light and Glare	NI	None required.	-
3.2 AGRICULTURE AND FORESTRY RESOURCES			
a) Agricultural Land Conversion	NI	None required.	-
b) Agricultural Zoning and Williamson Act	NI	None required.	-
c, d) Forest Land Zoning and Conversion	NI	None required.	-
e) Indirect Conversion of Farmland and Forest Land	LS	None required.	-
3.3 AIR QUALITY			
a) Air Quality Plan Consistency	LS	None required.	-
b) Cumulative Emissions	NI	None required.	-
c) Exposure of Sensitive Receptors	LS	None required.	-
d) Odors	NI	None required.	-
3.4 BIOLOGICAL RESOURCES			
a) Special-Status Species	PS	BIO-1: Pre-construction surveys for nesting Swainson's hawks within one-quarter mile of the project site shall be conducted if construction commences between March 1 and September 15. If active nests are found, a qualified	LS

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		biologist shall determine the need, if any, for temporal restrictions on construction, such as prohibiting construction activities within a specified radius of the active nest until the young fledge. Any determination shall be made pursuant to criteria set forth by the California Department of Fish and Wildlife in its 1994 Staff Report regarding Mitigation for Impacts to Swainson's Hawks (Buteo Swainsoni) in the Central Valley of California and by the Swainson's Hawk Technical Advisory Committee in its 2000 publication *Determining a Project's Potential for Impacting Swainson's Hawks*. BIO-2: Pre-construction surveys for burrowing owls within 250 feet of the project site shall be conducted if construction commences between February 1 and August 31. If occupied burrows are found, a qualified biologist should determine the need, if any, for temporal restrictions on construction, such as prohibiting construction activities within a specified radius of the active nest until the young fledge. Any determination shall be made pursuant to criteria set forth by the California Department of Fish and Wildlife in its 2012 *Staff Report on Burrowing Owl Mitigation.*	
b) Riparian and Other Sensitive Habitats	NI	None required.	-
c) Wetlands and Waters of the U.S.	NI	None required.	-
d) Fish and Wildlife Movement	PS	BIO-3: If construction commences during the general avian nesting season (March 1 through July 31), a pre-construction survey for nesting birds shall be conducted within 500 feet of the project site. If active nests are found, work in the vicinity of the nest shall be delayed until the young fledge as determined by a qualified wildlife biologist.	LS
e) Local Biological Requirements	NI	None required.	-

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TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
f) Conflict with Habitat Conservation Plans	NI	None required.	-
3.5 CULTURAL RESOURCES			
a) Historical Resources	LS	None required.	-
b) Archaeological Resources	LS	None required.	-
c) Human Burials	PS	CULT-1: In accordance with CEQA Guidelines Section 15064.5(e), California Public Resources Code Section 5097.98, and California Health and Safety Code Section 7050.5, if human remains are uncovered during project construction, then all work within 50 feet of the find shall be halted, and the San Joaquin County Sheriff/Coroner shall be notified to determine if an investigation of the death is required. If it is determined that the remains are Native American in origin, then the County Sheriff/Coroner shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the Most Likely Descendant of the deceased Native American. The Most Likely Descendant, in coordination with the City, the State Water Resources Control Board (SWRCB), and a qualified archaeologist, shall develop a plan for the proper treatment of the human remains and any associated funerary objects. If a Most Likely Descendant cannot be identified or fails to make a recommendation, then the City, in coordination with the SWRCB and the Native American Heritage Commission, shall rebury the Native American remains and associated grave goods with appropriate dignity in a location not subject to further disturbance.	LS
3.6 ENERGY			
a) Project Energy Consumption	LS	None required.	-

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
b) Consistency with Energy Plans	NI	None required.	-
3.7 GEOLOGY AND SOILS			
a-i) Fault Rupture Hazards	NI	None required.	-
a-ii) Seismic Ground Shaking	LS	None required.	-
a-iii) Other Seismic Hazards	NI	None required.	-
a-iv) Landslides	NI	None required.	-
b) Soil Erosion	LS	None required.	-
c) Unstable Soils	LS	None required.	-
d) Expansive Soils	NI	None required.	-
e) Adequacy of Soils for Wastewater Disposal	NI	None required.	-
f) Paleontological Resources and Unique Geologic Features	PS	GEO-1: If any subsurface paleontological resources are encountered during construction of the project, the City of Hughson Community Development Department shall be notified and all construction activities within 50 feet of the encounter shall be halted until a qualified paleontologist can examine these materials and determine their significance. If the find is determined to be significant, then the paleontologist shall recommend mitigation measures that would reduce potential effects on the find to a level that is less than significant. Recommended measures may include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The project proponent shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the City's	LS

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		Community Development Department, consistent with the requirements of the CEQA Guidelines.	
3.8 GREENHOUSE GAS EMISSIONS			
a) Project GHG Emissions	LS	None required.	-
b) Consistency with GHG Reduction Plans	NI	None required.	-
3.9 HAZARDS AND HAZARDOUS MATERIALS			
a) Hazardous Material Transport, Use and Storage	NI	None required.	-
b) Release of Hazardous Materials by Upset or Accident	LS	None required.	-
c) Hazardous Materials Releases near Schools	NI	None required.	-
d) Hazardous Materials Sites	LS	None required.	-
e) Airport Operations	NI	None required.	-
f) Emergency Response and Evacuation	PS	HAZ-1: Prior to the start of project construction, the contractor shall develop and implement a Traffic Control Plan for both roadways at the Cobles Corner and Country Villa Apartments residential areas. The Traffic Control Plan shall include such items as traffic control requirements, resident notification of access closure, and daily access restoration. The contractor shall specify dates and times of road or access closures or restrictions, if any, and shall ensure that adequate access will be provided for emergency vehicles and residents. The Traffic Control Plan shall be reviewed and approved by the City Department of Public Works and shall be coordinated with the Hughson Fire Protection District, the Hughson Police Department, and the Stanislaus County Sheriff's Department.	LS

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
g) Wildland Fire Hazards	NI	None required.	-
3.10 HYDROLOGY AND WATER QUALITY			
a) Violation of Water Quality Standards	LS	None required.	-
b) Groundwater Supplies and Recharge	LS	None required.	-
c-i, ii, iii) Drainage Patterns and Runoff	NI	None required.	-
c-iv) Flood Flows	NI	None required.	-
d) Release of Pollutants in Flood Zone	NI	None required.	-
e) Conflict with Water Quality or Sustainable Groundwater Plans	LS	None required.	-
3.11 LAND USE AND PLANNING			
a) Division of Established Communities	NI	None required.	-
b) Conflict with Applicable Plans, Policies and Regulations Avoiding or Mitigating Environmental Effects	LS	None required.	-
3.12 MINERAL RESOURCES			
a, b) Loss of Mineral Resource Availability	NI	None required.	-
3.13 NOISE			
a) Exposure to Noise Exceeding Local Standards	PS	NOISE-1: The following measures shall be incorporated into the project plans and specification: ● All construction equipment powered by internal combustion engines shall be properly muffled and	LS

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		maintained. Mufflers shall be installed in accordance with manufacturers' specifications. ● In accordance with State regulations, construction equipment with internal combustion engines shall be prohibited from idling more than five minutes. ● The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.	
b) Groundborne Vibrations	LS	None required.	-
c) Exposure to Airport/Airstrip Noise	NI	None required.	-
3.14 POPULATION AND HOUSING			
a) Unplanned Population Growth	LS	None required.	-
b, c) Displacement of Housing and People	NI	None required.	-
3.15 PUBLIC SERVICES			
a-i) Fire Protection	NI	None required.	-
a-ii) Police Protection	NI	None required.	-
a-iii) Schools	NI	None required.	-
a-iv) Parks	NI	None required.	-
a-v) Other Public Facilities	NI	None required.	-
3.16 RECREATION			

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
a, b) Recreational Facilities	NI	None required.	-
3.17 TRANSPORTATION			
a) Conflict with Transportation Plans, Ordinances and Policies	NI	None required.	-
b) Conflict with CEQA Guidelines Section 15064.3(b)	NI	None required.	-
c) Traffic Hazards	NI	None required.	-
d) Emergency Access	PS	Mitigation Measure HAZ-1.	LS
3.18 TRIBAL CULTURAL RESOURCES			
a-i, ii) Tribal Cultural Resources	PS	Mitigation Measure CULT-1.	LS
3.19 UTILITIES AND SERVICE SYSTEMS			
a) Construction or Relocation of Infrastructure	LS	None required.	-
b) Water Supply	LS	None required.	-
c) Wastewater Systems	NI	None required.	-
d, e) Solid Waste Services	NI	None required.	-
3.20 WILDFIRE			
a) Emergency Response and Emergency Evacuation Plans	NI	None required.	-
b) Exposure of Project Occupants to Pollutants	NI	None required.	-
c) Installation and Maintenance of Infrastructure	NI	None required.	-

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
d) Risks from Runoff, Post-Fire Slope Instability, or Drainage Changes	NI	None required.	-
3.21 MANDATORY FINDINGS OF SIGNIFICANCE			
a) Findings on Biological and Cultural Resources	PS	Mitigation measures in Sections 3.4 and 3.5.	LS
b) Findings on Individually Limited but Cumulatively Considerable Impacts	NI	None required.	-
c) Findings on Adverse Effects on Human Beings	LS	None required.	-

LEGEND: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

2.0 PROJECT DESCRIPTION

2.1 Project Location

The project site is in the City of Hughson and the unincorporated area of Stanislaus County east of the City (see Figures 1-1 to 1-4). Most of the project is located along the right-of-way of Whitmore Avenue from Tully Road to just east of Geer Road. Proposed pipelines also extend along Geer Road and Tully Road south of their intersections with Whitmore Avenue, and along Euclid Road north of its intersection with Whitmore Avenue.

The project site is shown on the U.S. Geological Survey's Denair, California, 7.5-minute quadrangle map within Sections 10 and 15, Township 4 South, Range 10 East, Mt. Diablo Base and Meridian. The latitude of the approximate center of the project site is 37° 35′ 39″ North, and the longitude is approximately 120° 51′ 26″ West.

2.2 Project Details

Proposed Facilities

The project proposes the installation of approximately 9,550 linear feet of new water pipeline along the street sections described above (Figures 2-1A through 2-1D). Most new pipeline would be of polyvinyl chloride, or PVC ranging from 10 to 16 inches in size. Ductile iron pipe would be utilized at the railroad crossing and may be utilized in other segments where required.

A 16-inch diameter water pipeline would be installed within the right-of-way of Whitmore Avenue from Tully Road to approximately 800 feet east of Geer Road – approximately 7,450 linear feet. The western terminus of this pipeline would connect to the City's water system through a new pipeline, approximately 100 feet in length and 16 inches in diameter, that would be extended south from Whitmore Avenue along Tully Road to an existing stub. The eastern terminus would be the point at which the Cobles Corner Mobile Home Park would connect to the City's water system by a pipeline approximately 10 inches in diameter. No land uses between the City and the mobile home park are planned to be connected to the proposed pipeline.

Another water pipeline, approximately 700 feet in length and 12 inches in diameter, would be installed within the right-of-way of Geer Road from its intersection with Whitmore Avenue south to the Country Villa Apartments. The apartment complex would connect to the City's water system at the southern terminus of this pipeline by a pipeline approximately 10 inches in diameter. No other land uses in the vicinity of this proposed pipeline are planned to be connected. At both the mobile home park and the apartment complex, a master meter vault for wholesale delivery of water would be installed.

In addition, a water pipeline, approximately 1,300 linear feet and 16 inches in diameter, is proposed to be installed along Euclid Avenue from the Whitmore Avenue intersection north. The northern terminus of this pipeline would connect to an existing portion of the City's water system, which would complete a loop that would improve water pressure and maintain water quality in the area.

Project Construction

Pipeline Installation

Most pipelines would be installed within trenches, the depth of which would vary based on pipeline diameter (Figure 2-2). All pipelines would be installed within compacted select and/or native backfill material approved by the City Engineer. The pipeline would be covered by a minimum of 36 inches of backfill. Most of this covering would be native material backfill; a topping layer of aggregate base approximately six inches deep would be placed in roadways. Excess excavated material would be disposed of within the adjacent right-of-way or removed to an approved off-site location.

The segment of the project that crosses beneath the Burlington Northern Santa Fe (BNSF) railroad tracks would be installed using the bore-and-jack method. The existing water pipeline at this crossing would be abandoned in place and would be filled by pressure grouting. The grout material would be a sand cement slurry with a minimum of two sacks of cement per cubic yard and a minimum amount of water to assure satisfactory placement. Security fencing would be placed around the bore pit and the receiving pit while they are open. The anticipated depth to which this segment of pipeline would be installed would be approximately 10 feet - the deepest part of the project.

Pipeline construction would be confined to the existing rights-of-way of Whitmore Avenue, Geer Road, Tully Road and Euclid Avenue; no additional acquisition of right-of-way would be required. All crossings of utility lines will be potholed and verified by the contractor, and the City Engineer will be notified of any conflicts. A clearance of one foot will be maintained between existing sewer, storm, water, and natural gas crossings.

Connection to Private Water Systems

The contractor would perform the work necessary to connect the new pipeline to the existing Cobles Corner and Country Villa Apartments private water systems. Work would include, but would not be limited to, the following:

- Locating existing pipes on private water system properties for points of connection,
- Installing and connecting new pipeline from transmission main to existing private water systems,
- Installing a master water meter for each system,
- Disconnecting existing well supply from the private water systems,
- Assisting with service interruption notices,

- Flushing, disinfecting, and testing system pipes and connections,
- Destroying four private wells in accordance with State of California Well Standards and the contract documents, and
- Installing a new fire hydrant at Country Villa Apartments.

The contractor would provide the City and the private water system representative at least 14 days notice prior to work on private properties. As part of the notification, the contractor would provide City and water system representatives with a work plan, including start date, work proposed and area impacted, and traffic plan specifying access and egress for residents. The new service would be installed in accordance with contract plans, specifications, and City Improvement Standards. Points of connection would be cut-in tees compatible with the existing pipe size and material (see Figure 2-2). Each service would include a master water meter, vault, and shut-off valves installed per City Improvement Standards Detail 5-W8. Shut-off valves would be provided at points of connection to isolate the existing systems from new work.

Records of existing private water system distribution system pipes are not available, though the approximate locations are shown on the plans. During the exploration (potholing) phase of the work, the contractor would locate and expose the existing distribution pipe for determining the connection point and materials needed for new water supply services for both private water systems. The contractor would coordinate with the City and the private water system representative two days prior to performing locating work. Both the City and the representative would be allowed to view the pipe prior to backfilling the pothole.

The contractor would provide a disinfection plan for review and approval by the City and the private water system representative at least 30 days prior to work on the private water system pipes. The disinfection plan would include, but is not limited to, proposed disinfection chemicals and a process to minimize risk of contamination. As part of the plan, flushing the system using existing well water, hose bibs, and other blow-off points would be identified. Contractor would have at least two bacteriological samples collected for each system immediately following the flush, and 24 hours later.

The contractor would provide a notice of intended service interruption at least 21 days prior to said work. The contractor would coordinate with the City to notify residents in advance of the day and duration of service outage, and any other special instructions necessary for protection of public health. Work would not start until all materials required for the cut-in tee are on site, including disinfection materials and approved disinfection/flushing plan.

Destruction of Wells

The contractor would retain the services of a licensed C57 Well Drilling Contractor to destroy four private wells in accordance with State of California Well Standards. Preliminary work would include disconnecting wells from existing water distribution systems, removing and/or disposing of pumps and other equipment, producing a video and description/sketch of well and pump, and permitting. The contractor would deliver well data and a destruction plan to the City Engineer for review and approval prior to applying

for destruction permits. Well videos would be clear (no sediment), in color, and show screens and/or perforations (perpendicular view) and the full depth of each well.

The contractor would disconnect well piping from the existing water system by finding the point of connection to the system, capping said connection, and removing well supply piping from well/tank to the point of connection. Destruction would be performed in accordance with State Well Standards and with well permits. Well casings would be perforated or punctured every 25 feet between the ground and standing water, and every 10 feet below the water level, or as directed by the City Engineer. Existing well casing would be cut off five feet below ground surface and disposed. The contractor would remove and dispose of concrete around the well head and foundations for tanks, unless otherwise directed by the private water system representative.

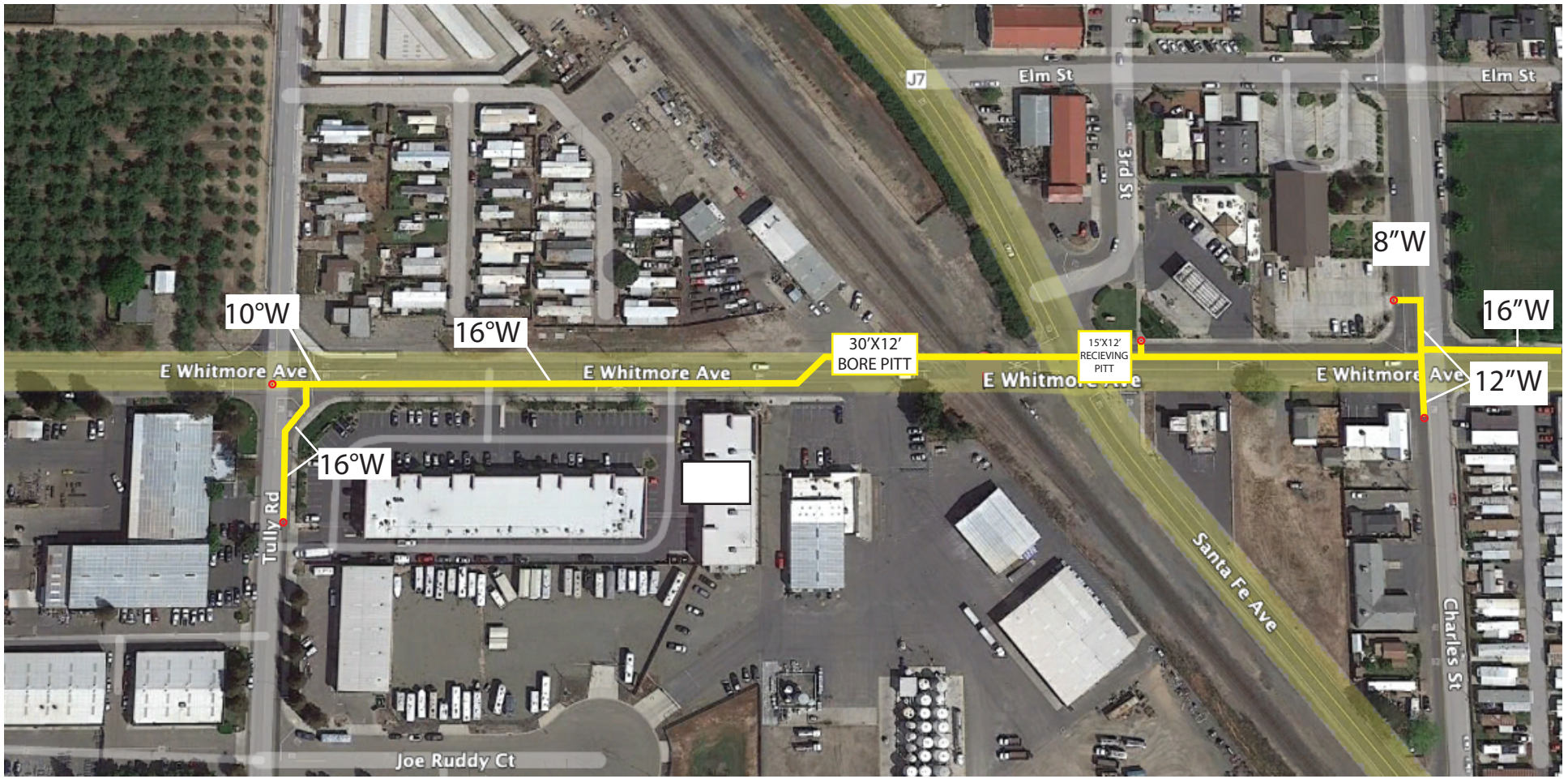
Erosion Control

As part of the project, the contractor would prepare an Erosion Control Plan to minimize soil erosion that may occur due to ground disturbance by construction activities. The plan would provide gravel bags and inlet protection at the nearest downstream curb inlet on each cross street. The contractor would be responsible for visiting the site and determining the total number of downstream inlets not shown in the plan. The plan would also designate areas for aggregate and concrete rinse, construction debris, washdown of vehicles, and maintenance. Erosion control best management practices (BMPs) would be installed and maintained through the duration of the project. Sediment control BMPs would be installed and maintained year round. The Erosion Control Plan is intended to be used as a guideline to comply with the requirements of the State Water Resources Control Board (SWRCB), which are mentioned below and discussed in more detail in Section 3.7, Geology and Soils.

2.3 Permits and Approvals

As the project is within both the City and unincorporated Stanislaus County, approvals from both agencies would be required, mainly of construction plans and encroachment permits for work within City streets and County roads. In particular, the City's Public Works Department would review and approve all connections to the City's water system, as well as issue encroachment permits for work in City streets. The County's Environmental Resources Department would issue permits for the proposed well destruction, and its Public Works Department would issue encroachment permits for work on County roads.

It is anticipated that the project would be funded largely by the SWRCB through its Drinking Water State Revolving Fund (DWSRF) program. An application for DWSRF funding will be presented to the SWRCB, including an Environmental Package that evaluates the potential environmental impacts of the proposed project under CEQA and the National Environmental Policy Act (NEPA), along with a Technical Package and a Financial Security Package. The Environmental Package will include this IS/MND for purposes of compliance with CEQA and other information related to compliance with NEPA. The SWRCB must approve the application, and a finalized agreement must be executed before funding is disbursed. The SWRCB also has approval authority for a



- Connection to existing water line

BaseCamp Environmental

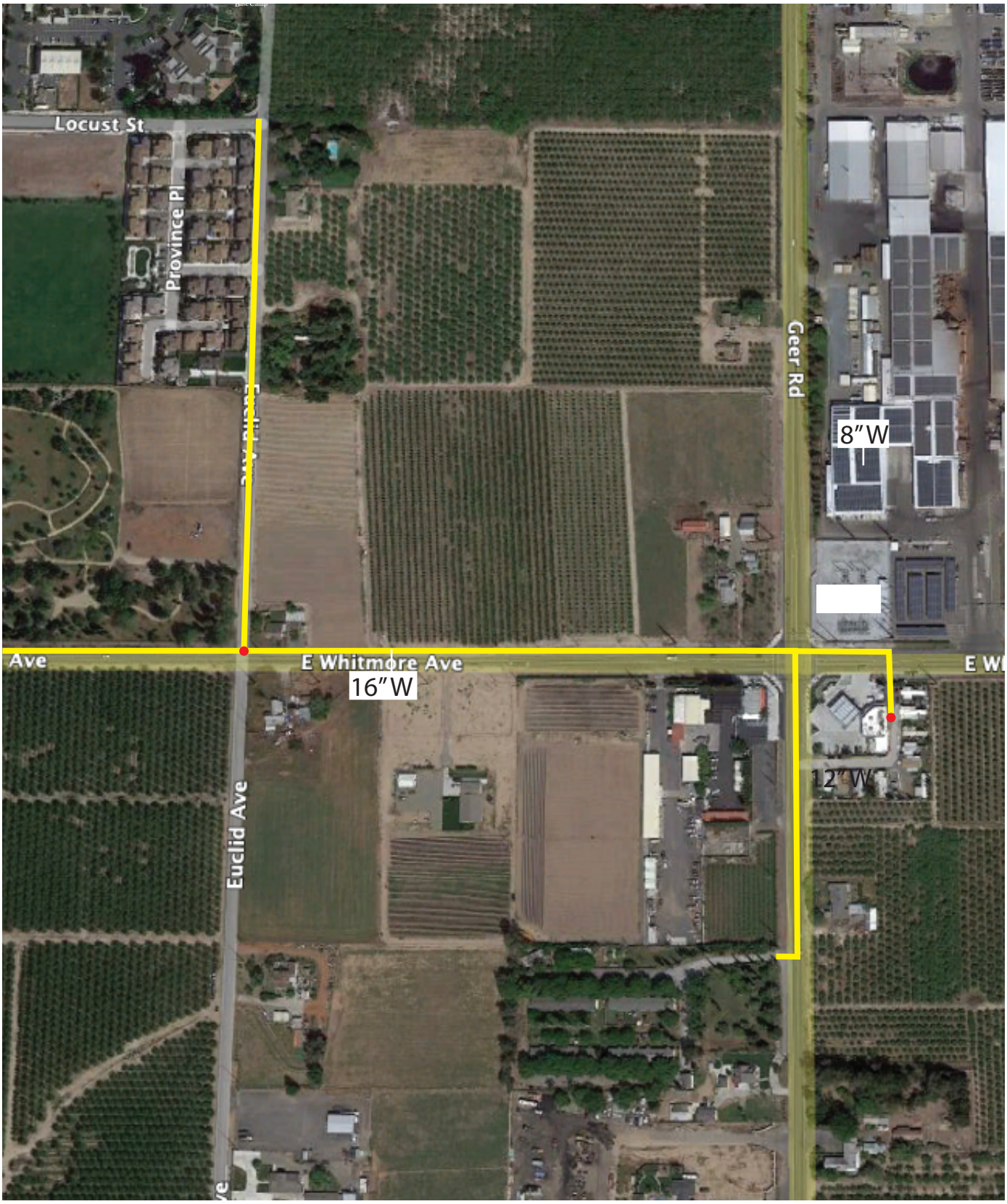
Figure 2-1A
PROJECT ALIGNMENT, TULLY ROAD/WHITMORE AVE TO CHARLES STREET

- Connection to existing water line.

Figure 2-1B
PROJECT ALIGNMENT, WHITMORE ROAD
FROM CHARLES TO EAST OF 7TH STREET

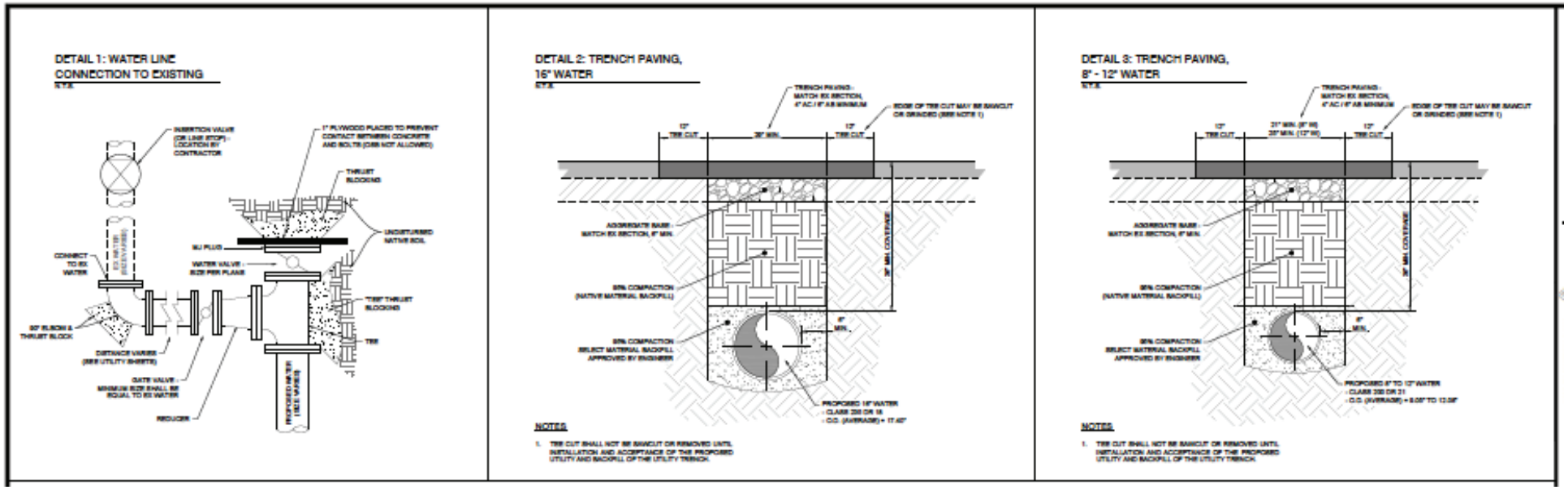
BaseCamp Environmental

Figure 2-1C
WHITMORE RD TO EUCLID AVE/ NORTH EUCLID AVE



BaseCamp Environmental

Figure 2-1D
AERIAL PHOTO



SOURCE: MCR Engineering, Inc.

BaseCamp Environmental

Figure 2-2
TRENCH CROSS SECTION

3.0 ENVIRONMENTAL EVALUATION CHECKLIST

3.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				✓
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓

NARRATIVE DISCUSSION

Environmental Setting

The project traverses both rural and urban landscapes. The western portion of the project is within the City of Hughson. The landscape in Hughson adjacent to the project consists of residential, commercial, and school land uses. Beyond the Hughson City limits to the east, the project passes by agricultural lands and rural residences, both along Whitmore Avenue and Euclid Avenue. However, at the intersection of Whitmore Avenue and Geer Road, the landscape is more developed. In the distance, when conditions permit, views of the Sierra Nevada mountains are visible to the east.

Environmental Impacts and Mitigation Measures

a) Scenic Vistas.

The project is the installation of underground water pipelines. It would not involve the construction of any aboveground structures that could interfere with existing scenic vistas from areas at or near the project site. The project would have no impact on scenic vistas.

b) Scenic Routes and Resources.

There are no scenic resources of significant value along the project alignment, such as trees, rock outcroppings, or historic buildings. California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. According to the Caltrans list of designated scenic highways, there is only one officially designated state scenic highway within Stanislaus County: Interstate 5 from the San Joaquin County line to the Merced County line (Caltrans 2019). This scenic highway is in southwestern Stanislaus County, well away from the project site. Neither the City nor Stanislaus County have designated any scenic highways. The project would have no impact on scenic resources or scenic highways.

c) Visual Character and Quality.

A recent change to the Environmental Checklist in CEQA Guidelines Appendix G emphasizes aesthetic and visual resource impacts on public views in non-urbanized areas. As defined in Appendix G, "public views" are views that are experienced from publicly accessible vantage points. Although not specifically defined, "publicly accessible vantage points" are assumed to include, though not necessarily limited to, public roads, parks, trails, and vista turnouts. For this project, publicly accessible vantage points would include public roads adjacent to the project alignment, primarily Whitmore Avenue, Euclid Avenue, and Geer Road.

Installation of most of the pipelines would involve trenching, which would temporarily affect visual quality along the roads where trenching occurs. The pipeline alignments would be restored to their pre-project condition upon completion of work, so there would be no permanent visual impacts. Existing visual landscapes would not be altered by the project, as the pipelines would be beneath the ground surface and no aboveground structures would be installed. Project impacts on visual character and quality would be less than significant.

d) Light and Glare.

Existing lighting along the project alignment is found mainly in the developed areas, with lights in the rural areas mainly those from rural residences. The project would not add any lighting, and it would not install any aboveground structures that may produce glare. The project would have no impact related to light or glare.

3.2 AGRICULTURE AND FORESTRY RESOURCES

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

NARRATIVE DISCUSSION

Environmental Setting

Portions of the project alignment are adjacent to agricultural lands. The Important Farmland Maps, prepared by the California Department of Conservation as part of its Farmland Mapping and Monitoring Program, designate the viability of lands for farmland use, based on the physical and chemical properties of the soils. The maps categorize farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. Collectively, these three categories are referred to as "Farmland" by CEQA Guidelines Appendix G. There are also designations for other agricultural land and for urban/built-up areas, among others. According to the 2018 Important Farmland Map of Stanislaus County, the project is adjacent to lands designated as Prime Farmland, Vacant or Disturbed Land, and Urban and Built-Up Land (FMMP 2018).

Environmental Impacts and Mitigation Measures

a) Agricultural Land Conversion.

As noted, the project is adjacent to land designated Prime Farmland, which is defined as Farmland by CEQA Guidelines Appendix G, along with other designations. However, the project would be located entirely within public road rights-of-way or on private land that has already been developed. No Farmland would be used for the project. The project would have no impact on Farmland conversion.

b) Agricultural Zoning and Williamson Act.

Lands along the project alignment outside the Hughson City limits have been zoned for agricultural use. As discussed in a) above, the project would be located entirely within public road rights-of-way or on private land that has already been developed. The project would not encroach upon lands zoned for agricultural use.

The Williamson Act is State legislation that seeks to preserve farmland by offering property tax breaks to farmers who sign a contract pledging to keep their land in agricultural use. There are some lands adjacent to the proposed pipeline alignment that are under a Williamson Act contract. However, as noted, the project would be confined to the public road rights-of-way, which are not subject to Williamson Act contracts. The project would have no impact on agricultural zoning or Williamson Act contracts.

c, d) Forest Land Zoning and Conversion.

There is no forest land in the project vicinity or in the Central Valley portion of Stanislaus County. No land in the area is zoned for timber production. The project would have no impact on forest land zoning or conversion.

e) Indirect Conversion of Farmland and Forest Land.

The project would not involve any conflict with, or have an adverse effect on, the ongoing and continued use of agricultural land in the project vicinity. The purpose of the project is to provide a safe and reliable water supply to existing residential development. The project would be confined to serving these developments; the City is not planning to oversize distribution pipe and service connections in anticipation of expanding its service area. Project impacts regarding indirect conversion of farmland are considered less than significant. The project would have no indirect effect on conversion of forest land to non-forest use, as there is no forest land in the area.

3.3 AIR QUALITY

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

NARRATIVE DISCUSSION

Environmental Setting

Air Quality Background

The project site is within the San Joaquin Valley Air Basin. The San Joaquin Valley Air Pollution Control District (SJVAPCD), which includes San Joaquin County, has jurisdiction over most air quality matters in the Air Basin; vehicle emissions are the responsibility of the California Air Resources Board (ARB). The SJVAPCD is tasked with developing and implementing plans, programs and regulations that would enable the Air Basin to attain ambient air quality standards set under both the federal and California Clean Air Acts. Under their respective Clean Air Acts, both the State of California and the federal government have established ambient air quality standards for six criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. California has four additional criteria pollutants under its Clean Air Act; none of these pollutants would be generated in the project area. Table 3-1 shows the current attainment status of the Air Basin relative to the federal and State ambient air quality standards for criteria pollutants.

TABLE 3-1
SAN JOAQUIN VALLEY AIR BASIN ATTAINMENT STATUS

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

* Effective June 15, 2005, EPA revoked the federal 1-hour ozone standard, including associated designations and classifications.

Source: SJVAPCD 2020.

Except for ozone and particulate matter, the Air Basin is in attainment of, or unclassified for, all federal and State ambient air quality standards. Ozone is not emitted directly into the air but is formed when reactive organic gases (ROG) and nitrogen oxides (NO_x) react in the atmosphere in the presence of sunlight. The SJVAPCD currently has a 2007 Ozone Plan and a 2013 Plan for the Revoked 1-Hour Ozone Standard for the Air Basin to attain federal ambient air quality standards for ozone.

Particulate matter is a mixture of solid and liquid particles suspended in air, including dust, pollen, soot, smoke, and liquid droplets. In San Joaquin County, particulate matter is

generated by a mix of rural and urban sources, including agricultural operations, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. Two types of particulate matter are of concern: particulate matter 10 micrometers or less in diameter (PM_{10}), and particulate matter 2.5 micrometers or less in diameter ($PM_{2.5}$). The SJVAPCD currently has a 2015 $PM_{2.5}$ Plan for the 1997 federal $PM_{2.5}$ standard, a 2012 $PM_{2.5}$ Plan for the 2006 federal $PM_{2.5}$ standard, a 2016 Moderate Area Plan for the 2012 federal $PM_{2.5}$ standard, and a 2007 PM_{10} Maintenance Plan to maintain the Air Basin's attainment status of the federal PM_{10} standard.

In addition to the criteria pollutants, the ARB has identified other air pollutants as toxic air contaminants (TACs) - pollutants that are carcinogenic (i.e., cause cancer) or that may cause other adverse short-term or long-term health effects. Diesel particulate matter, considered a carcinogen, is the most common TAC, as it is a product of combustion in diesel engines. It is present at some concentration in all developed areas of the state. Other TACs are less common and are typically associated with industrial operations.

As noted, the SJVAPCD is tasked with implementing regulations designed to attain ambient air quality standards. SJVAPCD regulations that are potentially applicable to the project are summarized below.

Regulation VIII (Fugitive Dust PM_{10} Prohibitions)

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

Rule 4101 (Visible Emissions)

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

Rule 9510 (Indirect Source Review)

Rule 9510, also known as the Indirect Source Rule, is intended to reduce or mitigate construction and operational emissions of NO_x and PM_{10} generated by new development, either directly and/or by payment of off-site mitigation fees. Construction emissions of NO_x and PM_{10} exhaust must be reduced by 20% and 45%, respectively. Operational emissions of NO_x and PM_{10} must be reduced by 33.3% and 50%, respectively. All projects subject to Rule 9510 are required to submit an Air Impact Assessment to the SJVAPCD.

Rule 9510 applies to projects of a land use not otherwise identified in the rule that is 9,000 square feet of space or greater. However, development projects that have a mitigated baseline below two tons per year of NO_x and two tons per year of PM_{10} are exempt from the requirements in Sections 6.0 and 7.0 of the rule, which involve general mitigation requirements and the off-site emission reduction fee.

a) Air Quality Plan Consistency.

In 2015, the SJVAPCD adopted a revised Guide for Assessing and Mitigating Air Quality Impacts. The Guide defines an analysis methodology, thresholds of significance, and mitigation measures for the assessment of air quality impacts for land development projects within SJVAPCD's jurisdiction. Table 3-2 shows the CEQA thresholds for significance for pollutant emissions within the SJVAPCD.

TABLE 3-2
SJVAPCD SIGNIFICANCE THRESHOLDS AND
PROJECT AIR POLLUTANT EMISSIONS

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Significance Thresholds	**10**	**10**	**100**	**27**	**15**	**15**
Construction Emissions	0.03	0.30	0.25	<0.01	0.10	0.03
Exceeds Threshold?	*No*	*No*	*No*	*No*	*No*	*No*

Note: All figures are in tons per year.
Sources: Road Construction Emissions Model Version 9.0.0, SJVAPCD 2015.

The Road Construction Emissions Model (RCEM) was used to estimate the total pollutant emissions that would result from project construction. Although originally developed for road projects, the RCEM has been modified to provide emission estimates for projects that are linear in character, such as pipeline installation. The full RCEM results are shown in Appendix A of this document, and a summary is presented in Table 3-2 above. As indicated in Table 3-2, project construction emissions would be substantially below the significance thresholds established by SJVAPCD for criteria pollutant emissions. As the significance thresholds were established in part to ensure consistency with the objectives of air quality attainment plans adopted by the SJVAPCD, project construction emissions would not conflict with these plans.

While project construction emissions would not be significant, the project would still be required to comply with applicable SJVAPCD rules and regulations, which would further reduce potential air quality impacts. As noted, SJVAPCD Regulation VIII contains measures to reduce fugitive dust emissions during construction. Dust control provisions are routinely included in site improvement plans and specifications, along with construction contracts. After construction work is completed, the project would not generate any air pollutant emissions. Project impacts related to air quality plans would be less than significant.

b) Cumulative Emissions.

As noted in a) above, the project would not generate any emissions once construction work is completed. Future attainment of federal and State ambient air quality standards is a function of successful implementation of the SJVAPCD's attainment plans. Consequently, the application of significance thresholds for criteria pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. Pursuant to the SJVAPCD's guidance, if project-specific emissions would be less than the thresholds of significance for criteria pollutants, the project would not be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the SJVAPCD is in nonattainment under applicable federal or State ambient air quality standards. As the project would not generate any emissions, it would have no cumulative impact on air quality.

c) Exposure of Sensitive Receptors.

As defined in the Guide for Assessing and Mitigating Air Quality Impacts, "sensitive receptors" include residences, schools, parks and playgrounds, day care centers, nursing homes, and hospitals (SJVAPCD 2015). Potential sensitive receptors near the project alignment include residences at the mobile home park and apartment complex, single-family residences and mobile homes along Whitmore Avenue and Euclid Avenue, and Hughson Elementary School and Hughson High School along Whitmore Avenue.

Project construction emissions could affect residences adjacent to the project alignment. However, potential exposure of any individual residence to these emissions would last a few days at most and would cease once construction work is completed. In addition, as described in a) above, dust control measures would be applied, reducing the amount of dust to which sensitive receptors may be exposed. Project operations would not generate any air pollutant emissions. Project impacts on sensitive receptors would be less than significant.

d) Odors and Other Emissions.

The project does not involve any features that would generate any substantial or noticeable odors during either construction or operation. Construction equipment could generate exhaust are considered odorous. However, exposure would be limited, and the exhaust emissions would quickly dissipate. Project operations would not generate any odors.

Residences adjacent to the project alignment could be exposed to diesel particulate matter generated by project construction. As noted, diesel particulate matter is considered a TAC. However, emissions would have adverse effects on residents only with long-term exposure, and potential exposure of any individual residence to these emissions would be for a few days at most. Diesel particulate emissions would cease once construction work is completed. No diesel particulate matter would be generated by project operations. The project would have no impact related to odors or other emissions.

3.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Adversely impact, either directly or through habitat modifications, any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?		✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				✓
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		✓		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?				✓

NARRATIVE DISCUSSION

Information in this section is based upon a biological resource report prepared by Moore Biological Consultants. Appendix B contains a copy of this report. Preparation of the report involved a search of California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), production of the United States Fish and Wildlife Service (USFWS) IPaC Trust Resource Report, and a field survey of the project site.

Environmental Setting

Table 3-3 lists the plant and wildlife species found on the project site. Existing vegetation along the pipeline alignments consists of scarce amounts of grasses and weeds growing along road shoulders and is best described as highly disturbed ruderal grassland. Oats, ripgut brome, and perennial ryegrass are some of the most common grasses in the ruderal grassland vegetation. Other grassland species such as yellow star-thistle, prickly lettuce, common sunflower and filaree are intermixed with the grasses.

TABLE 3-3
SPECIES OBSERVED ON THE PROJECT SITE

Common Name	**Scientific Name**
Plants	
Oat	*Avena* sp.
Ripgut brome	*Bromus diandrus*
Yellow star thistle	*Centaurea solstitialis*
Bermuda grass	*Cynodon dactylon*
Long-beaked stork's bill	*Erodium botrys*
Hairy fleabane	*Erigeron bonariensis*
Common sunflower	*Helianthus annuus*
Foxtail barley	*Hordeum murinum*
Prickly lettuce	*Lactuca serriola*
Perennial ryegrass	*Lolium perenne*
Prostrate knotweed	*Polygonum aviculare*
Russian thistle	*Salsola tragus*
Wildlife	
Turkey vulture	*Cathartes aura*
Mourning dove	*Zenaida macroura*
American crow	*Corvus brachyrhynchos*
California scrubjay	*Aphelocoma californica*
Northern mockingbird	*Mimus polyglottos*
Brewer's blackbird	*Euphagus cyanocephalus*
House finch	*Carpodacus mexicanus*

There are numerous trees in close proximity to the pipeline alignments, a majority of which are ornamental varieties associated with homes adjacent to the roads where the pipelines will be installed. Representative tree species observed near the site includes ornamental pine, American sycamore, deodar cedar, California pepper tree, valley oak, gum tree, and a variety of fruit and nut trees and other common ornamentals. No blue elderberry shrubs, which provide habitat for the federally listed valley elderberry longhorn beetle, were observed on or adjacent to the project site.

Only a few bird species were observed during the field survey, all of which are commonly seen in residential and agricultural areas in Stanislaus County. Turkey vulture, American crow, mourning dove, and Brewer's blackbird are representative bird species observed on and near the project site.

Only a few mammals are likely to occur on the project site and adjacent areas, most of which are common to agricultural areas. No mammals were observed on the project site, but a few California ground squirrel burrows were observed in adjacent areas. Coyote, raccoon, black-tailed hare, striped skunk, and Virginia opossum are expected to occur on the project site. A number of species of small rodents, including mice and voles, also likely occur. Based on habitat types present, only a few amphibian and reptile species are expected to use habitats in the site. Although none were observed during the field survey, common species such as western fence lizard, gopher snake, common king snake, and common garter snake are expected to occur occasionally on the project site.

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations 328 to include navigable waterways, their tributaries, and adjacent wetlands. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the U.S. Army Corps of Engineers' *Wetlands Delineation Manual* and Regional Supplement. Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages; lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. No potentially jurisdictional Waters of the U.S. or wetlands were observed within the footprint of the proposed project.

In April 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State. When the program is implemented, the RWQCB is expected to require issuance of Waste Discharge Requirements that authorize the impacts of filling isolated wetlands that are not subject to Section 404 permitting, or in some cases granting a waiver. No State-protected wetlands were identified on the project site.

Environmental Impacts and Mitigation Measures

a) Special-Status Species.

"Special-status species" are species that are listed under the federal or California Endangered Species Acts, along with species designated as ones of concern by State or federal agencies. Table 3 of the biological resource report in Appendix B lists the special-status species documented in the greater project vicinity, based on the CNDDB search and

information provided by the USFWS. Six special-status plant species and 15 special-status wildlife species were identified as potentially occurring in the project vicinity.

The biological resource report stated that most of these special-status species were considered unlikely to occur on the project site due to lack of suitable habitat. Swainson's hawk and burrowing owl are the only special-status species with potential to occur in the project site on more than a transitory or occasional basis.

Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species and is protected year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawk is found in the Central Valley primarily during their breeding season. The nearest recorded occurrence of Swainson's hawk is along the Tuolumne River four miles northwest of the project site. However, there are several suitable nest trees and tree clusters near the pipeline alignments, and pockets of annual cropland and grasslands in the region provide suitable foraging habitat.

Burrowing owl, a State Species of Concern, is a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere. The primary habitat requirement of the burrowing owl is small mammal burrows for nesting, usually abandoned ground squirrel burrows. The only record of burrowing owl in the vicinity is approximately 9.5 miles northwest of the project site. The intensity of development within and surrounding the project site reduces the likelihood of burrowing owls using the site for nesting. No burrowing owls were observed in the project site during the field survey, and only a few ground squirrel burrows were observed in adjacent habitats. Burrowing owls could potentially nest in or near the site if burrow habitat is available.

Although not identified on the project site during the field survey, the project has the potential to affect Swainson's hawk and burrowing owl nesting. Mitigation described below would require pre-construction surveys prior to the start of project construction, and recommended actions if active nests for either species are found. Implementation of these mitigation would reduce impacts on special-status species to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

BIO-1: Pre-construction surveys for nesting Swainson's hawks within one-quarter mile of the project site shall be conducted if construction commences between March 1 and September 15. If active nests are found, a qualified biologist shall determine the need, if any, for temporal restrictions on construction, such as prohibiting construction activities within a specified radius of the active nest until the young fledge. Any determination shall be made pursuant to criteria set forth by the California Department of Fish and Wildlife in its 1994 *Staff Report regarding Mitigation for Impacts to Swainson's Hawks* (*Buteo Swainsoni*) *in the Central Valley of California* and by the Swainson's

Hawk Technical Advisory Committee in its 2000 publication *Determining a Project's Potential for Impacting Swainson's Hawks*.

BIO-2: Pre-construction surveys for burrowing owls within 250 feet of the project site shall be conducted if construction commences between February 1 and August 31. If occupied burrows are found, a qualified biologist should determine the need, if any, for temporal restrictions on construction, such as prohibiting construction activities within a specified radius of the active nest until the young fledge. Any determination shall be made pursuant to criteria set forth by the California Department of Fish and Wildlife in its 2012 *Staff Report on Burrowing Owl Mitigation*.

Significance After Mitigation: Less than significant

b) Riparian and Other Sensitive Natural Communities.

There are no streams on or near the project site, so no riparian vegetation exists there. The biological resource report did not identify any sensitive natural communities on the project site. The project would have no impact on riparian or other sensitive natural communities.

c) State and Federally Protected Wetlands.

As noted, no potentially jurisdictional Waters of the U.S. or wetlands were observed on the project site. Likewise, no State-protected wetlands were identified. The project would have no impact on State or federally protected wetlands.

d) Fish and Wildlife Movement.

As there are no streams or channels on or near the project site, the project would have no impact on migration routes for fish. However, the biological resource assessment noted that trees, shrubs, and grasslands on and near the project site could be used by birds protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code. Mitigation described below would avoid impacts on migratory bird nests, thereby reducing project impacts on migratory species to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

BIO-3: If construction commences during the general avian nesting season (March 1 through July 31), a pre-construction survey for nesting birds shall be conducted within 500 feet of the project site. If active nests are found, work in the vicinity of the nest shall be delayed until the young fledge as determined by a qualified wildlife biologist.

Significance After Mitigation: Less than significant

e) Local Biological Requirements.

Neither the City of Hughson nor Stanislaus County has any local biological resource ordinances or other requirements applicable to the project. The Stanislaus County General Plan contains policies to protect and enhance oak woodlands and other native hardwood habitat, but the County does not have a tree preservation ordinance at this time. While valley oak has been identified near the project site, there are no oak woodlands on or near the site. The project would have no impact on local biological requirements.

f) Conflict with Habitat Conservation Plans.

There are no Habitat Conservation Plans, Natural Community Conservation Plans, or similar plans that apply to the project area. The project would have no impact on this issue.

3.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?			✓	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			✓	
c) Disturb any human remains, including those interred outside of formal cemeteries?		✓		

NARRATIVE DISCUSSION

Information in this section is based primarily upon a cultural resource report prepared by Solano Archaeological Services. Appendix C contains a copy of this report. The report is based upon a search of historical and archaeological records conducted by the Central California Information Center at CSU Stanislaus, along with additional archival research and a field survey of the project alignments, which were considered Areas of Potential Effects (APE).

Environmental Setting

The project area is within territory claimed by the Northern Valley Yokuts. Section 3.18, Tribal Cultural Resources, discusses the Yokuts in more detail.

A series of explorations in present-day Stanislaus County was conducted by the Spanish beginning with a 1776 expedition led by Jose Joaquin Moraga. Other expeditions were conducted by fur trappers, including Jedediah Smith and Ewing Young in 1820 and 1829–1830 respectively. Mission lands were granted to prestigious Mexican citizens in the form of large land grants, or ranchos. Within Stanislaus County, five ranchos were awarded, none of which encompassed the Hughson area. American settlers flooded California with the discovery of gold on the American River. After California had been granted statehood, Stanislaus County was organized in 1854 from a portion of Tuolumne County.

Throughout the 19th and 20th centuries, agriculture was the primary economic driver of the region. Before the arrival of the railroad, much of Stanislaus County was grazed by large herds of cattle, hogs, horses, and sheep. A wheat boom ended in the late 1880s, leading to many growers being foreclosed in bankruptcy. One of those who took advantage of the economic shift was Hiram Hughson, who arrived in Stanislaus County in 1882 and purchased 1,000 acres for a grain ranch, gradually owning nearly 5,000 acres. In the early 1900s, the San Joaquin Railroad purchased land from Hughson for their tracks and developed a stop, which became known as the Hughson Stop. In 1907, Hughson placed his land in the hands of the Hughson Town Company, under the direction of Charles Flack and C.W. Minniear. John Tully, who owned a section of land to the south of Hughson, also opened up his land for settlement, which directly led to the establishment of the town of Hughson.

An examination of USGS mapping dating to as early as 1916 shows that Hughson was thoroughly laid out by the early 20th century, and residential, public, and commercial development was underway. In 1916, buildings were depicted on both sides of the main APE alignment within the City, but no development or agricultural lands were depicted in the eastern part of the APE. This pattern continued throughout the 20th century and can be seen in mid-20th century aerial photos, the earliest of which dates to 1957. Hughson remained a township until 1972, when it was incorporated as a City.

Environmental Impacts and Mitigation Measures

a) Historical Resources.

The Central California Information Center records search indicated that one historic-era cultural resource - an alignment of the Burlington Northern & Santa Fe Railroad - had been previously documented in the APE. An additional two historic-era resources, consisting of a residential complex and a commercial building, have been recorded within the half-mile search area.

The field survey did not identify any historical resources. The Solano Archaeological Services report stated that the establishment of a rail line during the 19th and early 20th centuries suggests that the APE could have been subject to early activities such as transportation infrastructure development, agriculture, or livestock ranching. However, archival and field research do not suggest that any particularly early sites, features, structures, or buildings are known to have existed within or immediately adjacent to the APE. As such, a low level of sensitivity for the APE to contain potentially significant historic-era archaeological traces was recommended. The project would have no impact on

historical resources. Based upon the conclusions of this report, project impacts on historical resources would be less than significant.

b) Archaeological Resources.

The field survey did not identify any prehistoric sites, features, or artifacts. In addition, no potential archaeologically sensitive landforms or soil types, such as middens, were encountered. Certain geological formations are considered highly sensitive for archaeological resources; these include supratidal floodplains, Pleistocene eolian deposits, the Montezuma Formation, the Riverbank Formation, and "piper" soils or "piper sand mounds". None of these are found within or near the project APE. In addition, no natural perennial or seasonal water sources that may contain archaeological resources are known to be present within or near the APE. The Solano Archaeological Services report concluded that it is unlikely that presently undocumented and significant buried prehistoric archaeological remains would be encountered within the APE. Based upon this conclusion, project impacts on archaeological resources would be less than significant.

c) Human Burials.

The Solano Archaeological Services report did not indicate the presence of any human burials within the APE. However, the report did indicate the possibility of unknown human remains being encountered during project construction activities.

CEQA Guidelines Section 15064.5(e), California Public Resources Code Section 5097.98, and California Health and Safety Code Section 7050.5 describe the procedure to be followed when human remains are uncovered in a location outside a dedicated cemetery. The San Joaquin County Sheriff/Coroner shall be contacted immediately. If it is determined that the remains are Native American in origin, then the County Sheriff/Coroner shall contact the Native American Heritage Commission, which in turn shall appoint a Most Likely Descendant to act as a tribal representative. The Most Likely Descendant shall develop a plan for the proper treatment of remains and associated funerary objects.

The treatment of any encountered burials is specified in the mitigation measure described below. Compliance with the mitigation measure would ensure that any human remains and associated grave goods encountered during project construction would be treated with appropriate dignity. Project impacts on human remains would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-1: In accordance with CEQA Guidelines Section 15064.5(e), California Public Resources Code Section 5097.98, and California Health and Safety Code Section 7050.5, if human remains are uncovered during project construction, then all work within 50 feet of the find shall be halted, and the San Joaquin County Sheriff/Coroner shall be notified to determine if an investigation of the death is required. If it is determined that the remains are Native American in origin, then the County Sheriff/Coroner shall contact the Native American Heritage

Commission within 24 hours. The Native American Heritage Commission shall identify the Most Likely Descendant of the deceased Native American. The Most Likely Descendant, in coordination with the City, the State Water Resources Control Board (SWRCB), and a qualified archaeologist, shall develop a plan for the proper treatment of the human remains and any associated funerary objects. If a Most Likely Descendant cannot be identified or fails to make a recommendation, then the City, in coordination with the SWRCB and the Native American Heritage Commission, shall rebury the Native American remains and associated grave goods with appropriate dignity in a location not subject to further disturbance.

Significance After Mitigation: Less than significant

3.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			✓	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

NARRATIVE DISCUSSION

Environmental Setting

Electricity and natural gas are major energy sources for residences and businesses in California. In Stanislaus County, electricity consumption in 2020 totaled approximately 5,056 million kilowatt-hours, of which approximately 2,015 million kilowatt-hours were consumed by residential uses and the remainder by non-residential uses (CEC 2022a). In 2019, natural gas consumption in San Joaquin County totaled approximately 199 million therms, of which approximately 63 million therms were consumed by residential uses and the remainder by non-residential uses (CEC 2022b). Motor vehicle use also accounts for substantial energy usage. Approximately 532 million gallons of fuel were consumed annually in Stanislaus County, of which approximately 474 million gallons were gasoline and 58 million gallons were diesel fuel (StanCOG 2018).

Environmental Impacts and Mitigation Measures

a) Project Energy Consumption.

Project construction would involve fuel consumption and use of other non-renewable resources. Construction equipment used for trenching and other outdoor activities typically runs on diesel fuel or gasoline. The same fuels typically are used for vehicles that transport equipment and workers to and from a construction site. However, construction-related fuel consumption would be finite, short-term, and consistent with construction activities of a similar character. This energy use would not be considered wasteful, inefficient, or unnecessary.

Project operations would consume minimal energy resources. No pumps or other facilities requiring significant energy use would be installed. Project impacts related to energy consumption are less than significant.

b) Consistency with Energy Plans.

No energy efficiency or renewable energy plans are applicable to this project. The project would have no impact on this issue.

3.7 GEOLOGY AND SOILS

Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?				✓
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		

NARRATIVE DISCUSSION

Environmental Setting

The project area lies in southeastern Stanislaus County in the southern portion of the Great Valley Geomorphic Province. The Great Valley, also known as the Central Valley, is a topographically flat, northwest-trending, structural basin about 50 miles wide and 450 miles long. It is bordered by the Tehachapi Mountains on the south, the Klamath Mountains on the north, the Sierra Nevada on the east, and the Coast Ranges on the west. The southern portion of the Great Valley, in which the project is located, is filled with thick alluvial deposits up to 130 million years in age. The Geologic Map of the San Francisco – San Jose Quadrangle (Wagner et al. 1991) designates the underlying geology of the project site as the Modesto Formation, consisting of Quaternary (geologically recent) sediments.

There are no known active or potentially active faults located in the project vicinity. The nearest fault is the San Joaquin Fault approximately 20 miles west of the City. Hughson is located between two seismically active regions, the Sierra foothills and the Coast Range, and is therefore subject to risk of hazards associated with earthquakes. However, Hughson has a relatively low risk of seismic hazards when compared to the rest of California (City of Hughson 2005).

Hughson and its vicinity are underlain primarily by Hanford and Tujunga series soils. According to a custom soil survey, the following soils are on the project site (City of Hughson 2005, NRCS 2021):

- Hanford sandy loam, 0 to 3 percent slopes – Found on most of the project site, this

is a well-drained, nearly level soil formed in alluvium derived from igneous rock. The water erosion hazard of this soil ranges from none to moderate. The expansive (shrink-swell) potential of this soil is from none to low.

- Tujunga loamy sand, 0 to 3 percent slopes – Found in the easternmost segment of the project site along Whitmore Avenue, this is a somewhat excessively drained, nearly level soil formed in sandy alluvium derived from granite. The water erosion hazard ranges from slight to moderate, but the wind erosion potential ranges from moderate to high. The expansive potential of this soil is low.

Environmental Impacts and Mitigation Measures

a-i) Fault Rupture Hazards.

The project site is not on or near a known earthquake fault, according to the criteria of Alquist-Priolo Special Studies Zones Act or as delineated on a seismic hazard zone map prepared under the Seismic Hazards Mapping Act. As noted, the nearest fault is 20 miles away. The project would have no impact related to fault rupture hazards.

a-ii) Seismic Ground Shaking.

The project area, along with the rest of the County, is subject to seismic shaking from fault systems east and west of the County. Proposed water system improvements would incorporate engineering design features that would be in accordance with the standard engineering practices and the adopted California Building Code, which contains design criteria for seismic shaking. Project impacts related to ground shaking would be less than significant.

a-iii) Other Seismic Hazards.

Earthquake-related hazards can include secondary effects, such as liquefaction. Liquefaction is a phenomenon primarily associated with saturated, cohesionless soil layers located close to the ground surface. During liquefaction, soils lose strength and ground failure may occur. As soils must be saturated to be at risk of liquefaction, the areas in Hughson most susceptible to liquefaction include areas along the Tuolumne River and where there are high groundwater levels (City of Hughson 2005). The project site is not along the Tuolumne River, and as discussed in Section 3.10, Hydrology and Water Quality, groundwater levels are not high in the Hughson area. Therefore, liquefaction at the project site is unlikely. The project would have no impact related to other seismic hazards.

a-iv) Landslides.

The project area is in a topographically flat area, which is not subject to landslides. The project would have no impact related to landslides.

b) Soil Erosion.

The soils on the project site have a low potential for water erosion. However, project construction activities would temporarily loosen soils within the construction area, leaving

them exposed to potential water and wind erosion. Of particular concern are the Tujunga soils, which are limited in area on the project site but have a high wind erosion potential.

Project design and specifications would include requirements for placement and compaction of excavated soils following construction. Required compliance with SJVAPCD Regulation VIII, which is discussed in Section 3.3, Air Quality, would also reduce potential erosion impacts, particularly wind erosion.

Also, since the project would disturb one acre of land or more, it would be required to obtain a Construction General Permit from the SWRCB. The Construction General Permit requirements include preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) to address potential water quality issues. The SWPPP would include Best Management Practices to avoid or minimize adverse water quality impacts. Best Management Practices fall within the categories of Temporary Soil Stabilization, Temporary Sediment Control, Wind Erosion Control, Tracking Control, Non-Storm Water Management, and Waste Management and Materials Pollution Control. Only Best Management Practices applicable to the project would become part of the SWPPP. In accordance with the requirements of the anticipated SWPPP, the City has prepared an Erosion Control Plan, which is described in Chapter 2.0, Project Description.

In general, the potential for soil erosion on the project site would be minimal, other than wind erosion on Tujunga soil. Compliance with contract specifications, regulations, Construction General Permit requirements, and the Erosion Control Plan would minimize project impacts related to soil erosion to a level that would be less than significant.

c) Unstable Soils.

The soils underlying the sites where the facilities would be constructed have not been identified as inherently unstable or prone to failure. However, since the project would likely involve trenching in soils with a sandy component, there is concern about the ability of the soils to maintain stability during pipeline installation. Both the Hanford and Tujunga soils have been rated as “moderately limited” for shallow excavations by the Natural Resources Conservation Service. This indicates that the soils have features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. As noted, project design and specifications would include requirements for placement and compaction of excavated soils following construction. Project impacts related to soil stability would be less than significant.

d) Expansive Soils.

As noted, the expansive potential of the soils on the project site is from none to low. Therefore, it is not expected that the pipelines would be exposed to potential damage from expansive soils. The project would have no impact related to expansive soils.

e) Adequacy of Soils for Wastewater Disposal.

The project would not use, and does not propose to install, any septic systems. The project would have no impact related to adequacy of soils for wastewater disposal.

f) Paleontological Resources and Unique Geologic Features.

The project area is predominantly flat land that contains no geologic features that may be considered unique. Since most of the project site has been disturbed by agricultural and development activities, it is unlikely that intact paleontological resources would exist. However, the project site is underlain by the Modesto Formation, which has been a source of paleontological finds. Because of this, it is conceivable that currently unknown resources may be uncovered during project construction activities. Procedures to address paleontological discoveries should they occur are set forth in the mitigation measure below. Implementation of this mitigation measure would reduce potential impacts on paleontological resources to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

GEO-1: If any subsurface paleontological resources are encountered during construction of the project, the City of Hughson Community Development Department shall be notified and all construction activities within 50 feet of the encounter shall be halted until a qualified paleontologist can examine these materials and determine their significance. If the find is determined to be significant, then the paleontologist shall recommend mitigation measures that would reduce potential effects on the find to a level that is less than significant. Recommended measures may include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The project developer shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the City's Community Development Department, consistent with the requirements of the CEQA Guidelines.

Significance After Mitigation: Less than significant

3.8 GREENHOUSE GAS EMISSIONS

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

NARRATIVE DISCUSSION

Environmental Setting

Background

Greenhouse gases (GHGs) are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. GHGs are both naturally occurring and are emitted by human activity. GHGs include carbon dioxide, the most abundant GHG, as well as methane, nitrous oxide, and other gases.

The State of California has prepared Climate Change Assessments that provide scientific assessments on the potential impacts of climate change in California by region. Potential climate change impacts occurring in the San Joaquin Valley and adjacent areas include the following (Westerling et al. 2018):

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

Unlike the criteria air pollutants described in Section 3.3, Air Quality, GHGs have no "attainment" standards established by the federal or State government. In fact, GHGs are not generally thought of as traditional air pollutants because their impacts are global in nature, while air pollutants mainly affect the general region of their release to the atmosphere (SJVAPCD 2015). Nevertheless, the U.S. Environmental Protection Agency

(EPA) has found that GHG emissions endanger both the public health and public welfare under Section 202(a) of the Clean Air Act due to their impacts associated with climate change (EPA 2009).

GHG emissions in California in 2019, the most recent year for which data are available, were estimated at approximately 418.2 million metric tons carbon dioxide equivalent (CO2e) – a decrease of approximately 14.6% from the peak level in 2004. Transportation was the largest contributor to GHG emissions in California, with almost 40% of total emissions. Other significant sources include industrial activities, with approximately 21% of total emissions, and electric power generation, both in-state and imported, with approximately 14% of total emissions (ARB 2021). No data on GHG emissions in Hughson are available.

GHG Emission Reduction Plans

The State of California has implemented GHG emission reduction strategies through AB 32, the Global Warming Solutions Act of 2006, which requires total statewide GHG emissions to reach 1990 levels by 2020, or an approximately 29% reduction from 2004 levels. The 2019 state GHG emissions were almost 13 million metric tons CO_2e below the 2020 target established by AB 32 (ARB 2021).

In 2016, Senate Bill (SB) 32 was enacted. SB 32 extends the GHG reduction objectives of AB 32 by mandating statewide reductions in GHG emissions to levels that are 40% below 1990 levels by the year 2030. The State adopted an updated Scoping Plan in 2017 that sets forth strategies for achieving the SB 32 target. The updated Scoping Plan continues many of the programs that were part of the previous Scoping Plans, including the cap-and-trade program, low-carbon fuel standards, renewable energy, and methane reduction strategies. It also addresses, for the first time, GHG emissions from the natural and working lands of California, including the agriculture and forestry sectors (ARB 2017). The 2017 Scoping Plan is being updated, and adoption of the updated Scoping Plan is anticipated in the fall of 2022.

The SJVAPCD adopted a Climate Change Action Plan in 2008 and issued guidance for development project compliance with the plan in 2009. The guidance adopted an approach that relies on the use of Best Performance Standards to reduce GHG emissions. Projects implementing Best Performance Standards would be determined to have a less than cumulatively significant impact. For projects not implementing Best Performance Standards, demonstration of a 29% reduction in project-specific (i.e., operational) GHG emissions from business-as-usual conditions is required to determine that a project would have a less than cumulatively significant impact (SJVAPCD 2009).

Cities and counties throughout California have prepared Climate Action Plans that outline how the local government will reduce GHG emissions, which are typically related to the 2020 emission reduction target set in the State's Climate Change Scoping Plan. Neither the City of Hughson nor Stanislaus County currently has a Climate Action Plan or other GHG reduction plan.

a) Project GHG Emissions.

Based on results from the RCEM run (see Section 3.3, Air Quality), potential construction GHG emissions would amount to approximately 40.7 metric tons CO_2e for the construction period. SJVAPCD has not established quantitative significance thresholds for GHG emissions. However, nearby air districts such as the Bay Area Air Quality Management District and the Sacramento Metropolitan Air Quality Management District have established a quantitative threshold of 1,100 metric tons CO_2e to determine significance of project GHG emissions for CEQA purposes (BAAQMD 2017, SMAQMD 2021). This threshold applies to both construction and operational emissions. CEQA Guidelines Section 15064.7 allows for the use of significance thresholds established by other agencies.

The GHG construction emissions of the proposed project are well below this threshold of 1,100 metric tons CO_2e. Based on this threshold, project GHG construction emissions are less than significant. Construction emissions would be limited to a short time and would cease once work is completed. Upon completion of construction work, the project would not generate any GHG emissions, either directly or indirectly. Project impacts on GHG emissions would be less than significant.

b) Consistency with GHG Reduction Plans.

As noted in a) above, upon completion of construction work, project operations would not generate new GHG emissions. As a result, the project would not conflict with the GHG reduction objectives of the State's Climate Change Scoping Plan and the SJVAPCD's Climate Change Action Plan. The project would have no impact on this issue.

3.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			✓	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		✓		
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

NARRATIVE DISCUSSION

Environmental Setting

This section focuses on hazards associated with hazardous materials, proximity to airports, and wildfires. Geologic and soil hazards are addressed in Section 3.7, Geology and Soils, and potential flooding hazards are addressed in Section 3.10, Hydrology and Water Quality.

Data on hazardous material sites are kept in the GeoTracker database, maintained by the SWRCB, and in the EnviroStor database, maintained by the California Department of Toxic Substances Control (DTSC). Both GeoTracker and EnviroStor provide the names and addresses of hazardous material sites, along with their cleanup status. A search of both GeoTracker and EnviroStor indicated no record of active hazardous material sites (i.e., sites not cleaned up) on or adjacent to the project site (SWRCB 2021, DTSC 2021). A search of GeoTracker indicated one evaluation site at Hughson High School, for a proposed expansion into agricultural land on which agricultural chemicals may have been used. After a preliminary environmental assessment, however, the DTSC determined that no further action needed to be taken at this site (DTSC 2021).

Environmental Impacts and Mitigation Measures

a) Hazardous Materials Transportation, Use, and Disposal.

The project would not require any use of hazardous materials upon completion of construction work. Therefore, no hazardous materials would need to be transported or stored for project operations. The project would have no impact on hazardous materials transportation, use, or disposal.

b) Release of Hazardous Materials by Upset or Accident.

Project construction activities may involve the use of hazardous materials such as fuels and solvents, and thus create a potential for hazardous material spills. Construction and maintenance vehicles would transport and use fuels in ordinary quantities. Fuel spills, if any occur, would be minimal and would not have significant adverse effects. Contractors typically have absorbent materials at construction sites to clean up minor spills. Other substances used in the construction process would be stored in approved containers and used in relatively small quantities, in accordance with the manufacturers' recommendations and/or applicable regulations.

As noted in a) above, the project will not involve the use of hazardous materials after project completion. Overall, project impacts related to releases of hazardous materials would be less than significant.

c) Hazardous Material Emissions near Schools.

Hughson Elementary School and Hughson High School are located along the project. However, the project, being water pipelines, would not emit hazardous materials of any type. The project would have no impact related to hazardous material emissions near schools.

d) Hazardous Materials Sites.

As previously noted, a search of the GeoTracker and EnviroStor databases did not identify any active hazardous material sites on or near the project site. An evaluation of a proposed Hughson High School expansion site by DTSC concluded that no further action needed to be taken.

Land adjacent to some of the project alignment is used for agriculture. Agricultural operations may involve the use of pesticides and herbicides whose residues may have accumulated in the soil. However, the project proposes to be constructed within existing rights-of-way and would not encroach upon agricultural lands. The project is not expected to expose construction workers to substantial environmental contamination. Project impacts related to hazardous material sites would be less than significant.

e) Airport Operations.

There are no public or public-use airports within two miles of the project site. The nearest public airport is Modesto City-County Airport, more than five miles to the northwest. Even

if the airport were closer, project operations would not expose employees to potential safety hazards, as no employees would be on the project site except for maintenance or repair work as required. The project would have no impact related to airport hazards.

f) Emergency Response and Evacuation.

Construction of the project would involve work adjacent to public roads such as Whitmore Avenue, Euclid Avenue, and Geer Road. All these roads are used by emergency vehicles, and Whitmore Avenue and Geer Road would likely be potential evacuation routes. The project would involve work within road rights-of-way, and construction activities could potentially obstruct traffic. In addition, construction work connecting the new water mains to the water systems of the Cobles Corner Mobile Home Park and of the Country Villa Apartments may also obstruct emergency vehicles, along with vehicles of the residents.

Construction work would be of temporary duration, and project operations would not obstruct any roads. As described in Chapter 2.0, Project Description, the contractor would provide City and water system representatives with a work plan, including start date, work proposed and area impacted, and traffic plan specifying access and egress for residents. Nevertheless, mitigation presented below would ensure that adequate emergency access is maintained during project construction, thereby reducing potential impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

HAZ-1: Prior to the start of project construction, the contractor shall develop and implement a Traffic Control Plan for both roadways and at the Cobles Corner and Country Villa Apartments residential areas. The Traffic Control Plan shall include such items as traffic control requirements, resident notification of access closure, and daily access restoration. The contractor shall specify dates and times of road or access closures or restrictions, if any, and shall ensure that adequate access will be provided for emergency vehicles and residents. The Traffic Control Plan shall be reviewed and approved by the City Department of Public Works and shall be coordinated with the Hughson Fire Protection District, the Hughson Police Department, and the Stanislaus County Sheriff's Department.

Significance After Mitigation: Less than significant

g) Wildland Fire Hazards.

Wildland fires are generally limited to the foothills on either side of the County. Although there is less of a hazard to structures and people, controlling such fires is more difficult because of their inaccessibility (Stanislaus County 2016). The project site is not located in a region susceptible to wildfires. Land in the area is either agricultural or developed, and neither has a high wildfire potential. The project would have no impact on wildland fire hazards. Refer to Section 3.20, Wildfire, for more detailed information on wildfires.

3.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			✓	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or offsite?				✓
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?				✓
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				✓
iv) Impede or redirect flood flows?				✓
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			✓	

NARRATIVE DISCUSSION

Environmental Setting

There are no natural surface waters on or near the project site. The nearest surface waters are canals operated by the Turlock Irrigation District (TID). The nearest TID canal is the Ceres Main Canal along Hatch Road, approximately one mile north of the project site.

The project site is within the Turlock Groundwater Basin, which covers approximately 542 square miles of eastern Stanislaus and Merced Counties between the Tuolumne River and the Merced River. Percolation of rainfall and irrigation water is the main source of inflow to the basin. Groundwater levels in the Hughson area range from approximately 80 to 90 feet below ground surface. The City relies on groundwater for its water supply (see Section 3.19, Utilities and Service Systems).

In 2014, the State enacted the Sustainable Groundwater Management Act. This act requires the formation of local groundwater sustainability agencies that must assess conditions in their local water basins and adopt locally based Groundwater Sustainability Plans for sustainable use of groundwater and avoidance of overdraft. Plans for "critically overdrafted" basins must be completed and adopted by January 31, 2020, while plans for high- and medium-priority basins have an adoption deadline of January 31, 2022. Both the City and Stanislaus County are members of the West Turlock Subbasin Groundwater Sustainability Agency, which was formed in 2017. A Groundwater Sustainability Plan for the entire Turlock Groundwater Basin, including the West Turlock Subbasin, was submitted to the California Department of Water Resources on January 28 , 2022.

According to a Flood Insurance Rate Map prepared by the Federal Emergency Management Agency (FEMA), the project site lies within an area designated Zone X. Zone X denotes areas determined to be of minimal flood hazard. They are outside the 100-year annual floodplain, which is the flood hazard area of concern (FEMA 2008). The Stanislaus County General Plan Safety Element indicates that the project site is outside the 200-year floodplain, the designation of which is required by SB 5 and companion bills (Stanislaus County 2016a).

Environmental Impacts and Mitigation Measures

a) Violation of Water Quality Standards.

The potential water quality impacts of the project are related to erosion and sedimentation resulting from project construction potentially entering surface waters; project operations would not affect either surface water or groundwater quality. While the project area does not contain soils that are highly erodible, there remains the potential that sediment from the site could be transported off the site during a storm event. As discussed in Section 3.7, Geology and Soils, the project would be required to obtain a Construction General Permit from the SWRCB. The Construction General Permit would require preparation and implementation of a SWPPP that would limit soil erosion. With implementation of the conditions of the Construction General Permit, along with a lack of surface water features

in the area, project impacts related to potential violation of surface water quality standards would be less than significant.

The project proposes the destruction of four existing wells. Improper destruction of wells could lead to contamination of groundwater. However, as described in Chapter 2.0, Project Description, these wells would be destroyed in accordance with State standards and with the conditions of permits issued for the well destruction. Implementation of these standards and permit conditions would minimize potential adverse impacts of well destruction on groundwater quality, thereby resulting in project impacts related to potential violation of groundwater water quality standards being less than significant.

b) Groundwater Supplies and Recharge.

The project is the extension of potable water infrastructure to two residential areas outside City limits. This would add residential connections to the City's water system, which relies on groundwater for its supply. However, the project would replace existing wells at the residential areas; these wells would be removed from service, eliminating their existing demand on groundwater, therefore, the net result of the project on local aquifers would not be significant. The project would not add impervious surfaces within the project site, so the existing recharge area would remain as it is today. Project impacts related to groundwater supplies and recharge would be less than significant.

c-i, ii, iii) Drainage Patterns and Runoff.

The project involves the installation of underground water infrastructure in existing road rights-of-way and developed areas. Because of this, the project would not substantially affect existing surface drainage patterns within the alignment area. As noted in b) above, the project would not add impervious surfaces, so there would be no increase in the amount of runoff from existing conditions. The project would have no impact on drainage patterns or runoff.

c-iv) Flood Flows.

The project is not located within an area susceptible to 100-year flooding; it is within an area of minimal flood hazard. The project also would not involve construction of any aboveground structures that could potentially impede or redirect any flood flows. The project would have no impact on flood flows.

d) Release of Pollutants in Flood Zone.

As noted, the project site is within an area of minimal flood hazard. The project is in a topographically flat area that is distant from large bodies of water; therefore, the project would not experience seiche or tsunami hazards. The project site would be exposed to flooding in the event of a catastrophic failure of the Don Pedro Dam on the Tuolumne River (City of Hughson 2005). However, aside from risk of dam failure being considered low, the project would not involve the placement of any materials that could pollute flood waters if released. The project consists of the installation of underground water pipelines, and as discussed in Section 3.9, Hazards and Hazardous Materials, project operations

would not involve the use of any hazardous materials. The project would have no impact related to release of pollutants due to any inundation.

e) Conflict with Water Quality or Sustainable Groundwater Plans.

As the project is the installation of water pipelines, it is not expected to interfere with the attainment of the objectives of applicable water quality plans. It also will not interfere with attainment of the objectives of the Groundwater Sustainability Plan that will eventually be adopted for the Turlock Groundwater Basin. As noted in b) above, the net results of the project on groundwater use would be minimal, if any. Project impacts on water quality or sustainable groundwater plans would be less than significant.

3.11 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			✓	

NARRATIVE DISCUSSION

Environmental Setting

The approximate western half of the proposed project is within the City limits of Hughson. Hughson is a small town with a mix of land uses. Land uses along Tully Road and Whitmore Avenue adjacent to the project alignment consists of single-family residences, a mobile home park, commercial development, and two schools (Hughson Elementary School and Hughson High School).

Beyond the City limits to the east, land uses along the Whitmore Avenue project alignment consist mainly of agricultural fields and rural residences. The same land uses are along the Euclid Avenue project alignment. The one exception is the Hughson Arboretum and Gardens. The Hughson Arboretum is on the northwest corner of the intersection of Euclid Avenue and Whitmore Avenue, and it lines much of the northern side of Whitmore Avenue.

At the intersection of Whitmore Avenue and Geer Road, more developed land uses are established. Light industrial land uses, including a TID electrical substation, are at the

northeastern corner of the intersection. At the southeast corner is a food market and the Cobles Corner mobile home park. The southwest corner has commercial land uses, and the northwest corner has vacant land and a single-family residence. Farther south, at the terminus of the Geer Road project alignment, is the Country Acres apartment complex. Across from the apartment complex to the east, is predominantly agricultural land.

Land development within the City of Hughson is guided by the City's General Plan, adopted in 2005. Within the unincorporated area of the project site, land development is guided by the Stanislaus County General Plan, adopted in 2016.

Environmental Justice

Environmental justice is not an issue that CEQA explicitly requires to be addressed; however, the State of California has recently emphasized the incorporation of environmental justice in land use and environmental planning. State law defines "environmental justice" as "the fair treatment of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." The State has enacted legislation, most notably SB 535 and SB 1000, that seeks to address the adverse environmental impacts of projects that disproportionately affect minority and/or lower-income communities, particularly those already burdened with environmental problems.

The California Office of Environmental Health Hazard Assessment has developed the California Communities Environmental Health Screening Tool (CalEnviroScreen) to identify "environmental justice" or "disadvantaged" communities. CalEnviroScreen measures pollution and population characteristics using 20 indicators such as air and drinking water quality, waste sites, toxic emissions, asthma rates, and poverty. It applies a formula to each U.S. Census tract in California to generate a score that rates the level of cumulative impacts on each area. A census tract that scores in the top 25% is considered a disadvantaged community.

Most of the project site is within Census Tract 6099002902, which includes the City of Hughson and surrounding rural areas. This Census tract has a CalEnviroScreen score in the 75-80th percentile, which makes it a disadvantaged community as defined by State law. The tract had a high pollution indicator score related to drinking water, among other issues. The Cobles Corner portion of the project site is within Census Tract 6099002901. This Census tract has a CalEnviroScreen score in the 60-65 percentile, which does not make it a disadvantaged community. However, the tract also had a high pollution indicator score related to drinking water (OEHHA 2021).

Environmental Impacts and Mitigation Measures

a) Division of Established Communities.

The project proposes the installation of water pipelines that would be placed underground. These improvements would not interfere with functions of, or physically divide, existing residential communities. In fact, the project is intended to enhance the provision of water

service to existing communities. The project would have no impact related to division of established communities.

b) Conflict with Applicable Plans, Policies and Regulations Avoiding or Mitigating Environmental Effects.

The project proposes to install water pipelines that would connect two existing unincorporated residential communities to the City's water system for the purpose of improving drinking water quality at these communities. It would not conflict with existing or future land use plans related to Hughson or the area along the project alignment, as the project would not affect existing land uses nor lead to any changes in existing land use designations. The project would be constructed either within existing developed areas or existing rights-of-way; no additional lands would be acquired. As such, the project is not expected to conflict with General Plan policies or with City or County ordinances designed to avoid or mitigate environmental effects, since very few such effects are expected. This IS/MND analyzes the potential environmental effects of the project, and no significant effects have been identified that cannot be mitigated to a level that would be less than significant.

The project proposes to connect two residential communities outside Hughson to the City's water system, providing drinking water that meets State standards, as opposed to drinking water provided to these communities from existing wells. The project would not contribute to the high Cal Enviro Screen indicator score related to drinking water; in fact, it would improve drinking water quality to these communities, which are predominantly occupied by lower-income households. Therefore, the project would not have significant adverse environmental effects; rather, lower income communities would be benefitted.

In summary, the project would not conflict with applicable plans, policies and regulations avoiding or mitigating environmental effects, including those related to environmental justice. Land use effects of the project would be less than significant.

3.12 MINERAL RESOURCES

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

NARRATIVE DISCUSSION

Environmental Setting

Stanislaus County's primary mineral resources are construction sand and gravel, together known as "aggregate." As of 2016, there were 12 operating mines in the County. Mining activities occur primarily within fluvial deposits along rivers and streams (Stanislaus County 2016). No mining activities are occurring on or near the project site.

The California Division of Mines and Geology, now part of the California Geological Survey, has classified portions of the state into Mineral Resource Zones. The lands within the project vicinity are not classified as being within a Mineral Resource Zone, indicating that no significant mineral deposits have been identified on or near the site. There are no oil or natural gas fields or wells in the project vicinity (DOGGR 2021).

Environmental Impacts and Mitigation Measures

a, b) Loss of Mineral Resource Availability.

No mineral resources have been identified on or near the project site, and no active mineral resource operations. No Mineral Resource Zones have been designated on or near the project site. The project would have no impact on availability of mineral resources.

3.13 NOISE

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

NARRATIVE DISCUSSION

Environmental Setting

Assessment of noise impacts focuses on the “ambient" noise level, which is the general noise level in a project area. As noted, the project site traverses both urban and rural lands. The existing ambient noise environment in the project area is defined primarily by traffic on local streets and roads, although agricultural activities in the rural areas produce intermittent localized noise during the growing season.

Both the City and Stanislaus County have Noise Ordinances that regulate noise in their respective codes. The Hughson Noise Ordinance, contained in Chapter 9.30 of the Municipal Code, states that it is unlawful to make “unnecessary or unusual noise which unreasonably disturbs the peace and quiet of any zone classified R-A, R-1, R-2, R-3, C-1, C-2 or C-3 which causes discomfort or annoyance” to an average person within those zones, and which is audible without amplification 50 feet or more from the source of the noise. The County Noise Ordinance, contained in Chapter 10.46 of the County Code, states that no person shall operate any construction equipment between the hours of 7:00 p.m. and 7:00 a.m. that causes an average sound level greater than 75 decibels at or beyond the line of any property upon which a dwelling unit is located.

Environmental Impacts and Mitigation Measures

a) Exposure to Noise Exceeding Local Standards.

The project, once completed, would not generate any noise, as the pipelines would be underground. However, construction activities associated with the project could expose noise-sensitive land uses in the immediate project vicinity to short-term noise impacts. Noise-sensitive uses would consist mainly of existing residences along the pipeline alignment, along with Hughson Elementary School and Hughson High School.

Table 3-4 shows noise levels generated by various construction equipment. Earthmoving and excavation would be the primary construction activities; therefore, equipment likely to be used would include backhoes and excavators. Based on the equipment anticipated to be used, construction of proposed facilities and improvement may generate maximum noise levels ranging from 78 to 81 A-weighted decibels (dBA) at a reference distance of 50 feet (FHWA 2006).

Construction noise is a short-term occurrence that does not result in significant or long-term effects, provided that sleep interruption is not involved. The City enforces its Noise Ordinance from 10:00 p.m. to 7:00 a.m. Mondays through Fridays, and from 10:00 p.m. to 8:00 a.m. on Saturdays, Sundays, and legal holidays. Stanislaus County restricts noise levels from construction activities during nighttime. Construction work during nighttime hours is considered unlikely in any case. Nevertheless, residences near the pipeline alignment would most likely be exposed to elevated noise levels resulting from project construction, which is considered a significant impact. If both schools are in session during project construction, students would likewise be exposed to elevated noise levels.

Mitigation described below would reduce noise from construction equipment to levels that would be less than significant.

TABLE 3-4
CONSTRUCTION EQUIPMENT NOISE LEVELS

Type of Equipment	Maximum Level (dBA at 50 feet)
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Paver	77
Pneumatic Tools	85

Source: FHWA 2006.

Level of Significance: Potentially significant

Mitigation Measures:

NOISE-1: The following measures shall be incorporated as conditions of approval for any permit that results in the use of construction equipment on the project site:

- All construction equipment powered by internal combustion engines shall be properly muffled and maintained. Mufflers shall be installed in accordance with manufacturers' specifications.
- In accordance with State regulations, construction equipment with internal combustion engines shall be prohibited from idling more than five minutes.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

Significance After Mitigation: Less than significant

b) Groundborne Vibration.

Groundborne vibration is not a common environmental problem. Some common sources are trains, buses on rough roads, and construction activities such as blasting, pile driving, and operating heavy earth-moving equipment. Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception.

The project would likely use excavation and trenching equipment during construction, which are not typically associated with significant vibration effects. Given this and the short-term duration of construction work, project impacts related to groundborne vibrations are considered less than significant.

c) Exposure to Airport/Airstrip Noise.

As noted in Section 3.9, Hazards and Hazardous Materials, there are no public airports within two miles of the project site; the nearest public airport is more than five miles to the northwest. No private airstrips have been identified in the vicinity. The project would have no impact related to airport or airstrip noise.

3.14 POPULATION AND HOUSING

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

NARRATIVE DISCUSSION

Environmental Setting

According to the 2020 U.S. Census, the population of Hughson in 2020 was 7,481 – an increase from the 2010 U.S. Census population of 6,640. For the Hughson Census County Division, which includes the surrounding unincorporated area, the population in 2020 was 13,433. There were 2,486 housing units in Hughson, and 4,562 units in the Hughson

Census County Division (U.S. Census Bureau 2020a, 2020b). Single-family detached units accounted for approximately 90.4% of the total housing units in the City of Hughson (California Department of Finance 2021). No information on housing types is available for the Hughson Census County Division.

Environmental Impacts and Mitigation Measures

a) Unplanned Population Growth.

The project would not directly induce population, as no housing or employment centers would be constructed in conjunction with the project. The project would extend the City's potable water system to serve a mobile home park and apartment complex in unincorporated Stanislaus County. However, t while the project would improve the availability of potable water in the area, additional water and sewage treatment improvements would be necessary to support additional growth, plus changes to existing land use designations would be required. These actions would require approval from appropriate agencies, along with additional environmental review. Therefore, the project is not expected to induce population growth that is not accounted for by either the City or County General Plans. Project impacts on population growth on unplanned population growth are considered less than significant.

b) Displacement of Housing and People.

The project would not displace or otherwise affect existing housing in the project area; therefore, the project would also not displace people. The project would have no impact on this issue.

3.15 PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Fire protection?				✓
ii) Police protection?				✓
iii) Schools?				✓
iv) Parks?				✓

v) Other public facilities?				✓

NARRATIVE DISCUSSION

Environmental Setting

The project site, including the unincorporated area, is within the boundaries of the Hughson Fire Protection District. The Fire District fire suppression, emergency medical services, technical rescue, hazardous materials response, fire prevention, public education, and disaster preparedness to approximately 35 square miles in and around the City of Hughson.

Police protection services in the City are provided by the Hughson Police Department, while these services in unincorporated Stanislaus County are provided by the Stanislaus County Sheriff's Department. The project site is within the boundaries of the Hughson Unified School District, which provides educational services to students from preschool to 12th grade. Both the City and County operate and maintain parks that are open to the public. Other public facilities in the area include the Hughson Community/Senior Center and the Hughson branch of the Stanislaus County Library.

Environmental Impacts and Mitigation Measures

a-i) Fire Protection.

The project is the installation of water pipelines to improve existing water systems. As discussed in Section 3.14, Population and Housing, the project is not expected to generate population growth. As such, demand for fire protection services would not increase, and no new or expanded fire protection facilities would be required. In addition, the project proposes the installation of a fire hydrant at the Country Villa Apartments, which would provide water for firefighting at this development. The project would have no impact on fire protection services, and may have a beneficial impact.

a-ii) Police Protection.

The project is not expected to generate population growth. As such, demand for police protection services would not increase, and no new or expanded police protection facilities would be required. The project would have no impact on police protection services.

a-iii) Schools.

The project is not expected to generate population growth. As such, demand for school services would not increase, and no new or expanded school facilities would be required. The project would have no impact on school services.

a-iv) Parks.

The project is not expected to generate population growth. As such, demand for parks would not increase, and no new or expanded park facilities would be required. The project would have no impact on parks.

a-v) Other Public Facilities.

The project is not expected to generate population growth. As such, the project is not expected to generate demand for other public services or facilities, such as community centers and libraries. The project would have no impact on other public services.

3.16 RECREATION

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

NARRATIVE DISCUSSION

Environmental Setting

As noted in Section 3.15, Public Services, the City and Stanislaus County provide parks and recreational facilities through their respective Parks and Recreation Departments. The nearest parks and recreational facilities to the project site are in the City, including the Community/Senior Center, Starn Park, and LeBright Park, the latter two facilities designated as community parks. No County parks or recreational facilities are in the unincorporated area near the project site; the nearest County recreation facility is the Fox Grove River and Fishing Access along the Tuolumne River north of the City.

Environmental Impacts and Mitigation Measures

a, b) Recreational Facilities.

The project is the installation of water pipelines to improve existing water systems. As discussed in Section 3.14, Population and Housing, the project is not expected to generate population growth. As such, demand for parks and recreational services would not increase, and no new or expanded parks or recreational facilities would be required. The project would have no impact on recreational facilities.

3.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				✓
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				✓
c) Substantially increase hazards to a geometric design feature (e g., sharp curves or dangerous intersections) or incompatible uses (e g, farm equipment)?				✓
d) Result in inadequate emergency access?		✓		

NARRATIVE DISCUSSION

Environmental Setting

The project alignment is located along and within the paved section of the adjacent vacant right-of-way of City and County roads. Whitmore Avenue is a mostly two-lane, east-west road that extends from west of Modesto to Montpelier Road in the eastern County, passing through Hughson along the way; Whitmore Avenue is a City street within the City limits and Geer Road is a two-lane, north-south road that extends from the City of Turlock to Yosemite Boulevard, past which it becomes Albers Road. Geer Road intersects with Whitmore Avenue more than one-half mile east of Hughson. Euclid Avenue is a local road that intersects with Whitmore Avenue between the Hughson City limits and Geer Road. A small portion of the project site is along Tully Road, a north-south City street that passes

through the western portion of Hughson. Several driveways provide direct access to these roads from adjacent private residences and businesses.

Stanislaus Regional Transit Route 61 provides bus service that connects Hughson to Modesto, Ceres, and Waterford. Route 61 uses Whitmore Avenue as part of its service route through Hughson. No bikeways have been designated on roads along the project alignment by either the City or Stanislaus County. Sidewalks are provided along much of Whitmore Avenue within the City, but none have been installed along roads outside the City limits except at the traffic signals at the Geer Road/Whitmore Avenue intersection.

The BNSF Railroad operates a mainline track in Stanislaus County that runs through the cities of Riverbank and Hughson and the communities of Empire and Denair. The BNSF line crosses the project alignment near its western limit. The BNSF track carries mainly freight, but Amtrak uses this track for its San Joaquin passenger rail service. Amtrak stations are in Modesto and Denair; no station is available in Hughson. There are currently no plans for any passenger rail service in the City.

Recently, Section 15064.3 was added to the CEQA Guidelines. Section 15064.3 states that "vehicle miles traveled" (VMT) is the preferred metric for evaluating transportation impacts, rather than the Level of Service metric commonly used but limited to motor vehicle traffic. VMT accounts for the total environmental impact of transportation associated with a project, including use of travel modes such as buses or bicycles. Section 15064.3(b) sets forth the criteria for analyzing transportation impacts using the preferred VMT metric.

Environmental Impacts and Mitigation Measures

a) Conflict with Transportation Plans, Ordinances, and Policies.

The project is the installation of water pipelines, which would not generate traffic other than during construction. The project would not contribute any new traffic on adjacent roadways nor increase existing traffic volumes. As the pipelines would be installed underground, the project would not interfere with any future changes to the adjacent roadways nor with any installation of facilities such as bus routes, bikeways, or sidewalks. The project would also not interfere with existing railroad traffic. The project would have no impact on applicable transportation plans, ordinances, and policies.

b) Conflict with CEQA Guidelines Section 15064.3(b).

As noted in a) above, the project would not generate traffic. Because of this, the project would not increase VMT and therefore would not conflict with the objectives of CEQA Guidelines Section 15064.3(b). The project would have no impact on this issue.

c) Traffic Hazards.

Other than temporary effects during construction, the project would not alter the existing road system such that it would introduce traffic hazards. Existing design features of the roads adjacent to the project alignment would not change. As the project would not add

traffic, it would not add any traffic that is potentially incompatible with the typical traffic on these roads. The project would have no impact on traffic hazards.

d) Emergency Access.

As noted in c) above, existing design features of the roads adjacent to the project alignment would not change with project completion. Existing emergency access would be maintained. As discussed in Section 3.9, Hazards and Hazardous Materials, the project may have a temporary impact on emergency vehicle access during construction. Implementation of Mitigation Measure HAZ-1 would reduce potential impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures: Implementation of Mitigation Measure HAZ-1.

Significance After Mitigation: Less than significant

3.18 TRIBAL CULTURAL RESOURCES

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

NARRATIVE DISCUSSION

Information in this section is based primarily upon a cultural resource report prepared by Solano Archaeological Services, a copy of which is available in Appendix C.

Environmental Setting

The project area is within the ethnographic territory of the Northern Valley Yokuts. The Yokuts occupied an extensive area, from the Diablo Range to the Sierra Nevada foothills, and from the Sacramento-San Joaquin Delta to south of Mendota. The late prehistoric Yokuts were organized into at least 11 small political units or tribes. Each tribe had a population of approximately 300 people, most of whom lived within one principal settlement. The closest well-documented village site to the project site was probably Tationes, which was located about 12.5 miles southeast on the east side of the San Joaquin River (Solano Archaeological Services 2022).

In many respects, the Yokuts' lifeways were very similar to that of other Central Valley groups. The hunting of terrestrial game such as tule elk, mule deer, antelope, pronghorn, rabbits, squirrels, and gophers was considered important, but it was subsidiary to collected foods that could be stored year-round. The typical California Native American diet consisted mainly of acorn, fish, and small seeds. Bedrock outcroppings were frequently utilized for creating fixed, non-portable mortars used in grinding nuts and seeds into meal. In locales where bedrock outcroppings were nonexistent, smaller, portable mortars and stone pestles were used. Acorn and seeds to be used during leaner months of the year were stored in baskets. In riparian areas, fishing and the hunting of waterfowl were also utilized to supplement dietary intake (Solano Archaeological Services 2022).

Early in the historic period, the Yokuts were severely impacted by the effects of Euro-American settlement; they were especially affected by disease and warfare. As a result, the Yokuts were generally not well documented in the ethnographic record. Presently, the Nototome/North Valley Yokut Tribe, Inc., represents the Northern Valley Yokuts in the region. The group is dedicated to the perpetuation of their cultural heritage which involves the preservation, documentation, and interpretation of their past, including ethnographic, archaeological, and human remains.

In 2015, the California Legislature enacted AB 52, which focuses on consultation with Native American tribes on land use issues potentially affecting the tribes. The intent of this consultation is to avoid or mitigate potential impacts on "tribal cultural resources," which are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe."

Under AB 52, when a tribe requests notification from a CEQA lead agency on projects within its traditionally and culturally affiliated geographical area, the lead agency must provide the tribe with notice of a proposed project within 14 days of a project application being deemed complete or when the lead agency decides to undertake the project if it is the agency's own project. The tribe has up to 30 days to respond to the notice and request consultation; if consultation is requested, then the local agency has up to 30 days to initiate consultation. Matters which may be subjects of AB 52 consultation include the type of

CEQA environmental review necessary, the significance of tribal cultural resources, and project alternatives or appropriate measures for preservation or mitigation of the tribal cultural resource that the tribe may recommend to the lead agency.

The consultation process ends when either (1) the resource in question is not considered significant, (2) the parties agree to mitigate or avoid a significant effect on a tribal cultural resource, or (3) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. Regardless of the outcome, a lead agency is still obligated under CEQA to mitigate any significant environmental effects, as explicitly noted in AB 52.

Environmental Impacts and Mitigation Measures

a-i, ii) Tribal Cultural Resources.

As noted in Section 3.5, Cultural Resources, no evidence of prehistoric presence or activity was observed anywhere within the APE, and field survey results for prehistoric resources were negative. The Native American Heritage Commission searched its Sacred Lands File for records pertaining to the project site; the results of the search were negative.

The Native American Heritage Commission provided contact information for representatives of six tribes with a potential interest in the project: Northern Valley Yokuts, Calaveras Band of Mi-Wuk Indians, Tule River Indian Tribe, California Valley Miwok Tribe/Sheep Ranch Rancheria, Wuksache Indian Tribe/Eshom Valley Band, and Southern Sierra Miwuk Nation. Solano Archaeological Services sent solicitation letters to representatives of these tribes on August 18, 2022, and followed up with telephone calls and email messages if email addresses were provided. As of the publication of the cultural resources report by Solano Archaeological Services, no responses were received from any of the representatives. The City has received no requests for consultation on the project; therefore, the City considers AB 52 requirements fulfilled.

As discussed in Section 3.5, it is possible that human burials, including Native American burials with associated grave goods, may be encountered during project construction. Implementation of Mitigation Measure CULT-1 would ensure compliance with CEQA Guidelines Section 15064.5(e) and other applicable regulations in the disposition of human remains with appropriate dignity. Implementation of this mitigation measure would reduce potential impacts on tribal cultural resources to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures: Implementation of Mitigation Measures CULT-1.

Significance After Mitigation: Less than significant

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment facilities or storm drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			✓	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			✓	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				✓
e) Comply with federal, state and local management and reduction statutes and regulations related to solid waste?				✓

NARRATIVE DISCUSSION

Environmental Setting

The City of Hughson provides drinking water to its residents and businesses through its water system. Water for this system is provided by three groundwater wells, two of which were recently drilled to replace two other groundwater wells with contaminants that exceeded State and/or federal drinking water standards. The City's system also includes a large water tank to store water for drinking and fire suppression (City of Hughson 2019). This proposed project involves an extension from this existing system to the two outlying residential areas.

The City also provides wastewater collection and treatment services. Wastewater is treated at a sewer treatment plant with a capacity to treat 1.8 million gallons of sewage per day.

The City manages a stormwater system composed of neighborhood collection systems, detention/retention basins, rockwells, stormwater pump stations, stormwater trunks, and discharge points to Turlock Irrigation District canals located along Hatch Road and Service Road.

Outside the Hughson city limits, there are few organized systems for these services. Water is provided by groundwater wells, as it is at the two outlying residential areas to be served by the project and wastewater disposal is through individual septic systems. As previously described, the Cobles Corner and Country Villa developments each have their private water systems, each using a groundwater well for its supply. Stormwater drainage either percolates into the ground or is collected in ditches along roads.

Solid waste disposal services are provided to the City of Hughson by Gilton Solid Waste Management of Modesto as a franchisee of the City. For the portion of unincorporated Stanislaus County adjacent to the project site, solid waste services are provided by Turlock Scavenger as a franchisee of the County.

Environmental Impacts and Mitigation Measures

a) Construction or Relocation of Infrastructure.

The project involves the installation of water pipelines to a mobile home park and an apartment complex near the intersection of Geer Road and Whitmore Avenue. This would be an extension of the City's existing water system to areas that have not been previously served by public water infrastructure. The extension of water pipelines to areas not previously developed with such infrastructure could have potential environmental effects, particularly in rural areas.

The potential environmental effects of the proposed work are addressed throughout this IS/MND. The IS/MND evaluated potential project impacts on the environment and identified issues for which the implementation of mitigation measures would avoid or minimize potential impacts to a level that would be less than significant. For other environmental issues, the project would have no impact or would have impacts that are less than significant.

The project is not expected to require the relocation of existing infrastructure on or adjacent to the project alignment. Places where the project may encounter other utility lines have been identified on the site plans, and the project would avoid these other lines. As noted in Chapter 2.0, Project Description, all crossings of utility lines shall be potholed and verified by the contractor, and the City Engineer shall be notified of any conflicts. A clearance of one foot shall be maintained between existing sewer, storm, water, and natural gas crossings. Based on this, project impacts related to construction or relocation of infrastructure would be less than significant.

b) Water Supply.

The project would connect two residential areas outside the Hughson City limits to the City's water system. Because of this, water demand is expected to increase. However, the increase would not be such that new water supplies would need to be obtained or new water

rights acquired. Project impacts on water supply would be less than significant. It should be noted that the purpose of the project is to improve the quality of drinking water at the two residential areas.

c) Wastewater Treatment Capacity.

The project does not propose any new structures or operations that would generate additional wastewater; as such, the project would not require the use of any capacity at the City's wastewater treatment plant. The project would have no impact on wastewater treatment capacity.

d, e) Solid Waste Services.

As the project is the installation of water pipelines, it would not generate any solid waste that would require collection or landfill capacity. It also would not affect compliance with applicable federal, State, or local solid waste regulations. The project would have no impact on solid waste services.

3.20 WILDFIRE

If located in or near state responsibility areas or lands classified as Very High Fire Hazard Severity Zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

NARRATIVE DISCUSSION

Environmental Setting

Wildfires are considered a significant hazard in Stanislaus County. Generally, from May to October of each year, Stanislaus County experiences its wildfire season. Most of the fire-susceptible areas are in the extreme eastern and western portion of the County, due to the underdeveloped, rugged terrain and the highly flammable, grass and brush covered land. Areas that are typically considered to be safe from wildfires include highly urbanized, developed areas that are not contiguous with vast areas of wild lands (Stanislaus County 2010).

The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program identifies fire threat based on a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined in determining the following Fire Hazard Severity Zones: Moderate, High, Very High, Extreme. The project site has not been placed in a Fire Hazard Severity Zone (Cal Fire 2007).

Environmental Impacts and Mitigation Measures

a) Emergency Response and Emergency Evacuation Plans.

The project site is not within a State Responsibility Area, which is an area in which fire protection service is provided by Cal Fire. As noted above, the project site is not within lands classified within a Fire Hazard Severity Zone. As discussed in Section 3.9, Hazards and Hazardous Materials, the project could temporarily interfere with emergency vehicle access, but no interference would occur after project completion, and no emergency vehicle access or evacuation issues would occur as a result of wildfires. The project would have no impact related to emergency response plans or emergency evacuation plans as they pertain to wildfires.

b) Exposure of Project Occupants to Pollutants.

As noted, the project has not been designated by Cal Fire as being within a Fire Hazard Severity Zone. Moreover, the project is the installation of water pipelines. No structures that would be occupied would be constructed. The project would have no impact related to exposure of project occupants to pollutants.

c) Installation and Maintenance of Infrastructure.

The project proposes the installation of water pipelines in an area not classified as being in a Fire Hazard Severity Zone. It would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The project would have no impact on this issue.

d) Risks from Runoff, Post-Fire Slope Instability, or Drainage Changes.

The project site is in a relatively flat area that is not classified as being in a Fire Hazard Severity Zone. In addition, as noted in b) above, the project would not construct any structures that would be occupied. Because of this, the project would not expose people or structures to downslope or downstream flooding or landslides, post-fire slope instability, or drainage changes. The project would have no impact on this issue.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				✓
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?			✓	

NARRATIVE DISCUSSION

a) Findings on Biological and Cultural Resources.

The project's potential biological resource and cultural resource impacts were described in Sections 3.4 and 3.5, respectively. Potentially significant environmental effects on biological and cultural resources were identified, but implementation of mitigation measures that would be incorporated within the project would reduce these effects to a level that would be less than significant. The mitigation measures are described in Sections 3.4 and 3.5 and are listed in Table 1-1.

b) Findings on Cumulatively Considerable Impacts.

As described in this IS/MND, the potential environmental effects of the project would either be less than significant, or the project would have no impact at all, when compared to baseline conditions. Where the project involves potentially significant effects, these effects would be reduced to a less-than-significant level with proposed mitigation measures and compliance with required permits and applicable regulations.

The potential environmental effects identified in this IS/MND have been considered in conjunction with each other as to their potential to generate other potentially significant effects. The various potential environmental effects of the project would not combine to generate any potentially significant cumulative effects. There are no other known, similar projects with which the project might combine to produce adverse cumulative impacts.

c) Findings on Adverse Effects on Human Beings.

Potential adverse effects on human beings were discussed in Section 3.3, Air Quality (TACs); Section 3.7, Geology and Soils (seismic hazards); Section 3.9, Hazards and Hazardous Materials; Section 3.10, Hydrology and Water Quality (flooding); Section 3.17, Transportation/Traffic (traffic hazards); and Section 3.20, Wildfire. No significant adverse effects were identified in these sections that could not be mitigated to a level that would be less than significant. Project impacts related to potential adverse effects on human beings would be less than significant.

4.0 REFERENCES

4.1 DOCUMENT PREPARERS

This IS/MND was prepared by BaseCamp Environmental, Inc. for use by and under the supervision of the City of Hughson. The following persons were involved in preparation of the IS/MND:

BaseCamp Environmental, Inc.

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4.3 PERSONS CONSULTED

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Carlos Nunez, Community Development Specialist, Self-Help Enterprises.

Lea Simvoulakis, Community Development Director, City of Hughson.

Jaime Velazquez, Utilities Superintendent, City of Hughson.

5.0 NOTES ON EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. In this case, a brief discussion should identify the following:

    a) Earlier Analyses Used: Identify and state where they are available for review.

    b) Impacts Adequately Addressed: Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c) Mitigation Measures: For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures, which were

incorporated or refined from the earlier document, and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) The checklist in CEQA Guidelines Appendix G is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

APPENDIX A
AIR QUALITY MODELING RESULTS

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Hughson Consolidation

Project Phases (Pounds)	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)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)	Overlap?
Grubbing/Land Clearing	0.34	3.71	2.93	3.13	0.13	3.00	0.75	0.12	0.62	0.01	580.43	0.16	0.01	586.84	No
Grading/Excavation	0.70	4.60	7.68	3.29	0.29	3.00	0.89	0.27	0.62	0.01	1,060.27	0.32	0.01	1,071.56	No
Drainage/Utilities/Sub-Grade	1.40	11.43	13.83	3.73	0.73	3.00	1.30	0.68	0.62	0.02	1,918.37	0.59	0.02	1,939.22	No
Paving	0.67	8.31	6.26	0.30	0.30	0.00	0.28	0.28	0.00	0.01	1,268.72	0.38	0.01	1,282.27	No
Maximum (pounds/day)	1.40	11.43	13.83	3.73	0.73	3.00	1.30	0.68	0.62	0.02	1,918.37	0.59	0.02	1,939.22	
Total (tons/construction project)	0.03	0.25	0.30	0.10	0.01	0.08	0.03	0.01	0.02	0.00	44.35	0.01	0.00	44.83	

Notes:

Project Start Year ->	2022
Project Length (months) ->	3
Total Project Area (acres) ->	2
Maximum Area Disturbed/Day (acres) ->	0
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	4	0	3	0	10	2
Grading/Excavation	4	0	3	0	10	0
Drainage/Utilities/Sub-Grade	4	0	3	0	20	2
Paving	0	0	0	3	10	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 G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Hughson Consolidation

Project Phases (Tons for all except CO2e, Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	1.92	0.00	0.00	1.76
Grading/Excavation	0.01	0.06	0.10	0.04	0.00	0.04	0.01	0.00	0.01	0.00	14.00	0.00	0.00	12.83
Drainage/Utilities/Sub-Grade	0.02	0.13	0.16	0.04	0.01	0.03	0.02	0.01	0.01	0.00	22.16	0.01	0.00	20.32
Paving	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.28	0.00	0.00	5.76
Maximum (tons/phase)	0.02	0.13	0.16	0.04	0.01	0.04	0.02	0.01	0.01	0.00	22.16	0.01	0.00	20.32
Total (tons/construction project)	0.03	0.25	0.30	0.10	0.01	0.08	0.03	0.01	0.02	0.00	44.35	0.01	0.00	40.67

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

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

APPENDIX B
BIOLOGICAL ASSESSMENT

MOORE BIOLOGICAL CONSULTANTS

October 14, 2022

Mr. Charlie Simpson
BaseCamp Environmental
802 West Lodi Avenue
Lodi, CA 95240

Subject: "HUGHSON WATER CONSOLIDATION PROJECT", STANISLAUS COUNTY, CALIFORNIA: BIOLOGICAL ASSESSMENT

Dear Charlie:

Thank you for asking Moore Biological Consultants to assist with the Hughson Water Consolidation Project in Stanislaus County, California (Figures 1 and 2). The purpose of this assessment is to describe existing biological resources in the project site, identify potentially significant impacts to biological resources from the project, and provide recommendations for how to reduce those impacts to a less-than-significant level. The work involved reviewing databases, aerial photographs, and documents, and conducting a field survey to document vegetation communities, potentially jurisdictional Waters of the U.S. and/or wetlands, and potentially suitable habitat for or presence of special-status species. This report details the methodology and results of our investigation.

Project Overview

The project site is located in the south part of Hughson, with much of the site being along E. Whitmore Road from Tully Road to just east of Geer Road (see Project Plans in Attachment A). The project involves an extension of the existing City of Hughson potable water distribution system to serve two existing mobile home and multi-family residential properties in the adjacent unincorporated area

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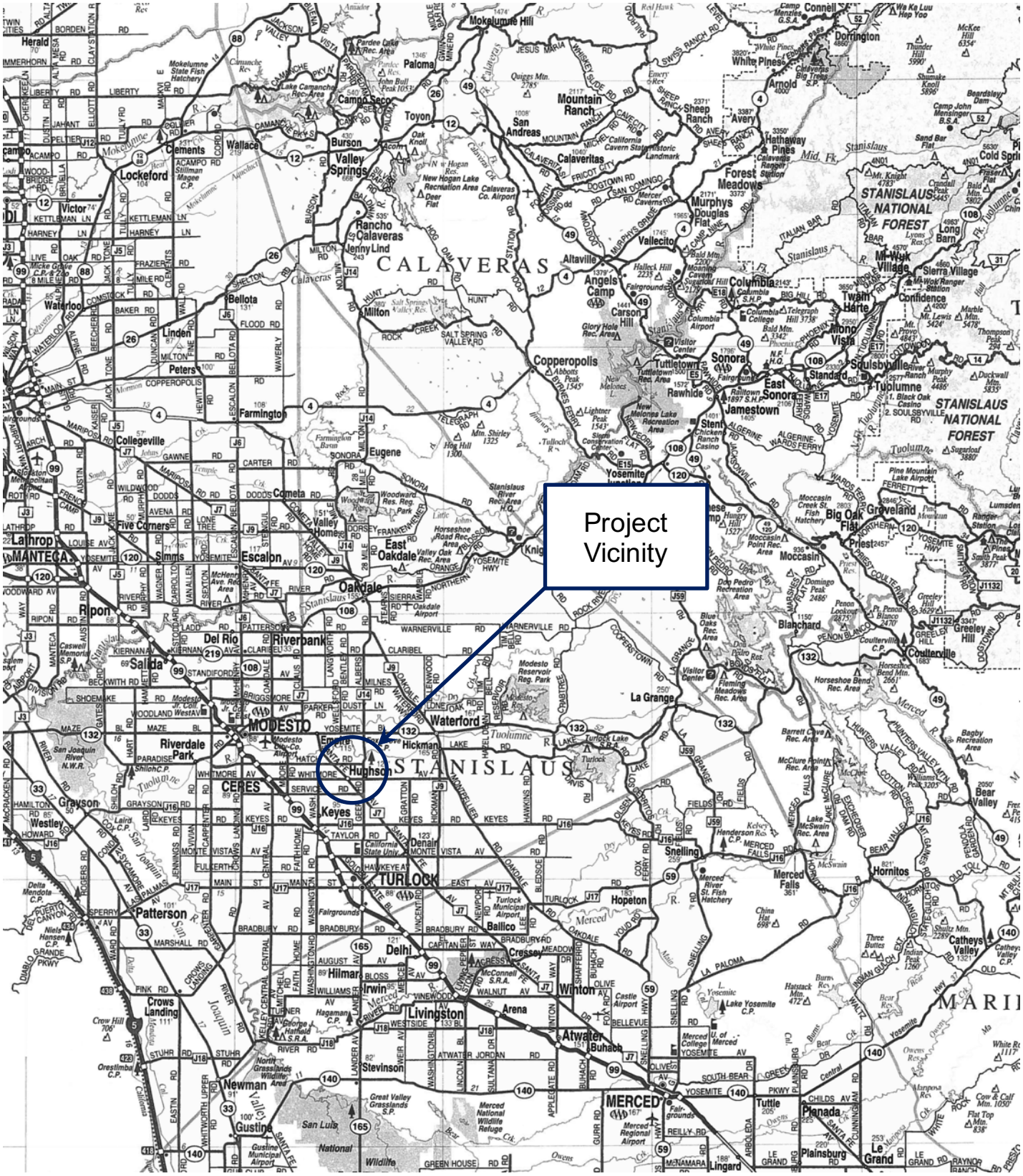

Source: California State Automobile Association

Moore Biological Consultants

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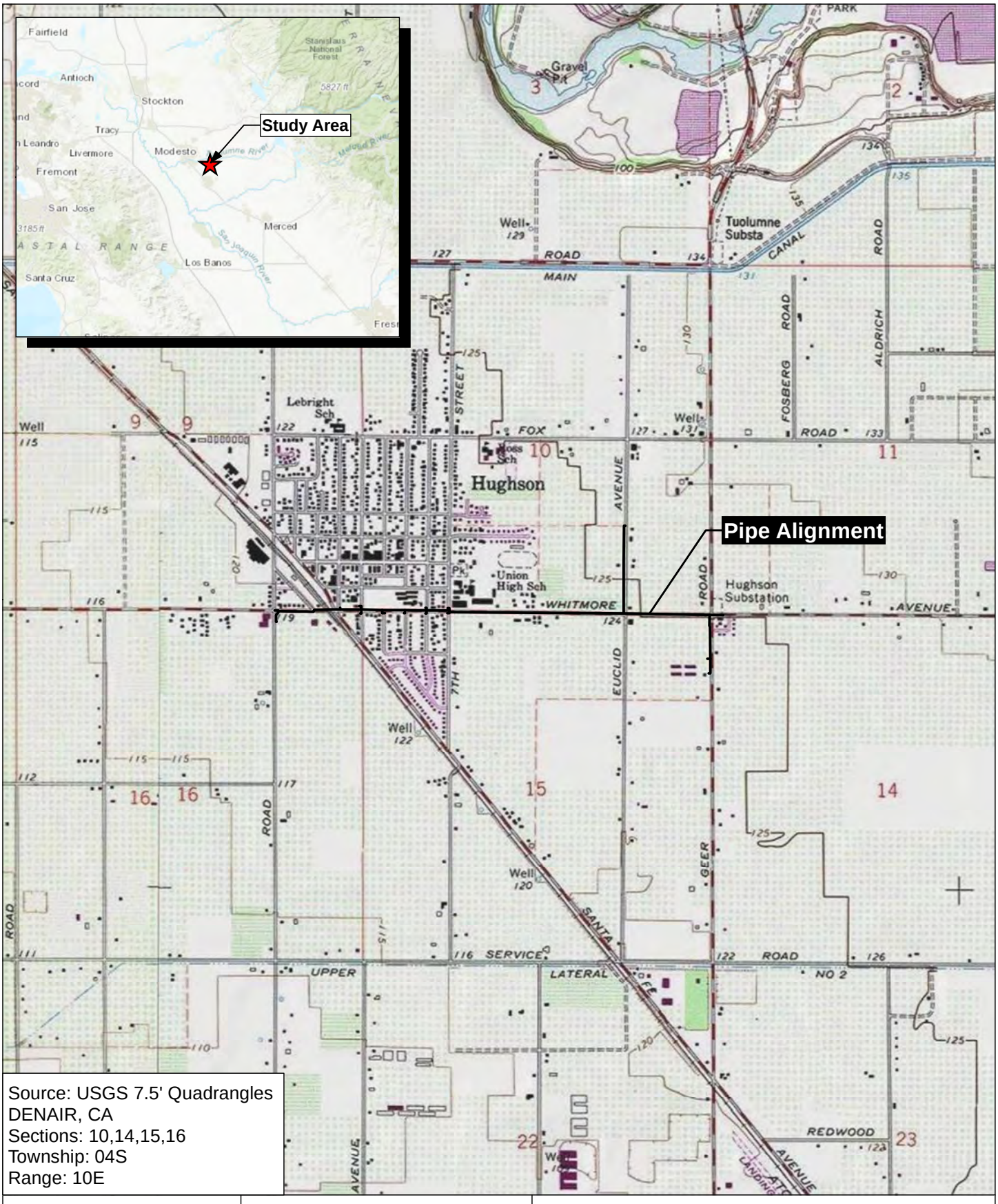
FIGURE 1

PROJECT VICINITY



Source: USGS 7.5' Quadrangles
DENAIR, CA
Sections: 10,14,15,16
Township: 04S
Range: 10E

Figure 2

Moore Biological Consultants

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N W E S

Map Date: 07/26/2022

USGS

Hughson Water Consolidation Project

Stanislaus County, CA

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of Stanislaus County east of the City. The residential properties currently obtain potable water service from wells operated by State-permitted community water systems. The project would be federally funded through the State Drinking Water State Revolving Fund.

System extension will involve the placement of underground pipelines that range up to 16 inches in diameter along existing City and County roads, including Whitmore Avenue and Geer Road. The project proposes the installation of approximately 9,550 linear feet of new polyvinyl chloride, or PVC, pipeline accommodating water pressure of up to 300 pounds per square inch.

Methods

Prior to the field survey, we conducted a search of California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB, 2022). The CNDDB search was conducted on the USGS 7.5-minute Riverbank, Waterford, Ceres, and Denair topographic quadrangles, encompassing approximately 240+/- square miles surrounding the site (Attachment B). The United States Fish and Wildlife Service (USFWS*)* IPaC Trust Resource Report of Federally Threatened and Endangered species that may occur in or be affected by projects in the project vicinity was also reviewed (Attachment B). This information was used to identify special-status wildlife and plant species that have been previously documented in the vicinity or have the potential to occur based on suitable habitat and geographical distribution. Additionally, the CNDDB depicts the locations of sensitive habitats. The USFWS on-line-maps of designated critical habitat in the area were also downloaded.

A field survey was conducted on August 23, 2022. The survey area included the pipeline alignments, as well as adjacent areas that may be subject to construction disturbance. The survey consisted of driving and walking throughout the site making observations of habitat conditions and noting surrounding land uses, habitat types, and plant and wildlife species. The

fieldwork included an assessment of potentially jurisdictional Waters of the U.S. and wetlands as defined by the U.S. Army Corps of Engineers (ACOE, 1987; 2008) and a search for special-status species and suitable habitat for special-status species (e.g., blue elderberry shrubs, vernal pools). Trees in and near the site were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*). The cropland and grasslands in the site and adjacent areas visible from the site were searched for burrowing owls (*Athene cunicularia*) or ground squirrel burrows with evidence of past occupancy.

Results

GENERAL SETTING: The project site is primarily in the City of Hughson, in Stanislaus County California (Figure 1). The site is in Sections 10, 14, and 15 within Township 4 South and Range 10 East of the USGS 7.5-minute Denair topographic quadrangle (Figure 2). The site is leveled and ranges in elevations of approximately 120 to 125 feet above mean sea level.

The project components (i.e., pipelines and appurtenant facilities) will be constructed in existing roads and along road shoulders (Figure 3 and photographs in Attachment C). These areas are collectively referred to as the "project site" or "pipeline alignments" below.

Surrounding land uses in this part of Stanislaus County are primarily agricultural and residential. Parcels adjacent to the site are comprised of residences, commercial properties, and fields planted in different crops.

VEGETATION: Vegetation along the pipeline alignments is comprised of scarce amounts of grasses and weeds growing along road shoulders and is best described as highly disturbed ruderal grassland (See photographs in Attachment C). Oats (*Avena* sp.), ripgut brome (*B. diandrus*), and perennial ryegrass (*Lolium perenne*) are some of the most common grasses in the ruderal grassland vegetation. Other grassland species such as yellow star-thistle (*Centaurea*

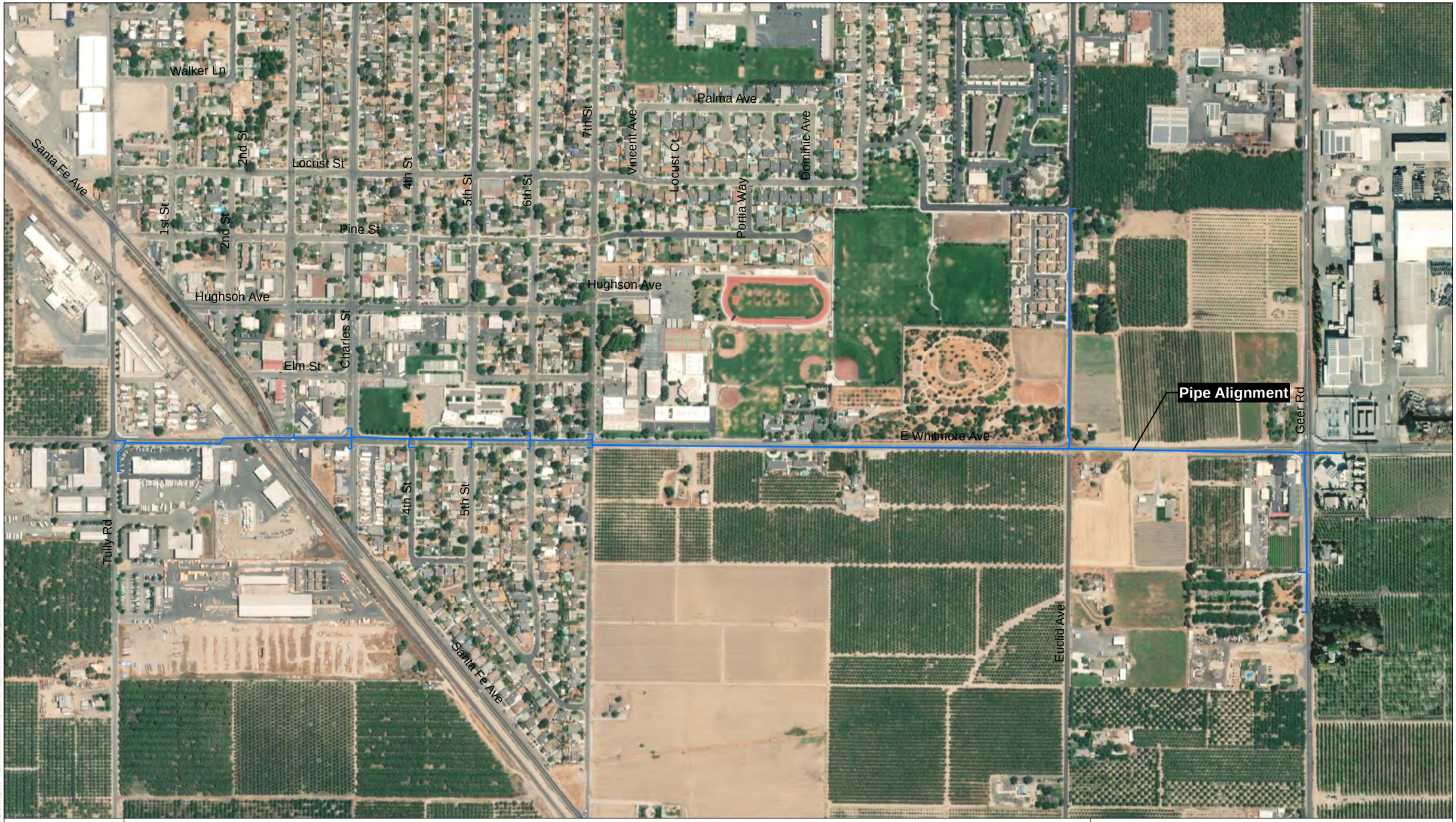

Figure 3

Moore Biological Consultants

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Map Date: 07/26/2022
Aerial Source: Maxar (06/2021)

AERIAL

Hughson Water Consolidation Project

Stanislaus County, CA

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solstitalis), prickly lettuce (*Lactuca serriola*), common sunflower (*Helianthus annuus*) and filaree (*Erodium botrys*) are intermixed with the grasses. Table 1 is a list of plant species observed in the site.

There are numerous trees in close proximity to the pipeline alignments, a majority of which are ornamental varieties associated with homes adjacent to the roads where the pipelines will be installed. The Hughson Arboretum is also situated north of E. Whitmore Avenue and west of Euclid Avenue; there are several large trees in the Arboretum. Representative tree species observed near the site includes ornamental pine (*Pinus* sp.), American sycamore (*Platanus occidentalis*), deodar cedar (*Cedrus deodara*), California pepper tree (*Schinus molle*), valley oak (*Quercus lobata*), gum tree (Eucalyptus sp.) and a variety of fruit and nut trees and other common ornamentals (see photographs in Attachment C).

No blue elderberry (*Sambucus nigra ssp. caerulea*) shrubs were observed in or adjacent to the project site.

WILDLIFE: Only a few bird species were observed during the field survey, all of which are commonly seen in residential and agricultural areas in Stanislaus County. Turkey vulture (*Cathartes aura*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), and Brewer's blackbird (*Euphagus cyanocephalus*) are representative bird species observed in and near the site (Table 2).

Although the project is within existing roads and road shoulders, there are large trees and tree clusters near the project site that are potentially suitable for nesting raptors, including Swainson's hawks. The Hughson Arboretum contains several large trees of varying species and there are two notable tree clusters associated with residences fronting and east of Euclid Avenue. Large trees and tree clusters also surround residences at the south end of the pipeline alignment, along Geer Road. Additionally, there are suitable nest trees scattered within

TABLE 1

PLANT SPECIES OBSERVED IN THE SITE

Avena sp.	oat
Bromus diandrus	ripgut brome
Centaurea solstitialis	yellow star-thistle
Cynodon dactylon	Bermuda grass
Erodium botrys	long-beaked stork's-bill
Erigeron bonariensis	hairy fleabane
Helianthus annuus	common sunflower
Hordeum murinum	foxtail barley
Lactuca serriola	prickly lettuce
Lolium perenne	perennial ryegrass
Polygonum aviculare	prostrate knotweed
Salsola tragus	Russian thistle

TABLE 2

WILDLIFE SPECIES OBSERVED IN THE SITE

Birds

Turkey vulture	*Cathartes aura*
Mourning dove	*Zenaida macroura*
American crow	*Corvus brachyrhynchos*
California scrubjay	*Aphelocoma californica*
Northern mockingbird	*Mimus polyglottos*
Brewer's blackbird	*Euphagus cyanocephalus*
House finch	*Carpodacus mexicanus*

residences and agricultural parcels in close proximity to the pipeline alignment. Given the presence of trees and shrubs near the site, it is likely one or more pairs of raptors and a variety of songbirds nest near the site during most years. Although road shoulders in the site are primarily bare dirt and gravel, it is possible that ground-nesting songbirds, such as killdeer, nest on the ground in or adjacent to the site.

Only a few mammals are likely to occur in the project site and adjacent areas, most of which are common to agricultural areas. No mammals were observed in the project site, but a few California ground squirrel (*Otospermophilus beecheyi*) burrows were observed in adjacent areas. Coyote (*Canis latrans*), raccoon (*Procyon lotor*), black-tailed hare (*Lepus californicus*), striped skunk (*Mephitis mephitis*), and Virginia opossum (*Didelphis virginiana*) are expected to occur at the project site. A number of species of small rodents including mice (*Mus musculus, Reithrodontomys megalotis,* and *Peromyscus maniculatus*) and voles (*Microtus californicus*) also likely occur.

Based on habitat types present, only a few amphibian and reptile species are expected to use habitats in the site. Although none were observed during the field survey, common species such as western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis melanoleucus*), common king snake (*Lampropeltis getulus*), and common garter snake (*Thamnophis sirtalis*) are expected to occur at the site on occasion.

WATERS OF THE U.S. AND WETLANDS: Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into any waters of the U.S., including wetlands. Some jurisdictional waters of the U.S. also fall under the jurisdiction of CDFW and/or the California Regional Water Quality Control Board (RWQCB).

"Waters of the U.S.", as defined in 33 CFR 328.4, encompasses Territorial Seas, Tidal Waters, and Non-Tidal Waters; Non-Tidal Waters includes interstate and intrastate rivers and streams, as well as their intermittent tributaries. The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the "ordinary high water mark". The ordinary high water mark is established by physical characteristics such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris.

Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* and Regional Supplement (ACOE, 1987; 2008). Jurisdictional wetlands are usually adjacent to or hydrologically associated with Waters of the U.S. Isolated wetlands are outside federal jurisdiction, but may be regulated by RWQCB under the State Wetlands Program.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

No potentially jurisdictional Waters of the U.S. or wetlands were observed within the footprint of the proposed project. The pipeline alignments will be located in existing roads and along road shoulders that are bare dirt, graveled, or sparsely vegetated in ruderal grasses and weeds.

SPECIAL-STATUS SPECIES: Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and

pertains to native California species. Both FESA and CESA prohibit unauthorized “take” (i.e., killing) of listed species, with take broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitats. The federal Migratory Bird Treaty Act (MBTA) and Fish and Game Code of California (FGCC) protect special-status bird species year-round, as well as their eggs and nests during the nesting season. FGCC also provides protection for mammals and fish.

Special-status plants are those which are designated rare, threatened, or endangered and candidate species for listing by the USFWS. Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2022). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on CNPS List 3.

Table 3 provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater project vicinity or for which there is potentially suitable habitat in the project area. This table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED IN THE GREATER PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Likeliness of Occurrence in the Project Site
PLANTS						
Heartscale	*Atriplex cordulata*	None	None	1B	Valley and foothill grassland, chenopod scrub; within areas with alkaline or saline soils.	Unlikely: the upland grassland along the road shoulders is highly disturbed and does not provide suitable habitat for heartscale; no areas of alkaline or saline soils were observed. The nearest occurrence of this species in the CNDDB (2022) search area is approximately 5 miles southwest of the site.
Subtle orache	*Atriplex subtilis*	None	None	1B	Valley and foothill grassland, in areas with alkaline soils.	Unlikely: the upland grassland along the road shoulders is highly disturbed and does not provide suitable habitat for subtle orache; no alkaline soils were observed. The nearest occurrence of this species in the CNDDB (2022) search area is approximately 5 miles southwest of the site.
Beaked clarkia	*Clarkia rostrata*	None	None	1B	Cismontane woodland and valley and foothill grassland.	Unlikely: the upland grassland along the road shoulders is highly disturbed and does not provide suitable habitat for beaked clarkia. The nearest occurrence of beaked clarkia in the CNDDB (2022) search area is approximately 7.5 miles northeast of the site.
Colusa grass	*Neostapfia colusana*	T	E	1B	Large, deep vernal pools.	Unlikely: there are no vernal pools or seasonal wetlands in or adjacent to the site. The nearest occurrences of Colusa grass in the CNDDB (2022) search area is approximately 6 miles northeast of the site. The site is not in designated critical habitat for Colusa grass (USFWS 2005a).
San Joaquin Valley Orcutt grass	*Orcuttia inaequalis*	T	E	1B	Vernal pools.	Unlikely: there are no vernal pools or seasonal wetlands in or adjacent to the site. The nearest occurrence of this species recorded in the CNDDB (2022) search area is approximately 5 miles east of the site.
Greene's tuctoria	*Tuctoria greenei*	E	R	1B	Vernal pools within the Central Valley.	Unlikely: there are no vernal pools or seasonal wetlands in or adjacent to the site. The nearest occurrences of Greene's tuctoria recorded in the CNDDB (2022) search area is approximately 6 miles northeast of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED IN THE GREATER PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Likeliness of Occurrence in the Project Site
WILDLIFE						
BIRDS						
Tricolored blackbird	*Agelaius tricolor*	None	T	N/A	Nests in dense brambles and emergent wetland vegetation associated with open water habitat.	Unlikely: there is no suitable nesting habitat in or adjacent to the site. This species may occasionally fly over or forage in the area. The nearest occurrence of tricolored blackbird in the CNDDB (2022) search area is approximately 10 miles southwest of the project site.
Swainson's hawk	*Buteo swainsoni*	None	T	N/A	Breeds in stands of tall trees in open areas. Requires adjacent suitable foraging habitats such as grasslands or alfalfa fields supporting rodents.	Low: there are several large trees suitable for nesting along and near the alignment, but Swainson's hawk foraging habitat is limited near the site; most of the agricultural land in the area is in orchard crops. The nearest occurrence of nesting Swainson's hawks in the CNDDB (2022) search area is approximately 4 miles northwest of the site.
Burrowing owl	*Athene cunicularia*	None	SC	N/A	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Unlikely: only a few ground squirrel burrows were observed in habitats adjacent to the alignment. The nearest occurrence of nesting burrowing owls in the CNDDB (2022) search area is approximately 9.5 miles northwest of the site.
MAMMALS						
Townsend's big-eared bat	*Corynorhinus townsendii*	None	SC	N/A	Wide variety of habitats, most common in desert scrub, mixed conifer forest, and pinyon-juniper or pine forest; roosting only in caves, mines, and buildings.	Unlikely: Townsend's big-eared bat may fly over or forage in the site on occasion, but the site does not contain suitable roosting habitat for this species. The nearest occurrence of this species in the CNDDB (2022) search area is approximately 2.5 miles northwest of the site.
REPTILES & AMPHIBIANS						
California tiger salamander	*Ambystoma californiense*	T	T	N/A	Breeds in seasonal water bodies such as deep vernal pools or stock ponds. Requires small mammal burrows for summer refugia.	Unlikely: there is no potentially suitable breeding habitat for California tiger salamander in or near the site and the site is not suitable for aestivation. There are no records of this species in the CNDDB (2022) search area. The site is not within an area designated critical habitat for California tiger salamander (USFWS, 2005b).

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED IN THE GREATER PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Likeliness of Occurrence in the Project Site
Northern California legless lizard	*Anniella pulchra*	None	SC	N/A	Sandy or loose loamy soils under sparse vegetation.	Unlikely: the upland grassland along the road shoulders is highly disturbed and does not provide suitable habitat for northern California legless lizard. The nearest occurrence of this species in the CNDDB (2022) search area is approximately 7 miles south of the site.
Giant garter snake	*Thamnophis gigas*	T	T	N/A	Freshwater marsh and low gradient streams; adapted to drainage canals and irrigation ditches, primarily for dispersal or migration.	Unlikely: there is no suitable habitat in or near the site for giant garter snake. Giant garter snake is not known from the area and there are no recorded occurrences of this species in the CNDDB (2022) search area.
FISH						
Delta smelt	*Hypomesus transpacificus*	T	T	N/A	Shallow lower delta waterways with submersed aquatic plants and other suitable refugia.	None: there is no aquatic habitat in the site. There are no occurrences of delta smelt recorded in the CNDDB (2022) within the search area. There is no designated critical habitat for delta smelt (USFWS, 1994) in or near the site.
Green sturgeon	*Acipenser medirostris*	T	None	N/A	Spawns in the Sacramento, Feather and Yuba Rivers. Delta important for rearing juveniles.	None: there is no aquatic habitat in the site. The nearest occurrence of green sturgeon in the CNDDB (2022) search area is approximately 10 miles northwest of the project site. The site is not in designated critical habitat of this species (NMFS, 2009).
Hardhead	*Mylopharodon conocephalus*	None	SC	N/A	Clear, deep pools with sand and gravel bottoms in tributaries to the San Joaquin and Sacramento River.	None: there is no aquatic habitat in the site. The nearest occurrence of hardhead in the CNDDB (2022) search area is approximately 1.5 miles north of the site.
Central Valley steelhead	*Oncorhynchus mykiss*	T	None	N/A	Riffle and pool complexes with adequate spawning substrates within Central Valley drainages.	None: there is no aquatic habitat in the site. The nearest occurrence of Central Valley steelhead in the CNDDB (2022) search area is in the Tuolumne River, approximately 1.5 miles north of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED IN THE GREATER PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Likeliness of Occurrence in the Project Site
INVERTEBRATES						
Vernal pool tadpole shrimp	*Lepidurus packardi*	E	None	N/A	Vernal pools and seasonally wet depressions within the Central Valley.	Unlikely: there are no vernal pools or seasonal wetlands in the site. The nearest occurrence of vernal pool tadpole shrimp in the CNDDB (2022) search area is approximately 8 miles northwest of the site. The site is not in designated critical habitat for this species (USFWS, 2005a).
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	None	N/A	Vernal pools and seasonally inundated depressions in the Central Valley.	Unlikely: there are no vernal pools or seasonal wetlands in the site. The nearest occurrence of vernal pool fairy shrimp in the CNDDB (2022) search area is approximately 8 miles northwest of the site. The site is not in designated critical habitat for this species (USFWS, 2005a).
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	T	None	N/A	Elderberry shrubs in the Central Valley and surrounding foothills	Unlikely: no blue elderberry shrubs were observed in or adjacent to the alignment. The nearest occurrence of valley elderberry longhorn beetle in the CNDDB (2022) search area is approximately 2 miles north of the site.
Monarch butterfly	*Danaus plexippus*	C	None	N/A	Variety of habitats in California; larvae dependent on milkweed; primarily associated with coastal habitat.	Unlikely: monarch butterfly may fly over the site during its migration, but would not be expected to utilize habitats in or near the site in a meaningful capacity. There are no occurrences of this species in the CNDDB (2022) search area.

Notes:

1 T= Threatened; E = Endangered; C = Candidate for Listing; R = Rare; SC = Species of Special Concern per California Department of Fish and Wildlife.

2 CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere.

SPECIAL-STATUS PLANTS: Only six species of special-status plants were identified in the CNDDB (2022) search area: heartscale (*Atriplex cordulata var. cordulata*), subtle orache (*Atriplex subtilis*), beaked clarkia (*Clarkia rostrata*), Colusa grass (*Neostapfia colusana*), San Joaquin Orcutt grass (*Orcuttia inaequalis*), and Greene's tuctoria (*Tuctoria greenei*) (Table 3 and Attachment B). There are no special-status plants included in the USFWS IPaC Trust Resource Report (Attachment B).

Most of the special-status plants identified in the CNDDB (2022) query in the project vicinity (Table 3) occur in relatively undisturbed areas within vegetation communities such as vernal pools, chenopod scrub, or within unique soils. None of these habitat types occur in the site and due to lack of suitable habitat, no special-status plant species are expected to occur in or adjacent to the site.

SPECIAL-STATUS WILDLIFE: The potential for intensive use of habitats in the project site by special-status wildlife species is generally low. Special-status wildlife species that have been recorded in greater project vicinity in the CNDDB (2022) include Swainson's hawk, burrowing owl, tricolored blackbird (*Agelaius tricolor*), Townsend's big-eared bat (*Corynorhinus townsendii*), northern California legless lizard (*Anniella pulchra*), green sturgeon (*Acipenser medirostris*), hardhead (*Mylopharodon conocephalus*), Central Valley steelhead (*Oncorhynchus mykiss*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and monarch butterfly (*Danaus plexippus*). Although not included in the CNDDB within the search area, California tiger salamander (*Ambystoma californiense*), giant garter snake (*Thamnophis gigas*), and delta smelt (*Hypomesus transpacificus*) were added to Table 3 because they are included in the USFWS IPaC Trust Resource Report (Attachment B).

The project site and surrounding areas may have provided habitat for the special-status wildlife species listed in Table 3 at some time in the past. However, farming, development, and construction and maintenance of roads, irrigation

facilities, and other infrastructure have substantially modified natural habitats within the greater project vicinity, including the project site. Of the wildlife species identified in the CNDDB, Swainson's hawk and burrowing owl are the only special-status species with potential to occur in the project site on more than a transitory or occasional basis. These species are discussed further below because they could be disturbed by noise if they nested in or near the project site during construction.

SWAINSON'S HAWK: The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The MBTA and FGCC protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawks are found in the Central Valley primarily during their breeding season, a population is known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their breeding territories by late August.

The CNDDB (2022) contains only a few records of Swainson's hawk in the greater project vicinity, with the nearest occurrence being 4 miles northwest of the site along the Tuolumne River. There are several suitable nest trees and tree clusters near the pipeline alignments and pockets of annual cropland and grasslands in the region provide suitable foraging habitat for this species. Swainson's hawks may forage in these areas on occasion and may also nest in trees in close proximity to the pipeline alignment. Most of the agricultural fields in

the site are planted in orchard crops, which is not suitable foraging habitat for Swainson's hawk.

BURROWING OWL: Burrowing owls are not listed at the state or federal level, but are a CDFW "Species of Special Concern". The MBTA and FGCC protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere.

The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows including pipes, culverts, and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk. There is only one record of burrowing owl in the CNDDB (2022) search area; this record is approximately 9.5 miles northwest of the site.

The intensity of development within and surrounding the site reduces the likelihood of burrowing owls using the site for nesting. No burrowing owls were observed in the project site during the recent survey and only a few ground squirrel burrows were observed in adjacent habitats. Burrowing owls could potentially nest in or near the site if burrow habitat is available.

OTHER SPECIAL-STATUS SPECIES: Tricolored blackbird may fly over the site, but there is no suitable nesting habitat in or adjacent to the site to support this species. The project will have no effect on tricolored blackbird.

There are no suitable roosting areas in the site for Townsend's big-eared bat, which commonly occupies forested areas and roosts in caves, mines, and

abandoned buildings. The project will have no effect on Townsend's big-eared bat or other special-status mammals.

There are no seasonal water bodies in or near the site for California tiger salamander and grassland areas close to the alignment are highly disturbed and do not provide suitable aestivation habitat for this species. There is no aquatic habitat for giant garter snake in or near the site. The ruderal and highly disturbed and grassland habitats in the site do not provide suitable habitat for northern California legless lizard. The project will have no effect on California tiger salamander, giant garter snake, northern California legless lizard, or other special-status reptiles or amphibians.

There is no aquatic habitat for any type of fish in the site. The project will have no effect on Central Valley steelhead, green sturgeon, delta smelt, hardhead, or other special-status fish.

No blue elderberry shrubs were observed in or near the site, precluding the potential occurrence of valley elderberry longhorn beetle. There are no vernal pools or seasonal wetlands in the site for vernal pool branchiopods (i.e., fairy and tadpole shrimp). Monarch butterfly could potentially migrate over the area, but is not be expected to occur in the project site due to a lack of suitable habitat. The project will have no effect on valley elderberry longhorn beetle, listed vernal pool branchiopods, monarch butterfly, or other special-status invertebrates.

CRITICAL HABITAT: The site is not within designated critical habitat for California tiger salamander (USFWS, 2005a), federally listed vernal pool shrimp or plants (USFWS, 2005b), delta smelt (USFWS, 1994), valley elderberry longhorn beetle (USFWS, 1980), or Central Valley steelhead (NOAA, 2005). The project will have no effect on designated critical habitat of federally listed species.

Conclusions and Recommendations

- The site consists of existing roads and ruderal grassland and disturbed habitats along road shoulders. On-site habitats are biologically unremarkable.

- No potentially jurisdictional Waters of the U.S. or wetlands were observed within the proposed construction footprint.

- No riparian habitats or other sensitive natural communities were observed in the site.

- Due to a lack of suitable habitat, it is unlikely that special-status plants occur in the site. The project will have no effect on heartscale, subtle orache, beaked clarkia, Colusa grass, San Joaquin Orcutt grass, Greene's tuctoria, or other special-status plant species.

- With the exception of Swainson's hawk and burrowing owl, no special-status wildlife species are expected to occur in or near the site on more than a very occasional or transitory basis. With implementation of preconstruction surveys and take avoidance measures prescribed below, the project will have no effect on Swainson's hawk or burrowing owl.

- Pre-construction surveys for nesting Swainson's hawks within 0.25 miles of the project site are recommended if construction commences between March 1 and September 15. If active nests are found, a qualified biologist should determine the need (if any) for temporal restrictions on construction using criteria set forth by CDFW (CDFG, 1994) and the Swainson's Hawk Technical Advisory Committee (SWHTAC, 2000).

- Pre-construction surveys for burrowing owls within 250 feet of the site are recommended if construction commences between February 1 and August

31. If occupied burrows are found, a qualified biologist should determine the need (if any) for temporal restrictions on construction. The determination should be pursuant to criteria set forth by CDFW (CDFG, 2012).

- Due to a lack of suitable habitat, the project will have no effect on tricolored blackbird, Townsend's big-eared bat, California tiger salamander, giant garter snake, northern California legless lizard, Central Valley steelhead, green sturgeon, delta smelt, hardhead, valley elderberry longhorn beetle, listed vernal pool branchiopods, monarch butterfly, or other special-status wildlife species.

- The project site is not within or near areas that are designated as critical habitat for federally listed species. Construction of the project will have no effect on federally designated critical habitat.

- Trees, shrubs, and grasslands in and near the site could be used by birds protected by the MBTA and/or Fish and Game Code of California. If construction commences during the general avian nesting season (March 1 through July 31), a pre-construction survey for nesting birds is recommended. If active nests are found, work in the vicinity of the nest will be delayed until the young fledge. With implementation of these take avoidance measures, the project will have no effect on special-status birds or other birds protected by the MBTA and FGCC.

Thank you, again, for asking Moore Biological Consultants to assist with the project. Please call me at (209) 745-1159 with any questions.

Sincerely,

Diane S. Moore, M.S.
Principal Biologist

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Attachment A

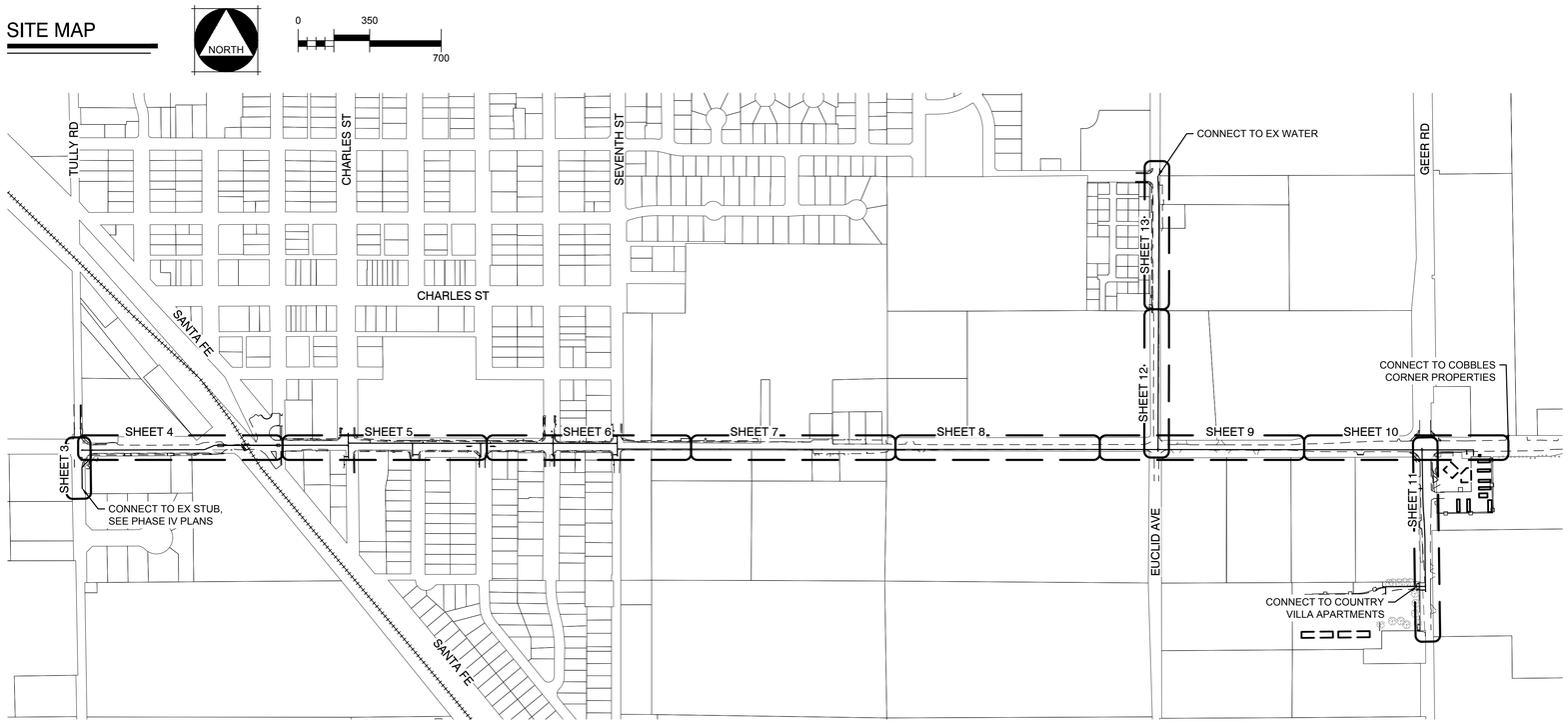
Improvement Plans

IMPROVEMENT PLANS FOR:

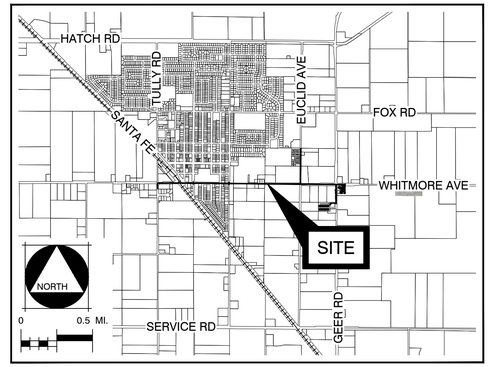
WATER CONSOLIDATION PROJECT

CITY OF HUGHSON, CALIFORNIA

SITE MAP



VICINITY MAP



SHEET INDEX

PROJECT TEAM

WATER RESOURCES ENGINEER

REGISTERED PROFESSIONAL ENGINEER
CORT ABNEY
No. C45383
EXP. 9-30-22
CIVIL
STATE OF CALIFORNIA
7/6/22

4120 Cameron Park Drive, Ste. 100-A
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E-mail: cort@h2oengr.com

CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
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7/6/22

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MANTECA, CA 95336
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FAX : (209) 239 - 8839

CITY OF Hughson

REGISTERED PROFESSIONAL ENGINEER
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FAX : (209) 239 - 8839

PREPARED UNDER THE DIRECTION OF: NICKLAUS B. STEPHENS R.C.E. C91352 EXP. 9-30-22 DATE

PLAN REVISIONS

NO.	DESCRIPTIONS	DATE
A		
A		
A		
A		
A		
A		

JOB NO. 20-110
DATE 3/25/2022
SCALE AS SHOWN
DR. BY NBS
CK. BY RM
FILE: HUGHSON/1-PUBLIC

COVER SHEET

WATER CONSOLIDATION PROJECT
HUGHSON, CALIFORNIA

SHEET 1 OF 16 SHEETS

GENERAL NOTES:

1. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE FOLLOWING: CITY OF HUGHSON STANDARD SPECIFICATIONS, AND ALL AMENDMENTS TO DATE, CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (CALTRANS, LATEST EDITION), WHERE APPLICABLE. ALL WORK SHALL BE UNDER THE INSPECTION OF THE RESPECTIVE ENTITY.

2. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES AND AMBIGUITIES WHICH MAY EXIST IN THE PLANS AND SPECIFICATIONS. IF THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.

3. CONSTRUCTION STAKING FOR GRADING, CURB, GUTTER, SIDEWALK, SANITARY SEWER, STORM DRAIN AND WATER SHALL BE DONE UNDER THE DIRECTION OF M.C.R. ENGINEERING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER NINETY-SIX (96) HOURS IN ADVANCE OF THIS NEED FOR STAKING. ANY STAKING REQUESTED BY THE CONTRACTOR OR HIS SUBCONTRACTORS THAT IS ABOVE AND BEYOND NORMAL STAKING NEEDS, WILL BE SUBJECT TO AN EXTRA BACK CHARGE TO THE CONTRACTOR.

4. THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSE FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE. ALL CENTERLINE AND/OR SURVEY MONUMENTS SHALL BE PRESERVED OR RESET AT THE END OF CONSTRUCTION.

5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, ENGINEER AND THE CITY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

6. UNLESS OTHERWISE STATED, ALL STATIONS INDICATED ON THE IMPROVEMENT PLANS ARE REFERENCED TO THE CENTERLINE OF THE STREET. ALL STATIONS OFF CENTER ARE PERPENDICULAR TO OR RADIALLY OPPOSITE CENTERLINE STATIONS, UNLESS OTHERWISE NOTED.

7. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE CITY ENGINEER.

8. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MAN OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT ISSUE OF "MANUAL OF TRAFFIC CONTROLS, WARNING SIGNS, LIGHTS AND DEVICES FOR USE IN PERFORMANCE OF WORK UPON HIGHWAY" PUBLISHED BY THE STATE OF CALIFORNIA BUSINESS AND TRANSPORTATION AGENCY.

9. THE OFFICE OF THE CITY ENGINEER SHALL BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF ANY WORK.

10. P.G.&E., TELEPHONE AND CABLE TV UNDERGROUND WORK SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF THE CURB, GUTTER, SIDEWALK AND PAVING.

11. THE CITY OF HUGHSON AND ASSOCIATED UTILITY COMPANY AND RESIDENCES TO BE AFFECTED SHALL BE NOTIFIED IMMEDIATELY UPON ANY UTILITY SERVICE DISRUPTION OTHER THAN SPECIFIED ON THESE IMPROVEMENT PLANS AND A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN FOR ANY PLANNED DISRUPTION.

12. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FROM THE CITY OF HUGHSON, DEPARTMENT OF PUBLIC WORKS OR ANY OTHER APPLICABLE AGENCIES PRIOR TO COMMENCEMENT OF WORK WITHIN EXISTING CITY RIGHT-OF-WAY. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FROM STANISLAUS COUNTY PRIOR TO COMMENCEMENT OF WORK WITHIN EXISTING COUNTY RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT.

13. STREET SIGNS, TRAFFIC CONTROL SIGNS, AND PAVEMENT MARKINGS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT LOCATIONS ESTABLISHED BY THE ENGINEER. UNLESS NOTED OTHERWISE, PAVEMENT MARKINGS SHALL BE REPLACED ACCORDING TO THE DETAILS OBSERVED IN THE ROAD PRIOR TO THE COMMENCEMENT OF WORK, ALL NEW MARKINGS SHALL BE THERMOPLASTIC.

14. ASPHALT CONCRETE SHALL BE PLACED ONLY WHEN THE ATMOSPHERIC TEMPERATURE IS ABOVE 50°F AND RISING.

15. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE REMOVAL OR RELOCATION OF ALL EXISTING UTILITIES WITH RESPECTIVE UTILITY COMPANIES.

16. RURAL DRIVEWAY IMPACTED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL STATE. TEMPORARY DRIVEWAYS SHALL BE PROVIDED DURING THE INTERIM.

17. DRAWING NUMBERS SHOWN ON THE PLANS REFER TO DRAWINGS CONTAINED IN THE CITY OF HUGHSON STANDARD SPECIFICATIONS, THUS: (I.E. DWG. ST-18).

18. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER (800) 227-2600. THE CONTRACTOR SHALL RECORD THE U.S.A. ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER PRIOR TO ANY EXCAVATION. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE DEVELOPMENT.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND REPLACEMENT OF EXISTING IMPROVEMENTS.

20. WHENEVER PAVEMENT IS BROKEN OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE SPECIFICATIONS, THE PAVEMENT SHALL BE REPLACED, AFTER PROPER BACKFIRING, WITH PAVEMENT MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL PAVING. THE FINISHED PAVEMENT SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER, OR CALTRANS, WHERE APPLICABLE.

21. PAYMENT FOR PAVEMENT WILL BE MADE ONLY FOR AREAS SHOWN ON THE PLANS REPLACEMENT OF PAVEMENT WHICH IS BROKEN OR CUT DURING THE INSTALLATION OF THE WORK COVERED BY THESE SPECIFICATIONS, AND WHICH LIES OUTSIDE OF SAID AREAS, SHALL BE INDICATED IN THE CONTRACTOR'S UNIT PRICE FOR PAVEMENT, AND NO ADDITIONAL PAYMENT SHALL BE MADE FOR SUCH WORK.

22. EXCAVATIONS OF 5 FEET OR MORE IN DEPTH WILL REQUIRE AN EXCAVATION PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY. FOR TRENCHES 5 FEET OF MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH SECTION 5-1.02A OF THE CALTRANS STANDARDS, CHAPTER 9 OF THE STATE OF CALIFORNIA LABOR CODE, AND ANY LOCAL CODES OR ORDINANCES.

23. WE CALL YOUR ATTENTION TO TITLE 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540 (A) (1) OF THE CONSTRUCTION SAFETY ORDERS ISSUED BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONS SAFETY AND HEALTH ACT OF 1973 AS AMENDED WHICH STATES: (1) PRIOR TO OPENING AN EXCAVATION EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E. SEWER, WATER, FUEL, ELECTRICAL LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.

24. ALL TRENCHES ON MAJOR AND COLLECTOR STREETS AND CROSS TRENCHES ON ALL STREETS SHALL BE PAVED WITH TEMPORARY PAVING THE SAME DAY THE PAVEMENT CUT IS MADE. TRENCH PLATES MAY BE USED TEMPORARILY WITH PRIOR APPROVAL OF THE PROJECT ENGINEER.

25. APPROPRIATE DUST CONTROL SHALL BE PROVIDED, AT THE CONTRACTOR'S EXPENSE TO MINIMIZE ANY DUST NUISANCE AND SHALL BE IN ACCORDANCE WITH SECTION 10 OF CALTRANS STANDARD SPECIFICATIONS AND THE REQUIREMENTS OF THE CITY OF HUGHSON.

26. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, PRIOR TO FINAL ACCEPTANCE, AS-BUILT DRAWINGS OF ALL IMPROVEMENTS REPRESENTED BY THE PROJECT PLANS AND SPECIFICATIONS.

27. AFTER CONSTRUCTION OF ALL IMPROVEMENTS, THE ENGINEER SHALL SUBMIT ONE SET OF REPRODUCIBLE PLANS. FINAL INVERT ELEVATIONS FOR SEWER AND STORM DRAIN LINES THAT ARE TO BE EXTENDED FOR FUTURE CONSTRUCTION SHALL ALSO BE SHOWN ON THE "AS-BUILT" PLANS ALL AS PROVIDED TO THE ENGINEER BY THE CONTRACTOR.

28. THE CONTRACTOR SHALL NOTIFY MCR ENGINEERING AT LEAST 48 HOURS PRIOR TO BACKFILLNG OF ANY PIPE WHICH STUBS TO A FUTURE PHASE OF CONSTRUCTION FOR INVERT VERIFICATION. TOLERANCE SHALL BE IN ACCORDANCE WITH THE CITY OF HUGHSON STANDARD SPECIFICATIONS.

29. REGULATING DISCHARGES OF STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM SOIL DISTURBANCES OF ONE (1) ACRE OR MORE, A NOTICE OF INTENT (NOI) TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE FILED AND APPROPRIATE FEE PAID PRIOR TO COMMENCEMENT OF CONSTRUCTION IN ADDITION, AT THE CONCLUSION OF THE PROJECT A NOTICE OF TERMINATION MUST ALSO BE FILED, SUBMIT THE FEE, A NOTICE OF INTENT, AND NOTICE OF TERMINATION TO THE STATE RESOURCES CONTROL BOARD AT THE FOLLOWING ADDRESS:

    STATE WATER RESOURCES CONTROL BOARD
    P.O. BOX 100
    SACRAMENTO, CA 95812-0100
    ATTN. STORM WATER PERMITTING SECTION

30. IF YOU HAVE ANY QUESTIONS CALL WATER QUALITY CONTROL ENGINEER, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION AT (916) 464-3291.

31. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE WATER RESOURCES CONTROL BOARD (SWCRB) ORDER NO. 2009-0009-DWQ. THE CONTRACTOR SHALL IMPLEMENT AND MONITOR A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH THE SWRCB REGULATIONS.

32. CONTRACTOR SHALL COMPLY WITH BUSINESS AND PROFESSIONS CODE, SECTION 8771 (b) REGARDING REFERENCING, PRESERVING, AND RECONSTRUCTING MONUMENTS, WHETHER OR NOT THE MONUMENTS ARE SHOWN ON THE PLANS.

GRADING NOTES:

1. EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF HUGHSON STANDARDS. ALL FILL AREAS SHALL BE TESTED AS REQUIRED BY THE CITY OF HUGHSON AND SHALL BE PAID FOR BY THE CITY OF HUGHSON.

2. THE CITY SHALL BE RESPONSIBLE FOR COST OF INITIAL TEST FOR MOISTURE DENSITY CURVE. IF THE FIRST TEST FAILS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COST OF ALL SUBSEQUENT CURVES AND TESTS.

3. THE CONTRACTOR SHALL REVIEW SITE PRIOR TO BIDDING. ALL VEGETATION AND DELETERIOUS MATERIALS, INCLUDING ROOTS SHALL BE REMOVED FROM THE SITE AT THE EXPENSE OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE LUMP SUM CLEARING COST.

4. THE CONTRACTOR SHALL PRESERVE ALL STAKES AND POINTS SET FOR LINES, GRADES OR MEASUREMENT OF THE WORK IN THEIR PROPER PLACES UNTIL AUTHORIZED TO REMOVE THEM BY THE ENGINEER. ALL EXPENSES INCURRED IN REPLACING STAKES THAT HAVE BEEN REMOVED WITHOUT PROPER AUTHORITY SHALL BE PAID FOR BY THE GENERAL CONTRACTOR.

5. CONTRACTOR SHALL OBTAIN 95% RELATIVE COMPACTION IN ALL GRADED AREAS.

WATER NOTES:

1. ALL WATER CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF HUGHSON STANDARD SPECIFICATIONS AND PLANS.

2. THE CONTRACTOR SHALL EXPOSE EXISTING WATER LINES TO VERIFY EXISTING ELEVATION AND LOCATION PRIOR TO START OF CONSTRUCTION. ALL POTHOLE INFORMATION SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

3. ALL WATER LINES SHALL BE TESTED AND DISINFECTED IN CONFORMANCE WITH THE REQUIREMENTS OF THE CITY OF HUGHSON AND THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, SECTION C-651.

4. WATER LINE TESTING SHALL INCLUDE:

    4.1. HYDROSTATIC PRESSURE TESTING PER CITY OF HUGHSON STANDARD SPECIFICATION 99-1.14 AND BACTERIOLOGICAL TESTING PER CITY OF HUGHSON STANDARD SPECIFICATION 99-1.15 AND AWWA C651.

    4.2. AFTER FINAL FLUSHING AND BEFORE THE NEW WATER MAIN IS CONNECTED TO THE DISTRIBUTION SYSTEM, TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES, TAKEN 24 HOURS APART, SHALL BE COLLECTED FROM THE NEW MAIN. SAMPLES SHALL BE COLLECTED AT SITES AS DIRECTED BY CITY. (AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED EVERY 1200 FEET OF THE NEW WATER MAIN, PLUS ONE SET FROM EACH END OF THE LINE AND AT LEAST ONE SET FROM EACH BRANCH). ALL SAMPLES SHALL BE TESTED FOR BACTERIOLOGICAL QUALITY, AND SHALL SHOW THE ABSENCE OF COLOFORM ORGANISMS. A STANDARD HETEROTROPHIC PLATE COUNT MAY BE REQUIRED AT THE OPTION OF THE CITY ENGINEER.

    4.3. SAMPLES SHALL BE TAKEN FROM WATER THAT HAS STOOD IN THE NEW MAIN FOR AT LEAST 16 HOURS AFTER FINAL FLUSHING HAS BEEN COMPLETED.

    4.4. IF THE INITIAL DISINFECTION FAILS TO PRODUCE SATISFACTORY BACTERIOLOGICAL SAMPLES, THE MAIN SHALL BE REFLUSHED AND RESAMPLED DAILY FROM THE SAME POINT(S) UNTIL TWO CONSECUTIVE SAMPLES ARE NEGATIVE FOR COLOFORM ORGANISMS.

    4.5. THE CITY OF HUGHSON SHALL PAY FOR THE INITIAL BACTERIOLOGICAL TESTS. THE CONTRACTOR SHALL PAY FOR ALL TESTING NECESSITATED BY FAILURE OF THE INITIAL TEST(S). IF TRENCH WATER HAS ENTERED THE NEW MAIN DURING CONSTRUCTION OR, IF IN THE OPINION OF THE CITY OF HUGHSON, EXCESSIVE QUANTITIES OF DIRT OR DEBRIS HAVE ENTERED THE NEW MAIN, BACTERIOLOGICAL SAMPLES SHALL BE TAKEN AT INTERVALS OF APPROXIMATELY 200 FEET AND SHALL BE IDENTIFIED BY LOCATION. THE CONTRACTOR SHALL INSTALL ADDITIONAL WATER SERVICE TAPS AND SAMPLING STATIONS AS REQUIRED. THE CONTRACTOR SHALL ALSO REMOVE SAMPLING STATIONS AND SERVICES UPON SATISFACTORY COMPLETION OF TESTING. THE CONTRACTOR SHALL PAY FOR TESTING OF THE CONTAMINATED AREAS.

5. CONTRACT PRICE SHALL INCLUDE FULL COMPENSATION FOR FURNISHING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS, AND FOR DOING ALL OF THE WORK INVOLVED IN TESTING AND DISINFECTION OF THE WATER MAINS.

6. CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN, OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.

7. WATER LINES SHALL BE A MINIMUM OF 10 FEET OUTSIDE OF PIPE TO OUTSIDE OF PIPE FROM SEWER MAINS. CROSSINGS SHALL MEET STATE HEALTH STANDARDS.

8. ALL VALVE BOXES TO BE ADJUSTED TO FINISH GRADE AFTER PAVING. COST FOR RAISING FACILITIES TO BE INCLUDED IN UNIT PRICES FOR VALVES.

9. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 5' OR MORE. SAID PROTECTION TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF HUGHSON DEPARTMENT OF PUBLIC WORKS, AND STATE REGULATIONS.

10. ALL CONNECTIONS TO EXISTING CITY FACILITIES SHALL BE MADE IN THE PRESENCE OF THE CITY ENGINEER, OR HIS APPOINTED REPRESENTATIVE.

11. ALL MATERIALS THAT WILL COME IN CONTACT WITH POTABLE WATER SHALL COMPLY WITH NSF 61.

POLLUTION AND DUST NOTES:

1. THE CONTRACTOR SHALL KEEP THE WORK SITE FREE AND CLEAR OF RUBBISH AND DEBRIS.

2. THE CONTRACTOR SHALL EXERCISE CARE TO PRESERVE AND PROTECT NATURAL HABITAT ADJACENT TO THE PROJECT SITE.

3. THE CONTRACTOR SHALL NOT DISCHARGE SMOKE, DUST, OR ANY OTHER AIR CONTAMINANTS INTO THE ATMOSPHERE IN SUCH A QUANTITY AS WILL VIOLATE THE REGULATIONS OF ANY LEGALLY CONSTITUTED AUTHORITY.

4. THE CONTRACTOR SHALL KEEP ALL AREAS GENERATING DUST WITHIN THE LIMITS OF THE PROJECT WELL WATERED DURING THE TERM OF THIS CONTRACT. THIS INCLUDES BUT IS NOT LIMITED TO ACCESS RAMPS, THE HAUL ROADS, THE EMBANKMENT FILL AREA, AND ANY OTHER AREAS THAT MAY GENERATE DUST AS A RESULT OF CONTRACTOR'S OPERATIONS. THE CONTRACTOR SHALL PROVIDE DUST CONTROL MEASURES DURING EVENINGS, WEEKENDS, AND HOLIDAYS AT NO ADDITIONAL COST TO THE CITY.

5. THE CONTRACTOR(S) SHALL KEEP ALL PUBLIC ROADWAYS ADJACENT TO THE PROJECT SITE FREE AND CLEAR OF MUD AND SILT DURING THE TERM OF THIS CONTRACT. THIS INCLUDES MUD CAUSED BY RAIN OR BY THE CONTRACTOR(S) WATERING PROCEDURES FOR DUST CONTROL.

6. THROUGHOUT ALL PHASES OF CONSTRUCTION, INCLUDING SUSPENSION OF WORK, AND UNTIL FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL KEEP THE PREMISES OCCUPIED BY HIM IN A CLEAN AND ORDERLY CONDITION, DISPOSING OF REFUSE AND LITTER IN A MANNER SATISFACTORY TO THE CITY OF HUGHSON.

MITIGATION MONITORING AND REPORTING PROGRAM:

4.3-1: COMPLY WITH ALL APPLICABLE REQUIREMENTS OF SJVAPCD REGULATION VIII (FUGITIVE DUST PROHIBITIONS).

4.3-2: THE PROJECT APPLICANTS SHALL INCORPORATE FEASIBLE EMISSION CONTROL MEASURES INTO THE PROJECT DESIGN AND OPERATION AS DETERMINED APPROPRIATE BY T HE CITY. SUCH MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING ITEMS AS RECOMMENDED IN THE SJVAPCD GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (SJVAPCD 2002) AND OTHER SOURCES.

4.3-3: IMPLEMENT MEASURES TO REDUCE EXPOSURE OF SENSITIVE RECEPTORS TO TAC EMISSIONS.

ABBREVIATION LIST

@	AT
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ADA	AMERICAN DISABILITIES ACT
BC	BEGINNING OF CURVE
BDRY	BOUNDARY
BSL	BUILDING SET BACK LINE
BV	BUTTERFLY VALVE (WATER)
C & G	CURB AND GUTTER
CI	CURB INLET
℄	CENTER LINE
CO	CLEAN OUT
CONC	CONCRETE
CR	CURB RETURN
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	DRIVEWAY
D OR SD	DRAIN OR STORM DRAIN
EC	END OF CURVE
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
E, EX, OR EXIST	EXISTING
FH	FIRE HYDRANT
FL	FLOW LINE
GB	GRADE BREAK
GV	GATE VALVE (WATER)
HP	HIGH POINT
HPS	HIGH PRESSURE SODIUM
INV	INVERT
IRR	IRRIGATION
LF	LINEAL FEET OR LINEAR FEET
LP	LOW POINT
MAX	MAXIMUM
MH	MAINTENANCE HOLE
MIN	MINIMUM
NTS	NOT TO SCALE
OG	ORIGINAL GROUND / GRADE
P	PROPOSED
PP	POWER POLE
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PT	POINT
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
RET	RETURN
R	RADIUS
SD	STORM DRAIN
SHT	SHEET
SNS	STREET NAME SIGN
STA	STATION
STD	STANDARD
SW	SIDEWALK
SS	SANITARY SEWER
S	SEWER
TC	TOP OF CURB
TEMP	TEMPORARY
THRU	THROUGH
TI	TRAFFIC INDEX
TPE	TREE PLANTING EASEMENT
TYP.	TYPICAL
WS	WATER SERVICE
W	WATER
±	PLUS OR MINUS (NOT EXACT)
U.N.O.	UNLESS NOTED OTHERWISE

LEGEND

ITEM	EXISTING	PROPOSED
WATER VALVE		
WATER HOSE BIB	HB	HB
AIR RELEASE VALVE		
BLOWOFF		
FIRE HYDRANT		
WATER METER	W	W
IRRIGATION BOX	IR	IR
SEWER MANHOLE	S	S
STORM MANHOLE		
DRAIN INLET		
CURB INLET		
CLEANOUT	CO	CO
WATER LINE	8"W	8"W
SANITARY SEWER	8"SS	8"SS
STORM DRAIN	12"SD	12"SD
TYPICAL ELECTROLIER		
TYPICAL LUMINAIRE		
ELECTRICAL VAULT	E	E
SURVEY MONUMENT		
UTILITY POLE		
SIGNAGE		
LINE STOP		
ELEVATION	203.50TC 203.00P	203.50TC 203.00P
DIRECTION OF FLOW	2.00%	2.00%
ORIGINAL GROUND	+ 203.59	N/A
CONTOUR (0.5' INTERVAL)	40.00	N/A
BARBED WIRE FENCE		
WOOD FENCE		
CURB, GUTTER & SIDEWALK		
TYPICAL RETURN WITH HANDICAP RAMP		
TREE		N/A
PAVEMENT		

MCR ENGINEERING, INC.
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FAX : (209) 239 - 8839

PREPARED UNDER THE DIRECTION OF : NICKLAUS B. STEPHENS R.C.E. C91352 EXP: 9-30-22

PLAN REVISIONS

NO.	DESCRIPTIONS	DATE
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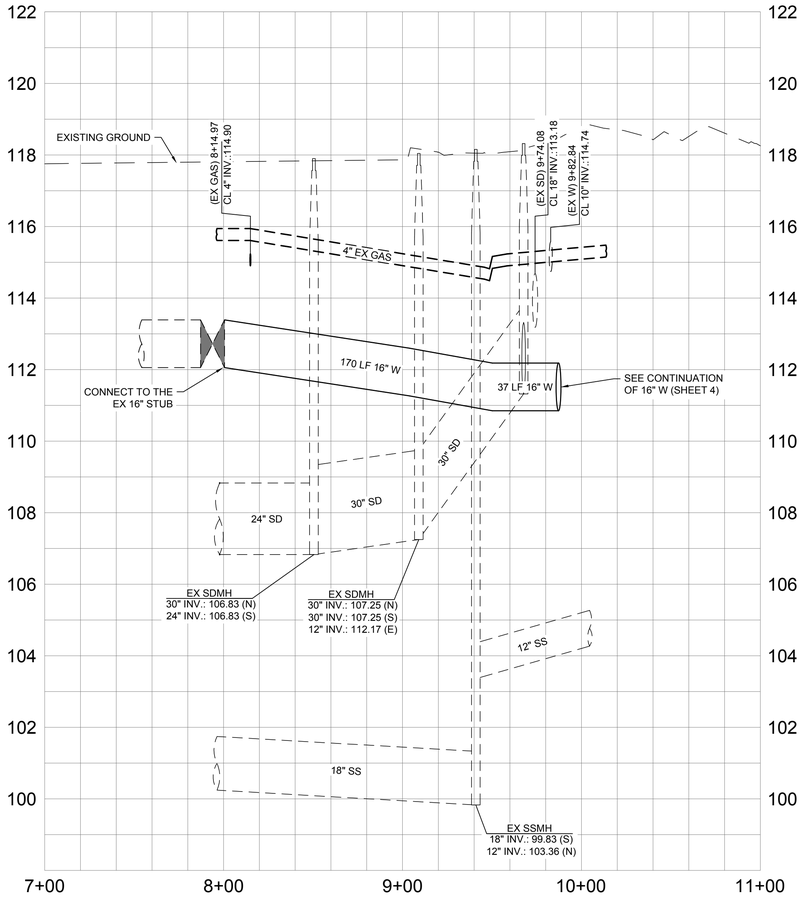
JOB NO. 20-110
DATE 3/25/2022
SCALE AS SHOWN
DR. BY NBS
CK. BY RM
FILE: HUGHSON\1-PUBLIC

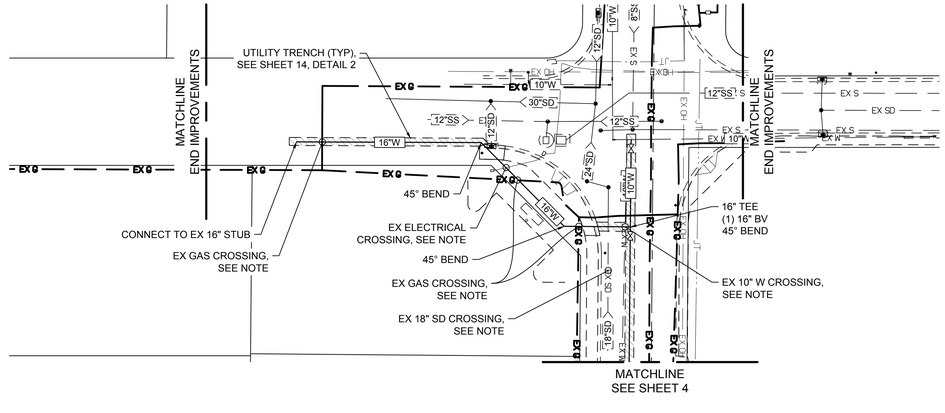
GENERAL NOTES

WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET 2 OF 16 SHEETS





TULLY ROAD
STA 7+00 TO 11+00

NORTH

0 20 40 80

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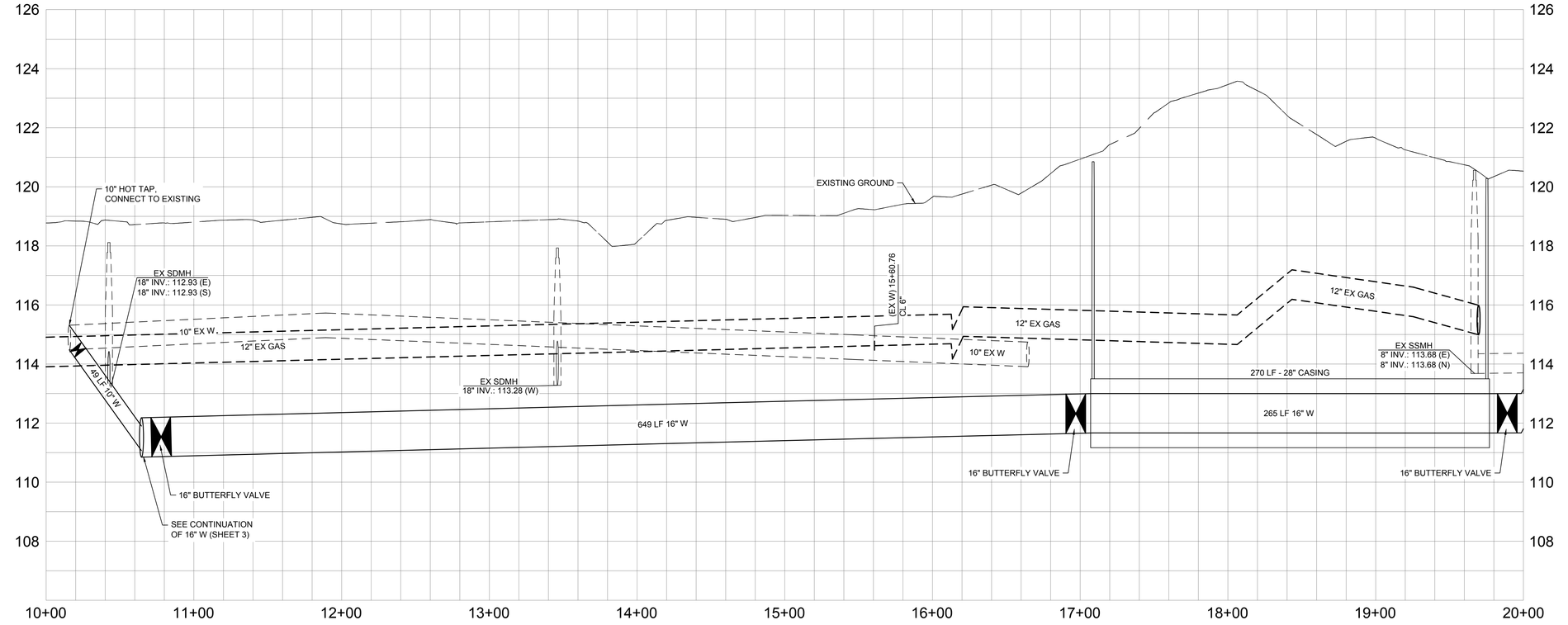
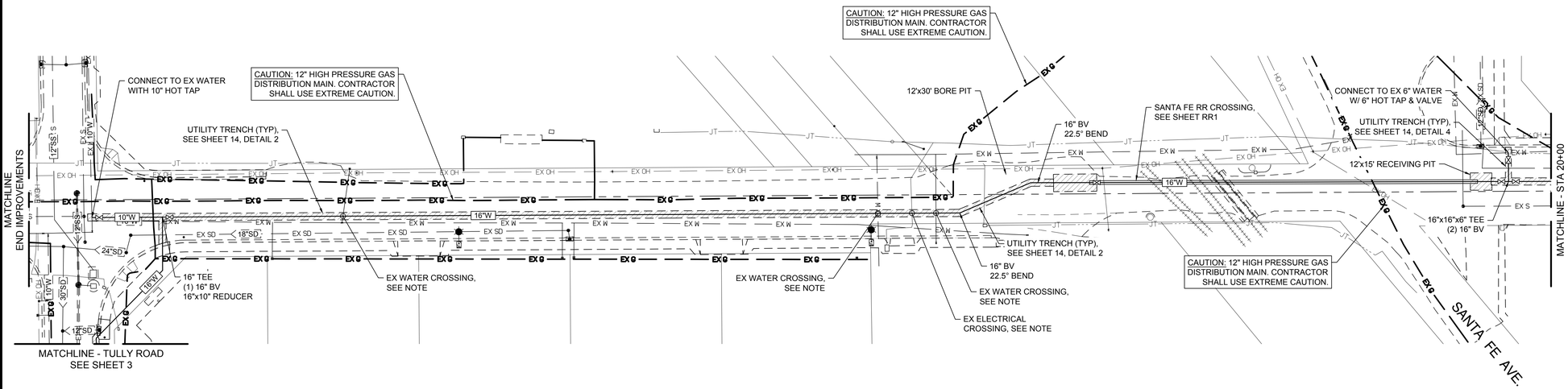
WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET 3 OF 16 SHEETS





WHITMORE AVENUE
STA 10+00 TO 20+00

NORTH

0 40 20 80

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TRENCH PATCH PAVEMENT

CITY OF Hughson

REGISTERED PROFESSIONAL ENGINEER NICKLAUS B. STEPHENS C 91352 CIVIL STATE OF CALIFORNIA

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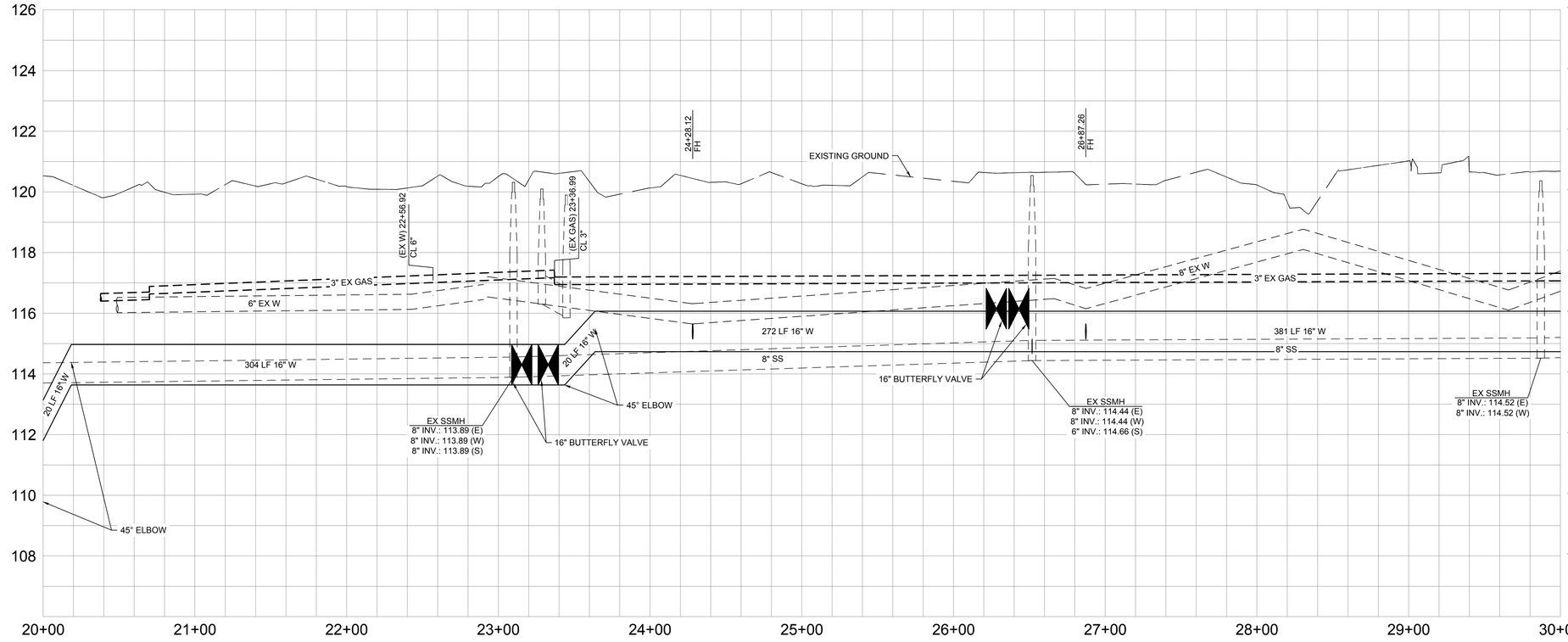
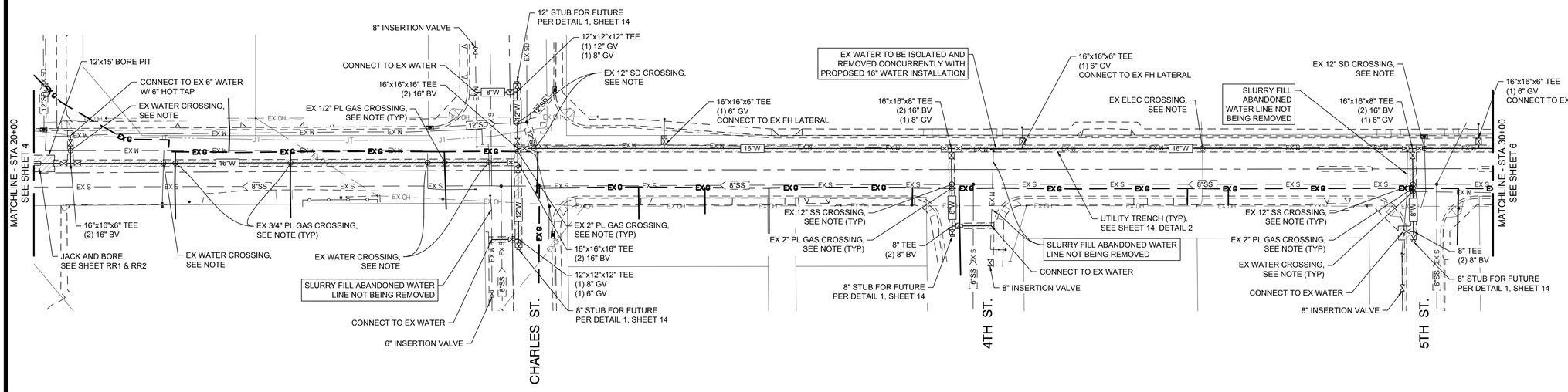
WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET 4 OF 16 SHEETS





WHITMORE AVENUE
STA 20+00 TO 30+00

NORTH

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C 91352
REGISTERED
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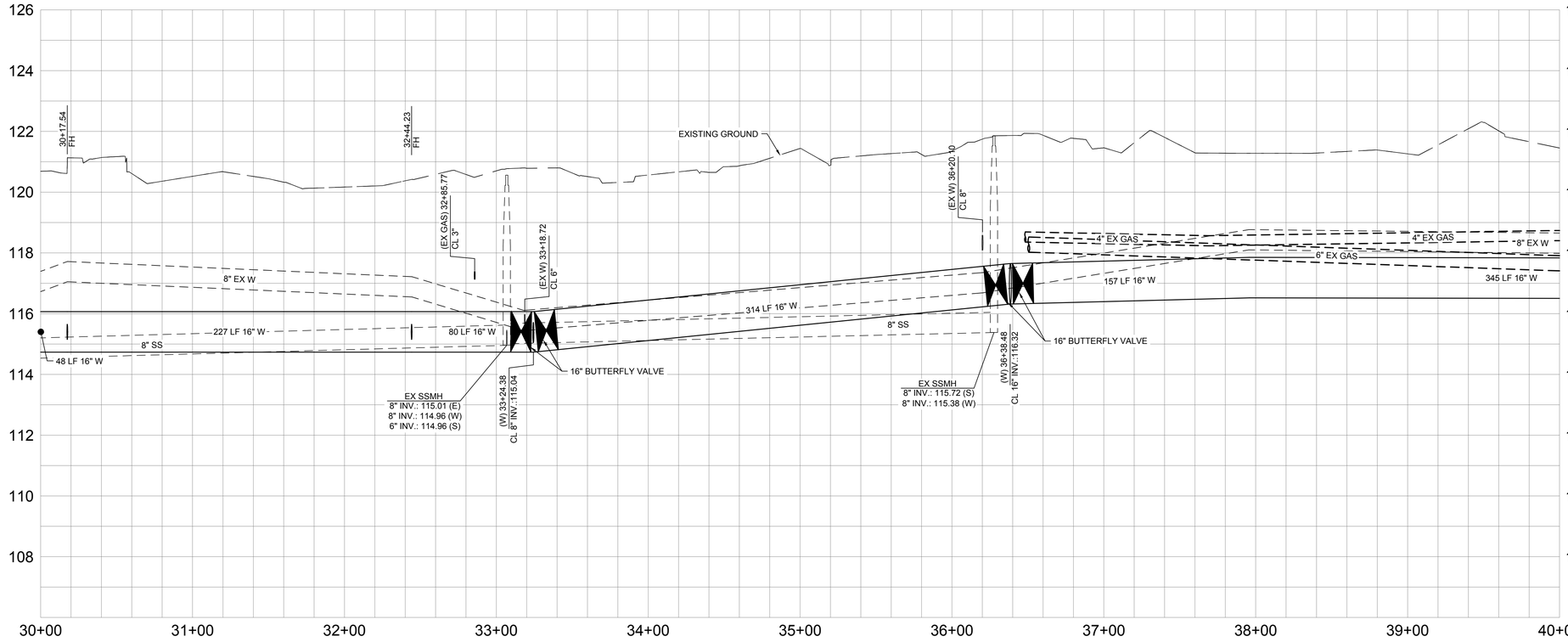
WHITMORE AVENUE
STA 20+00 TO 30+00

WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET
5
OF 16 SHEETS



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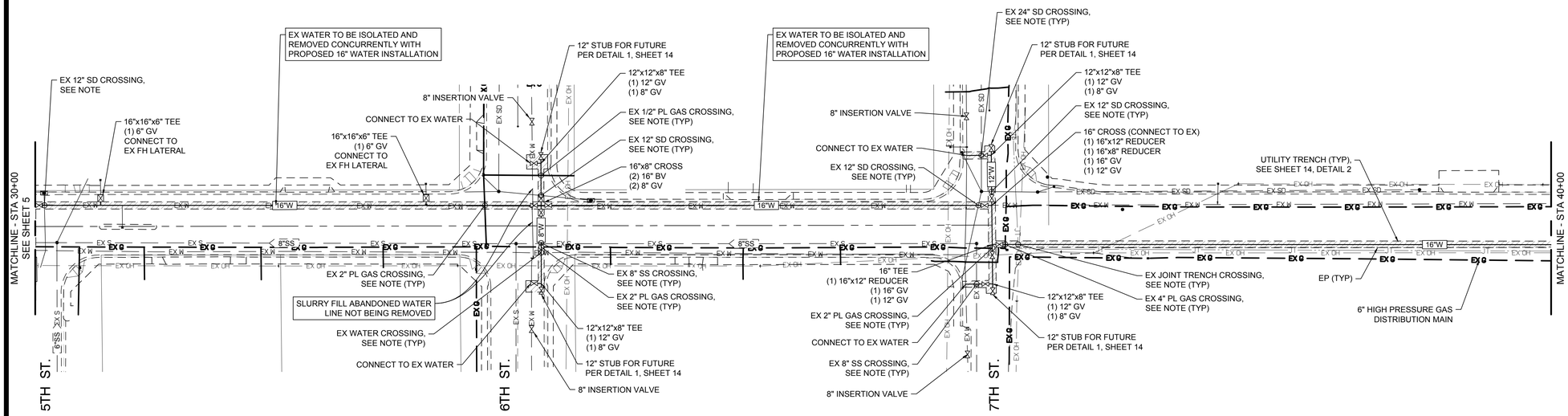

WHITMORE AVENUE
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NORTH

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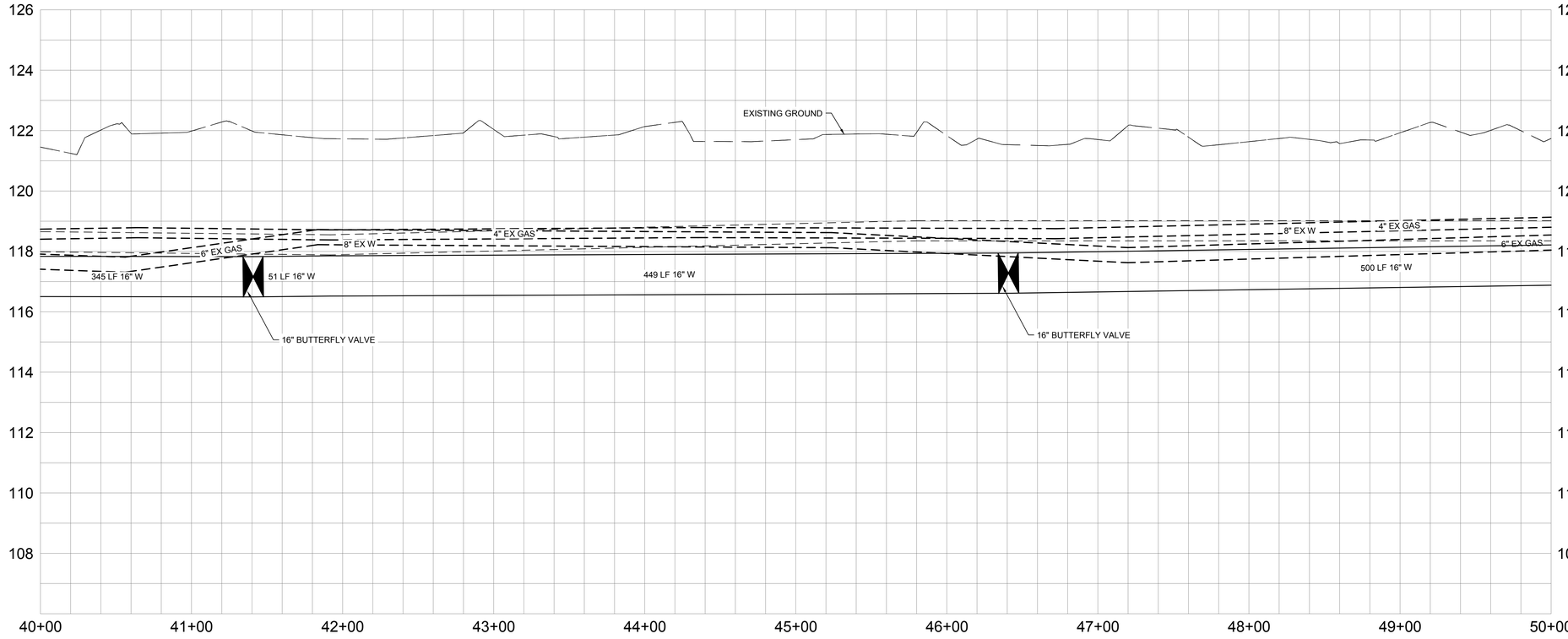

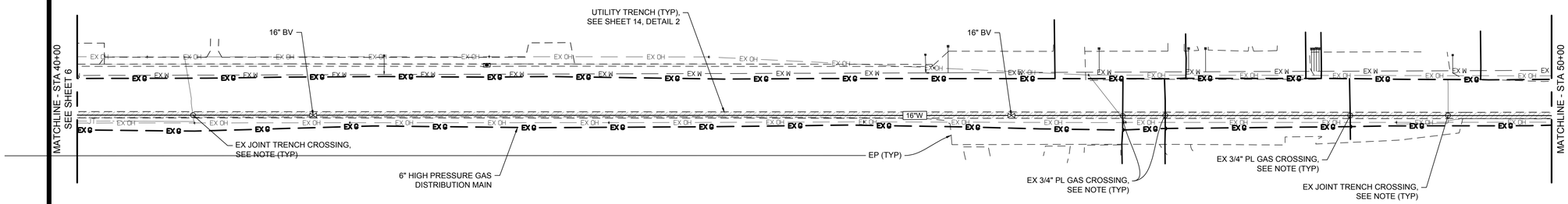

WHITMORE AVENUE
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WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

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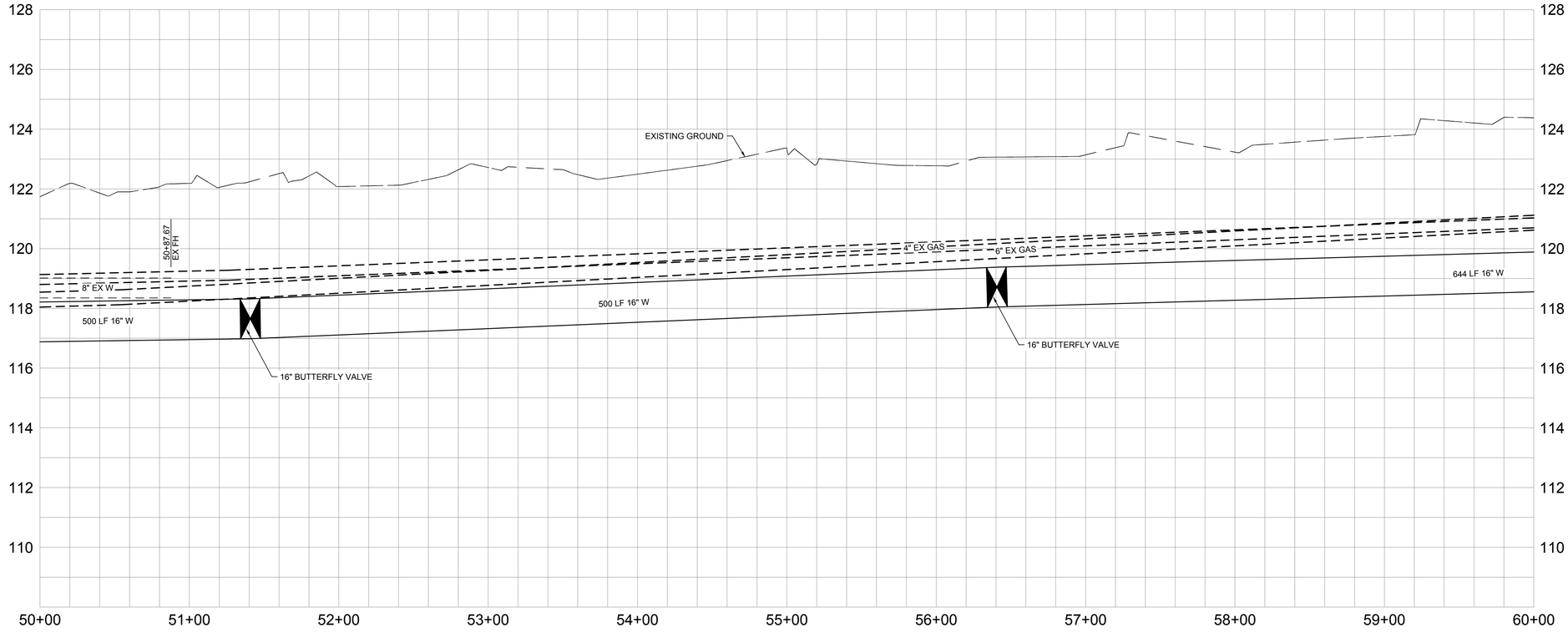

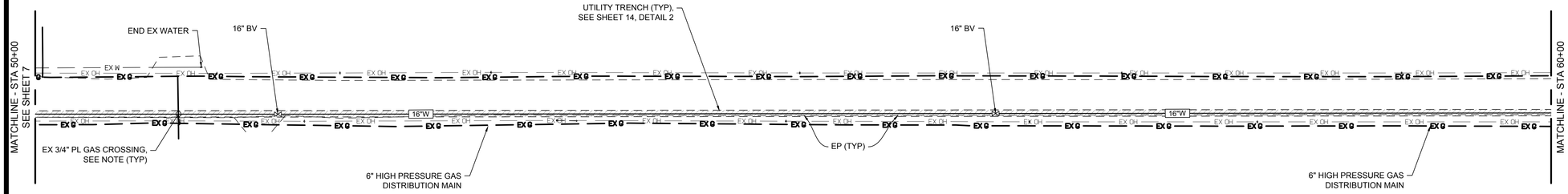

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TRENCH PATCH PAVEMENT

WHITMORE AVENUE
STA 50+00 TO 60+00

NORTH

0 20 40 80

CITY OF Hughson

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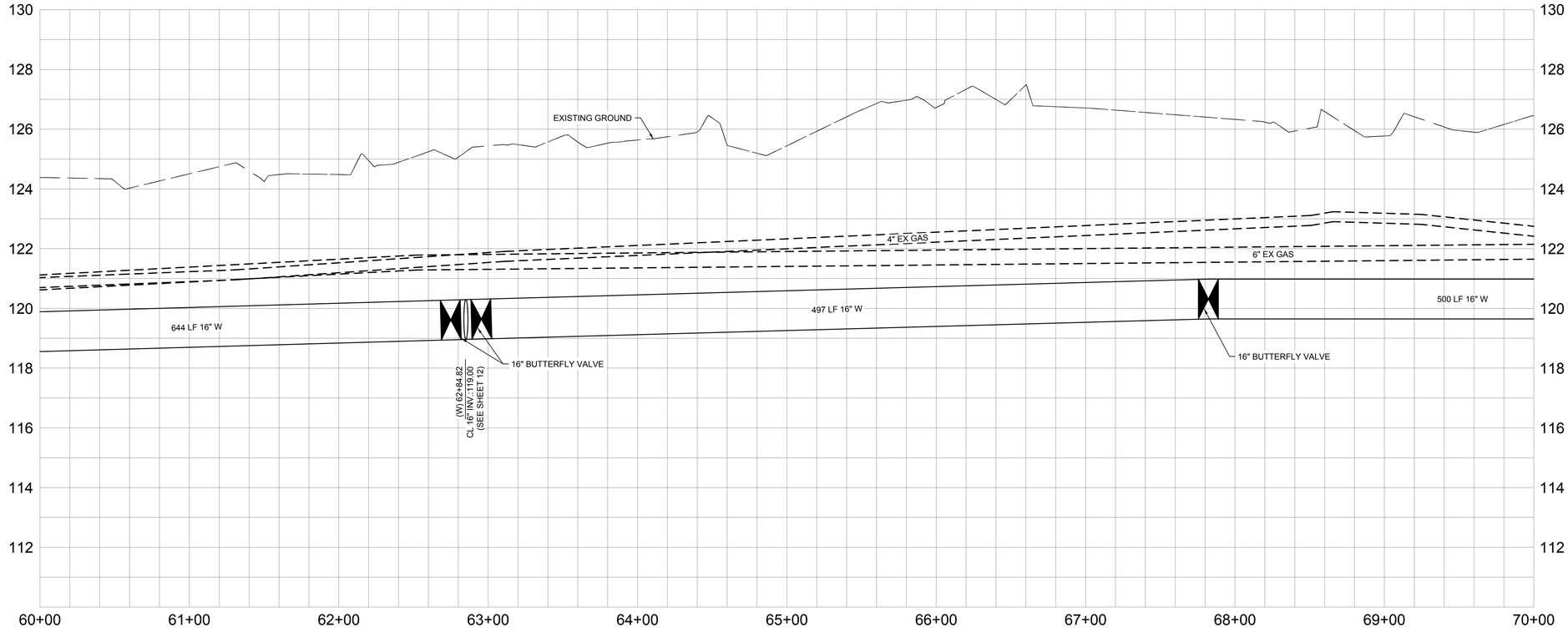
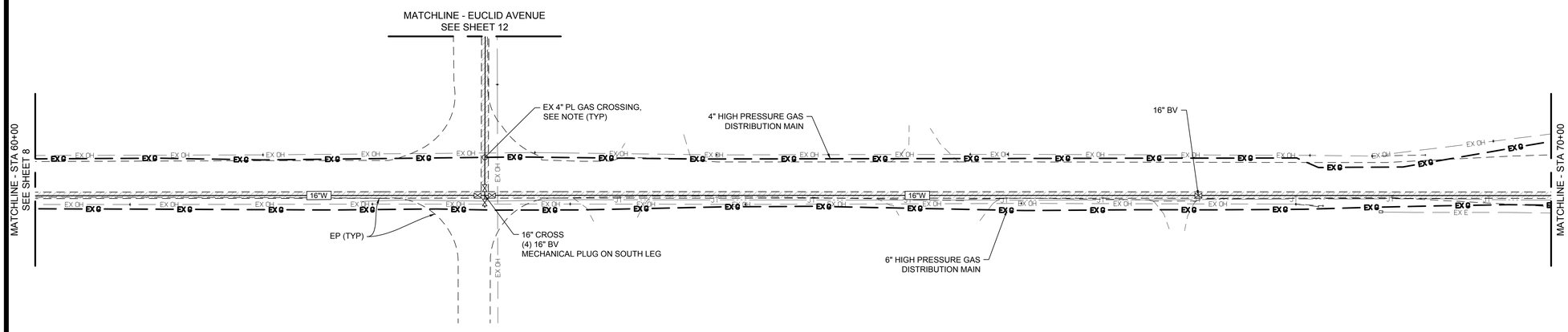
OF 16 SHEETS





NOTES

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LEGEND

TRENCH PATCH PAVEMENT

WHITMORE AVENUE
STA 60+00 TO 70+00

NORTH

0 20 40 80

CITY OF Hughson

PROFESSIONAL ENGINEER * REGISTERED * NICKLAUS B. STEPHENS * No. C 91352 * CIVIL * STATE OF CALIFORNIA

MCR ENGINEERING, INC.
1242 DUPONT COURT
MANTECA, CA 95336
TEL: (209) 239 - 6229
FAX: (209) 239 - 8839
PREPARED UNDER THE DIRECTION OF: NICKLAUS B. STEPHENS R.C.E. C91352 EXP: 9-30-22 DATE

PLAN REVISIONS

NO.	DESCRIPTIONS	DATE
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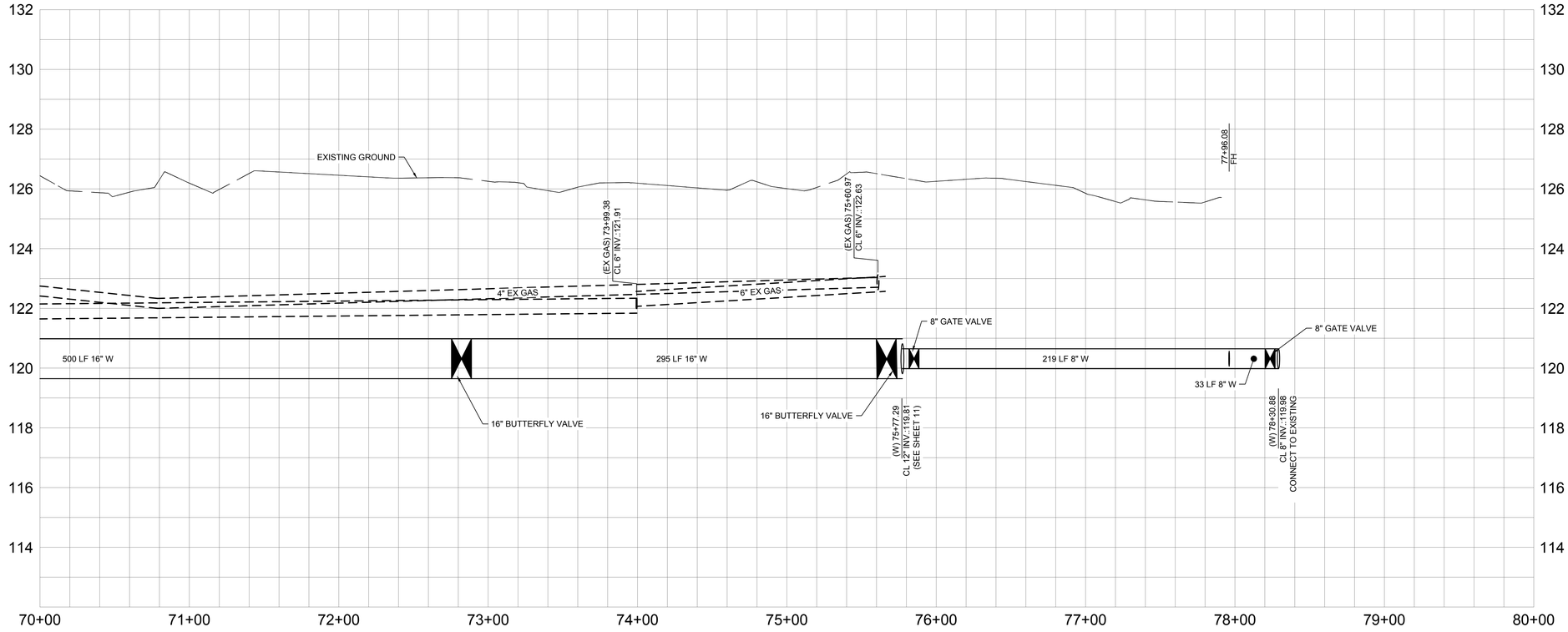
JOB NO. 20-110
DATE 3/25/2022
SCALE AS SHOWN
DR. BY NBS
CK. BY RM
FILE: HUGHSON1-PUBLIC

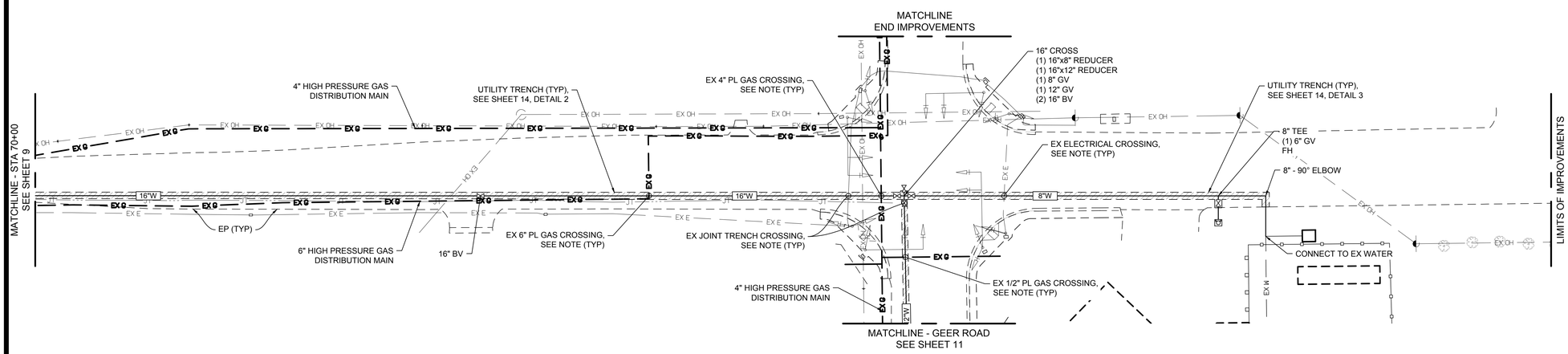
WHITMORE AVENUE
STA 60+00 TO 70+00

WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET
9
OF 16 SHEETS





WHITMORE AVENUE
STA 70+00 TO 80+00

NORTH

0 20 40 80

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TRENCH PATCH PAVEMENT

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WHITMORE AVENUE
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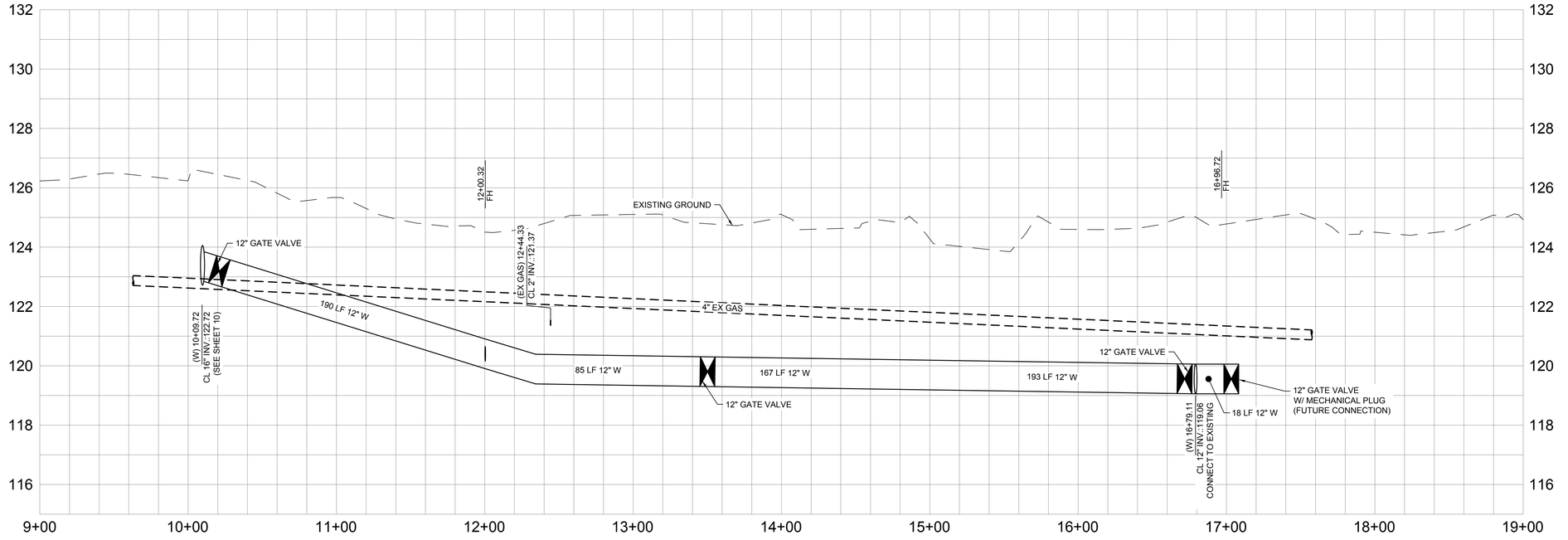
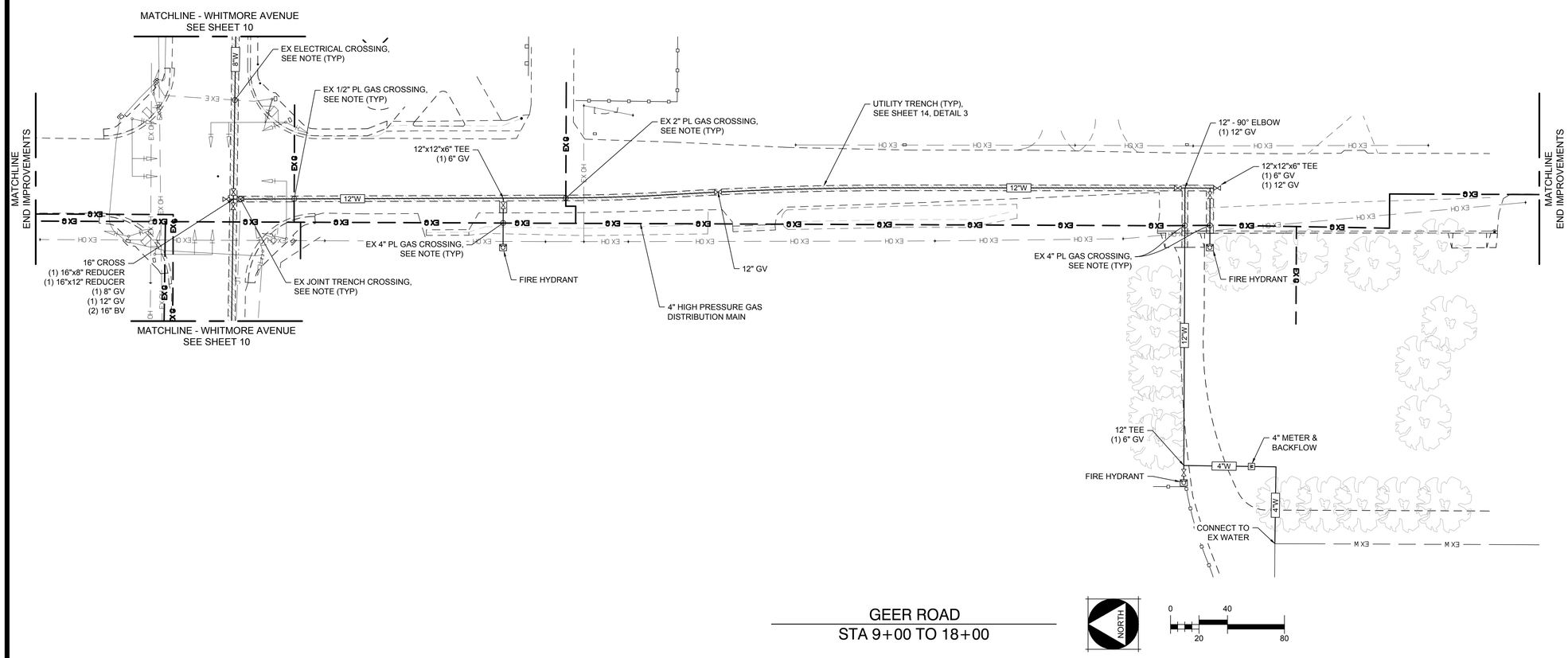
WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET
10
OF 16 SHEETS





GEER ROAD
STA 9+00 TO 18+00

NORTH

0 20 40 80

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LEGEND

TRENCH PATCH PAVEMENT

CITY OF Hughson

REGISTERED PROFESSIONAL ENGINEER NICKLAUS B. STEPHENS C 91352 CIVIL STATE OF CALIFORNIA

PROFESSIONALENGINEER.COM

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GEER ROAD
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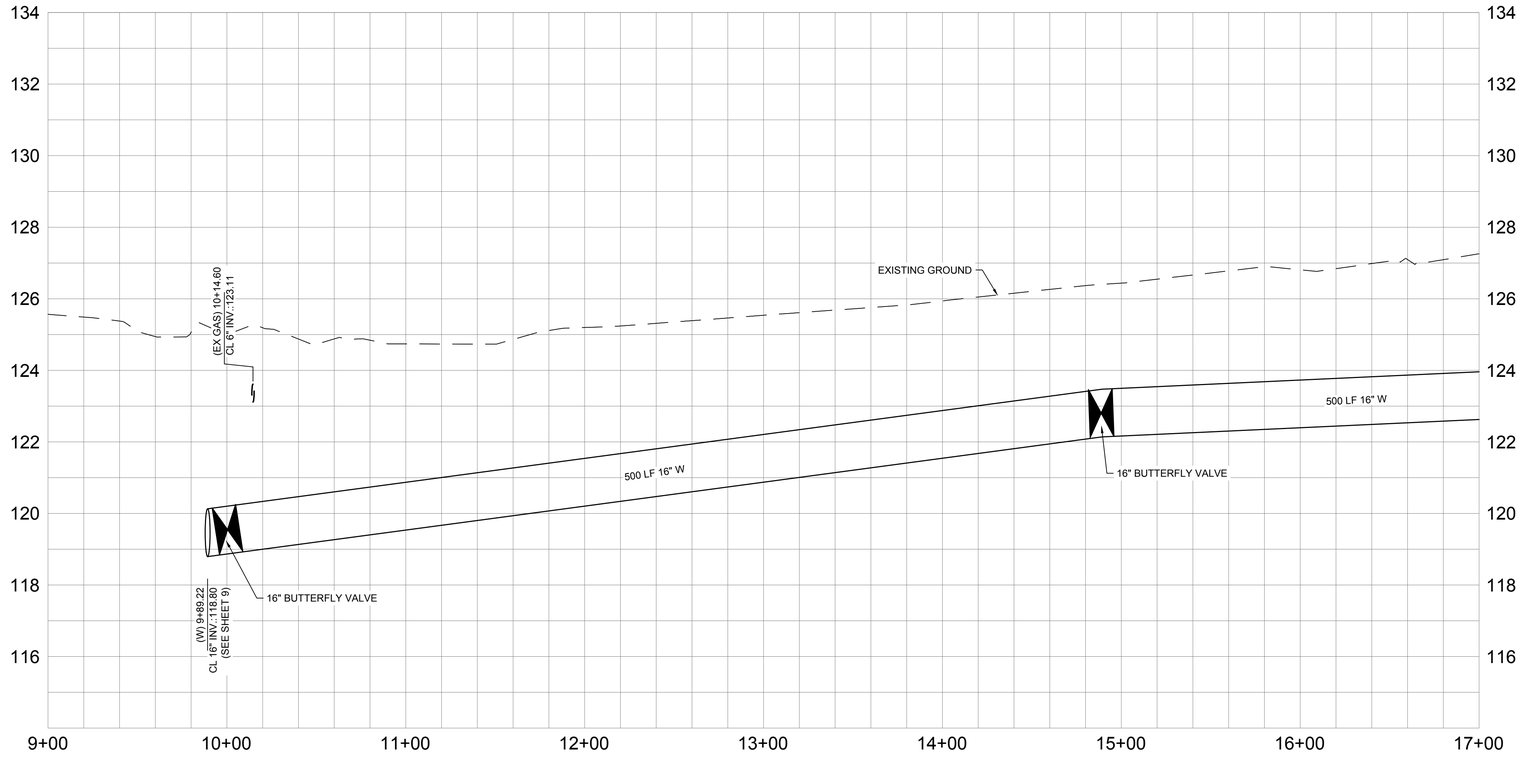
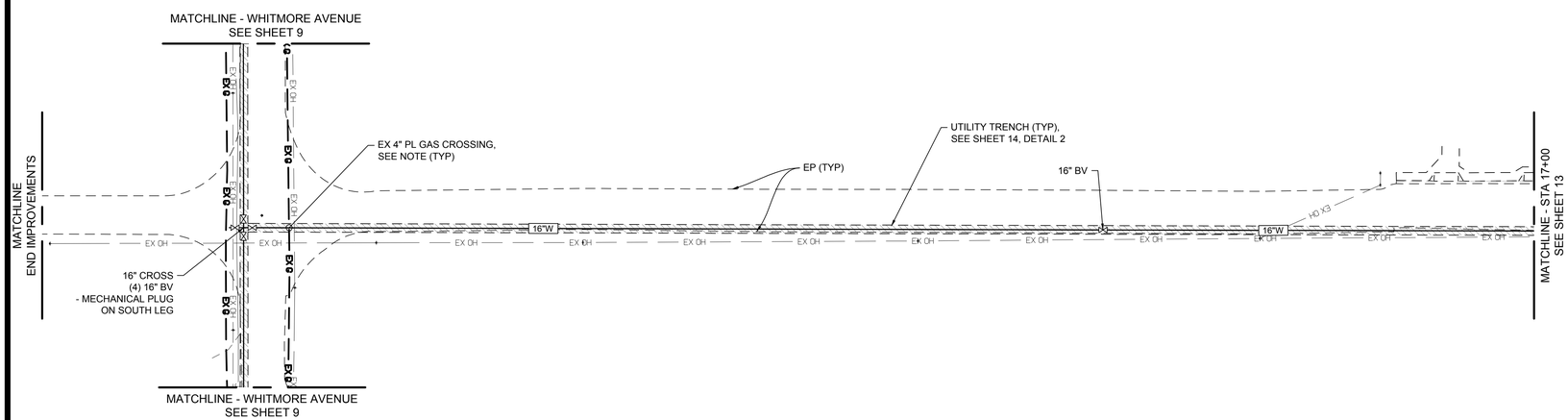
WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET 11 OF 16 SHEETS





EUCLID AVENUE
STA 9+00 TO 17+00

NORTH

0 20 40 80

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TRENCH PATCH PAVEMENT

CITY OF Hughson

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EUCLID AVENUE
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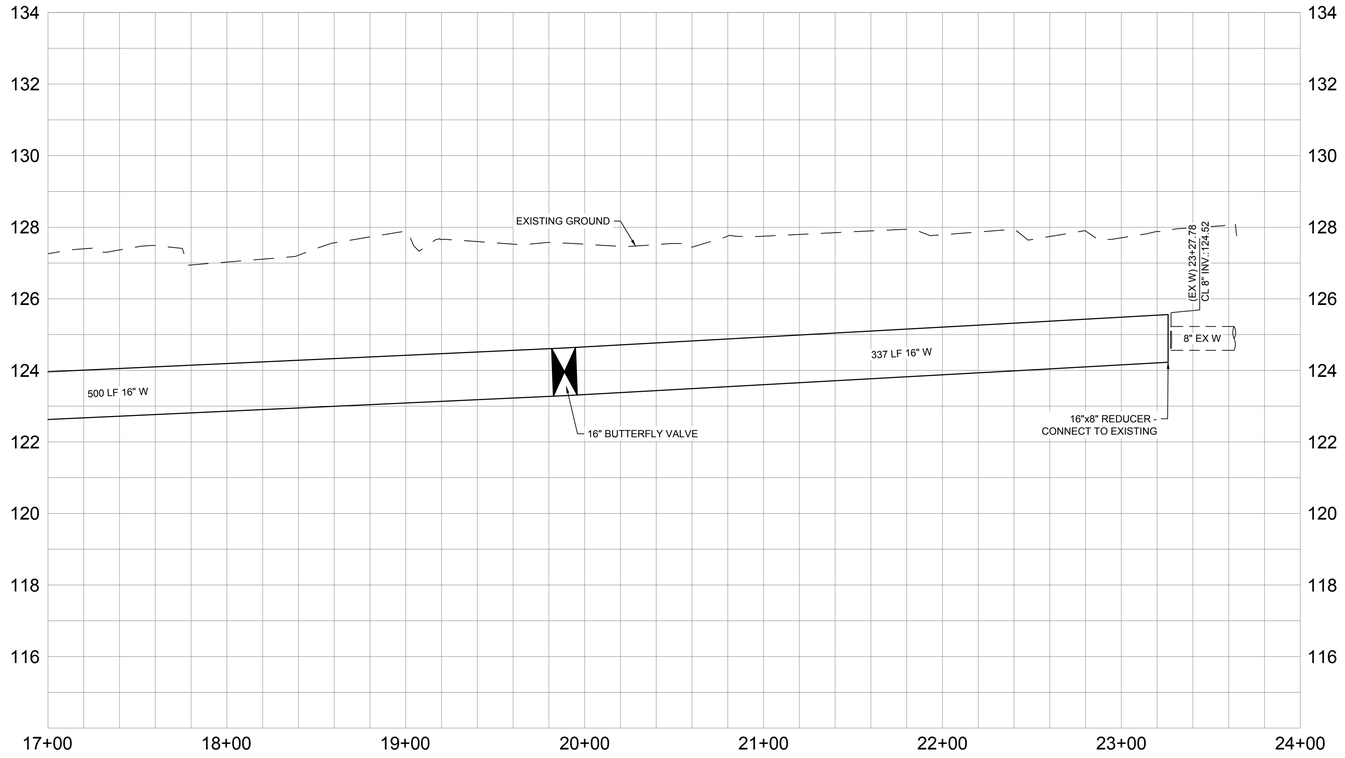
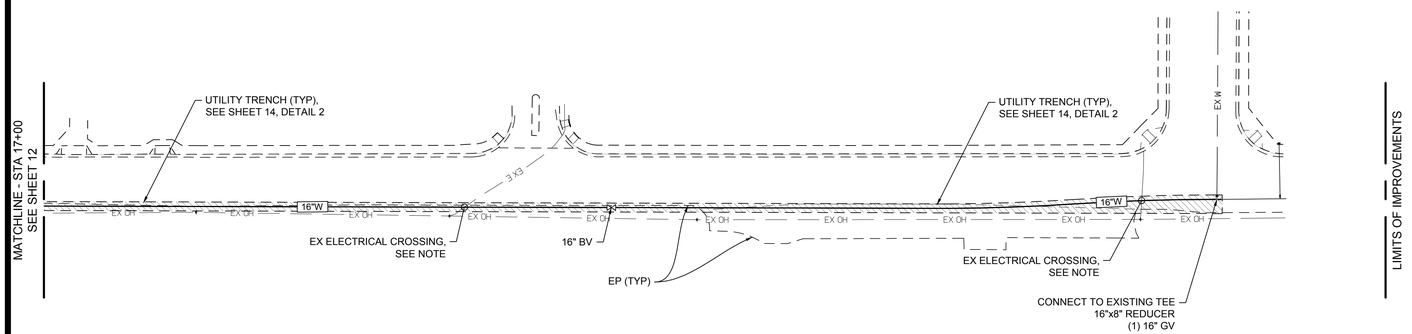
WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET
12
OF 16 SHEETS





EUCLID AVENUE
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TRENCH PATCH PAVEMENT

CITY OF Hughson

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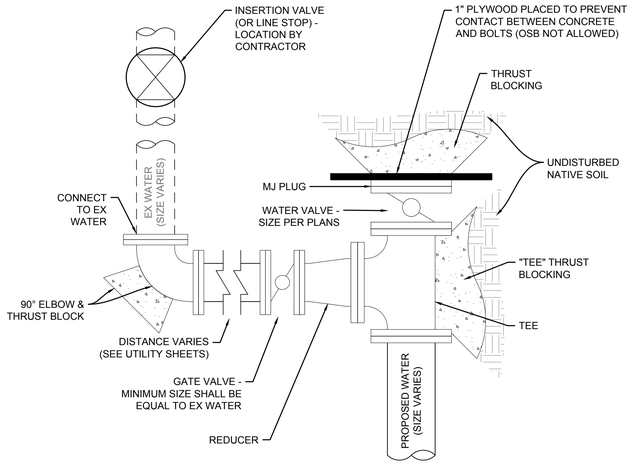
WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET
13
OF 16 SHEETS

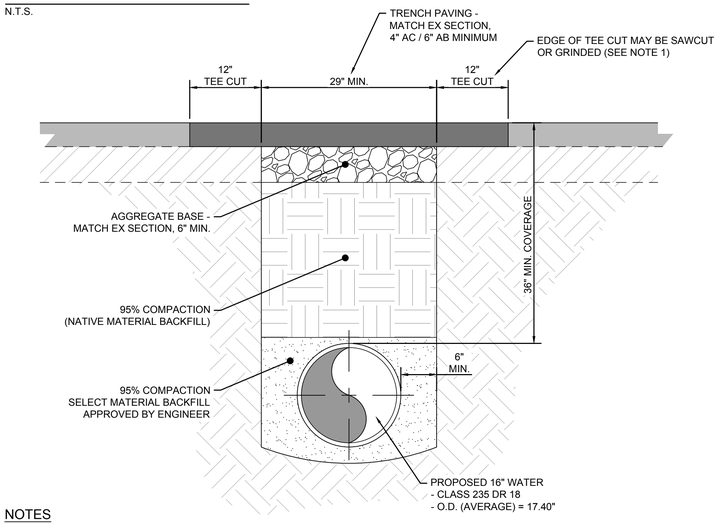
DETAIL 1: WATER LINE CONNECTION TO EXISTING

N.T.S.



DETAIL 2: TRENCH PAVING, 16" WATER

N.T.S.

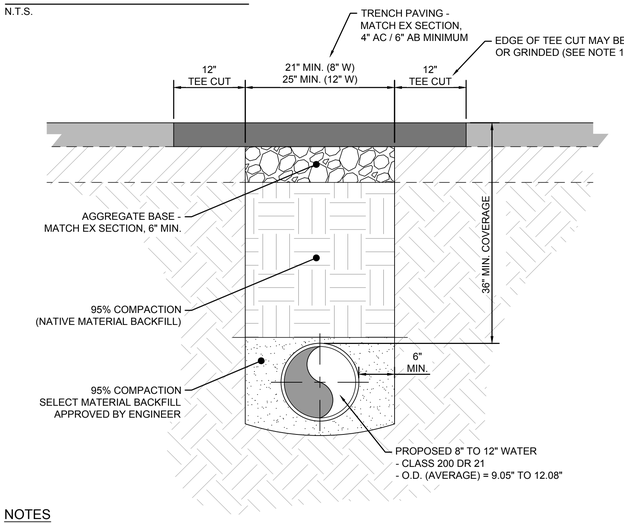


NOTES

1. TEE CUT SHALL NOT BE SAWCUT OR REMOVED UNTIL INSTALLATION AND ACCEPTANCE OF THE PROPOSED UTILITY AND BACKFILL OF THE UTILITY TRENCH.

DETAIL 3: TRENCH PAVING, 8" - 12" WATER

N.T.S.



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CITY OF Hughson

REGISTERED PROFESSIONAL ENGINEER NICKLAUS B. STEPHENS C 91352 CIVIL STATE OF CALIFORNIA

PRELIMINARY NOT FOR CONSTRUCTION

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CONSTRUCTION DETAILS

WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET 14 OF 16 SHEETS

NORTH

EROSION CONTROL PLAN

LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- (1) PROVIDE STORM DRAIN INLET PROTECTION
- STRAW ROLLS (DETAIL 1-C7)
- (A) PROVIDE CONSTRUCTION DEBRIS AREA (UTILIZE WATER-TIGHT DUMPSTERS FOR SOLIDS)
- (C) PROVIDE AGGREGATE AND CONCRETE RINSE AREA
- (B) PROVIDE MAINTENCE AREA
- (D) PROVIDE WASH DOWN AREA

NOTES:

1. PROVIDE GRAVEL BAGS AND INLET PROTECTION AT NEAREST DOWNSTREAM CURB INLET ON EACH CROSS STREET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND DETERMINING THE TOTAL NUMBER OF DOWNSTREAM INLETS NOT SHOWN IN THIS EROSION CONTROL PLAN. ANY ADDITIONAL COSTS SHALL BE INCLUDED IN THE LUMP SUM FOR SWPPP IMPLEMENTATION AND MAINTENANCE.

EROSION CONTROL NOTES

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE EFFECTIVE FOR THE DURATION OF THE CONSTRUCTION ACTIVITY.
2. EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE INSTALLED AND MAINTAINED THROUGH THE DURATION OF THE PROJECT. SEDIMENT CONTROL BMPs SHALL BE INSTALLED AND MAINTAINED YEAR ROUND.
3. EFFECTIVE EROSION CONTROL BMPs SHALL BE REVIEWED AND PROPERLY RESTORED (IF NECESSARY) PRIOR TO ANY STORM EVENTS.
4. THE NAME, ADDRESS AND 24-HOUR TELEPHONE NUMBER OF THE PERSON RESPONSIBLE FOR IMPLEMENTATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE PROVIDED.
5. ALL DRAINAGE INLETS IMMEDIATELY DOWNSTREAM OF THE WORK AREAS AND WITHIN THE WORK AREAS SHALL BE PROTECTED WITH SEDIMENT CONTROL AND INLET FILTER BAGS YEAR ROUND. INLET FILTER BAGS SHALL BE REMOVED FROM THE DRAINAGE INLETS UPON COMPLETION OF CONSTRUCTION.
6. THE CONTRACTOR(S) SHALL KEEP ALL PUBLIC ROADWAYS ADJACENT TO THE PROJECT SITE FREE AND CLEAR OF MUD AND SILT DURING THE TERM OF THIS CONTRACT. THIS INCLUDES MUD CAUSED BY RAIN OR BY THE CONTRACTOR(S) WATERING PROCEDURES FOR DUST CONTROL.
7. ALL STABILIZED CONSTRUCTION ACCESS LOCATIONS SHALL BE CONSTRUCTED WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES PAVED AREAS. THE STABILIZED ACCESS SHALL BE MAINTAINED ON A YEAR ROUND BASIS UNTIL THE COMPLETION OF CONSTRUCTION.
8. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED ROCK THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SANDBAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
9. SEDIMENT CONTROL BMPs SHALL BE PLACED ALONG THE PROJECT PERIMETER WHERE DRAINAGE LEAVES THE PROJECT. SEDIMENT CONTROL BMPs SHALL BE MAINTAINED YEAR ROUND UNTIL THE CONSTRUCTION IS COMPLETE OR THE DRAINAGE PATTERN HAS BEEN CHANGED AND NO LONGER LEAVES THE SITE.
10. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS, BUT ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE CITY ENGINEER.
11. DURING THE RAINY SEASON ALL SIDEWALK AND PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF FROM ENTERING ANY STORM DRAINAGE SYSTEM.
12. THE EROSION AND SEDIMENTATION CONTROL PLAN COVERS ONLY THE FIRST WINTER DURING WHICH CONSTRUCTION IS TO TAKE PLACE. PLANS ARE TO BE RESUBMITTED PRIOR TO SEPTEMBER 1 OF EACH SUBSEQUENT YEAR UNTIL THE CITY ACCEPTS THE SITE IMPROVEMENTS.
13. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT AND REPAIR ALL EROSION CONTROL FACILITIES AT THE END OF EACH WORK DAY DURING THE RAINY SEASON.
14. IT IS THE RESPONSIBILITIES OF THE CONTRACTOR TO PROTECT TEMPORARY BORROW AREAS AND/OR STOCKPILES WITH APPROPRIATE EROSION CONTROL MEASURES SATISFACTORY TO THE CITY ENGINEER.
15. THE CLEANING OF PAVED STREETS, DURING AND AT THE COMPLETION OF CONSTRUCTION, SHALL BE PERFORMED WITH MECHANICAL SWEEPERS. THE USE OF WATER TRUCKS TO "WASH DOWN" THE STREET IS PROHIBITED.
16. ALL MATERIALS STORED ON SITE SHALL HAVE PROPER ENCLOSURES AND/OR COVERINGS.
17. CONTRACTOR SHALL PLACE FIBER ROLLS AROUND THE SITE PERIMETER. THE CONTRACTOR SHALL INSPECT AND REPAIR FIBER ROLLS AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT RUN-OFF AND CAN BE PERMANENTLY STABILIZED.
18. NO ON-SITE FUELING SHALL TAKE PLACE.
19. THE CONTRACTOR SHALL KEEP THE WORK SITE FREE AND CLEAR OF RUBBISH AND DEBRIS.
20. THROUGHOUT ALL PHASES OF CONSTRUCTION, INCLUDING SUSPENSION OF WORK, AND UNTIL FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL KEEP THE PREMISES OCCUPIED BY THEM IN A CLEAN AND ORDERLY CONDITION, DISPOSING OF REFUSE AND LITTER IN A MANNER SATISFACTORY TO THE COUNTY.
21. THE FOLLOWING PLANS ARE ACCURATE FOR EROSION CONTROL PURPOSES ONLY.
22. THE INFORMATION ON THIS PLAN IS INTENDED TO BE USED AS A GUIDELINE FOR THE CONTRACTOR AND SUBCONTRACTORS TO COMPLY WITH THE REQUIREMENTS OF THE STATE WATER RESOURCES CONTROL BOARD. FIELD CONDITIONS MAY NECESSITATE MODIFICATIONS TO THIS PLAN.

CITY OF Hughson

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NICKLAUS B. STEPHENS R.C.E. C91352 EXP: 9-30-22 DATE

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EROSION CONTROL PLAN

WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET 15 OF 16 SHEETS

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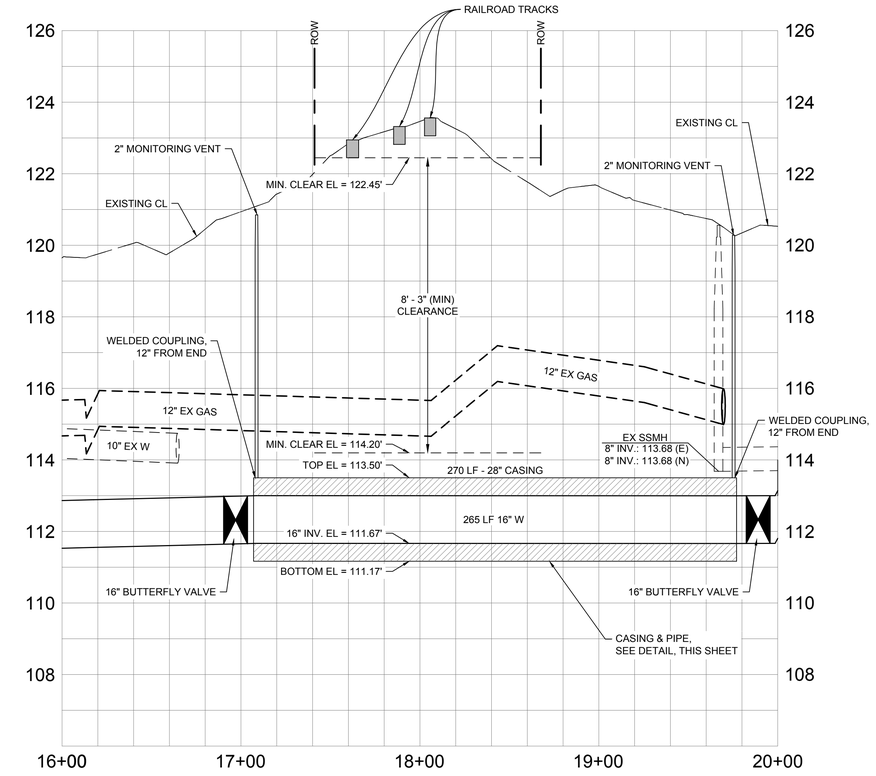
7. EX WATER PIPE SHALL BE ABANDONED IN PLACE AT THE LOCATIONS. THE EXISTING PIPE SHALL BE FILLED BY PRESSURE GROUTING. THE GROUT MATERIAL SHALL BE A SAND CEMENT SLURRY WITH A MINIMUM OF TWO (2) SACKS OF CEMENT PER CUBIC YARD AND A MINIMUM AMOUNT OF WATER TO ASSURE SATISFACTORY PLACEMENT.
8. SECURITY FENCING IS REQUIRED AROUND BORE PIT AND RECEIVING PIT WHILE OPEN.

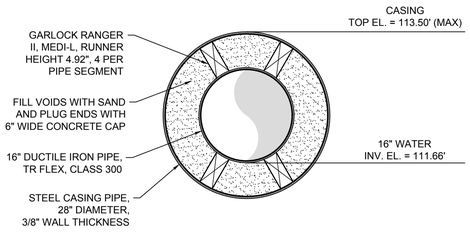
LEGEND

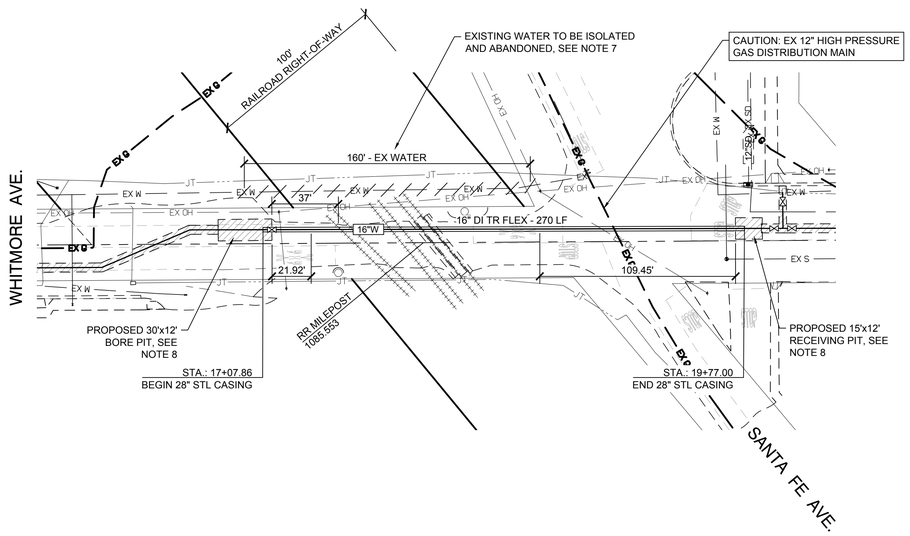
TRENCH PATCH PAVEMENT



CASING & PIPE DETAIL

NOT TO SCALE





WHITMORE AVENUE
STA 10+00 TO 20+00

NORTH

0 40
20 80

MCR ENGINEERING, INC.
1242 DUPONT COURT
MANTECA, CA 95336
TEL: (209) 239 - 6229
FAX: (209) 239 - 8839
PREPARED UNDER THE DIRECTION OF:
NICKLAUS B. STEPHENS R.C.E. C91352 EXP: 9-30-22 DATE

PLAN REVISIONS

NO.	DESCRIPTIONS	DATE
1		
2		
3		
4		
5		
6		
7		

JOB NO. 20-110
DATE 3/25/2022
SCALE AS SHOWN
DR. BY NBS
CK. BY RM
FILE: HUGHSON#1-PUBLIC

SANTA FE RR CROSSING

WATER CONSOLIDATION PROJECT

HUGHSON, CALIFORNIA

SHEET
RR1
OF 16 SHEETS

Attachment B

CNDDB Summary Report and Exhibits

& USFWS IPaC Trust Report

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Riverbank (3712068) OR Waterford (3712067) OR Ceres (3712058) OR Denair (3712057))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acipenser medirostris pop. 1 green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Anniella pulchra Northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Atriplex subtilis subtle orache	PDCHE042T0	None	None	G1	S1	1B.2
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G2	S1S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Clarkia rostrata beaked clarkia	PDONA050Y0	None	None	G2G3	S2S3	1B.3
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2T3	S3	
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Lasiurus cinereus hoary bat	AMACC05030	None	None	G3G4	S4	
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Lytta moesta moestan blister beetle	IICOL4C020	None	None	G2	S2	
Mylopharodon conocephalus hardhead	AFCJB25010	None	None	G3	S3	SSC
Neostapfia colusana Colusa grass	PMPOA4C010	Threatened	Endangered	G1	S1	1B.1

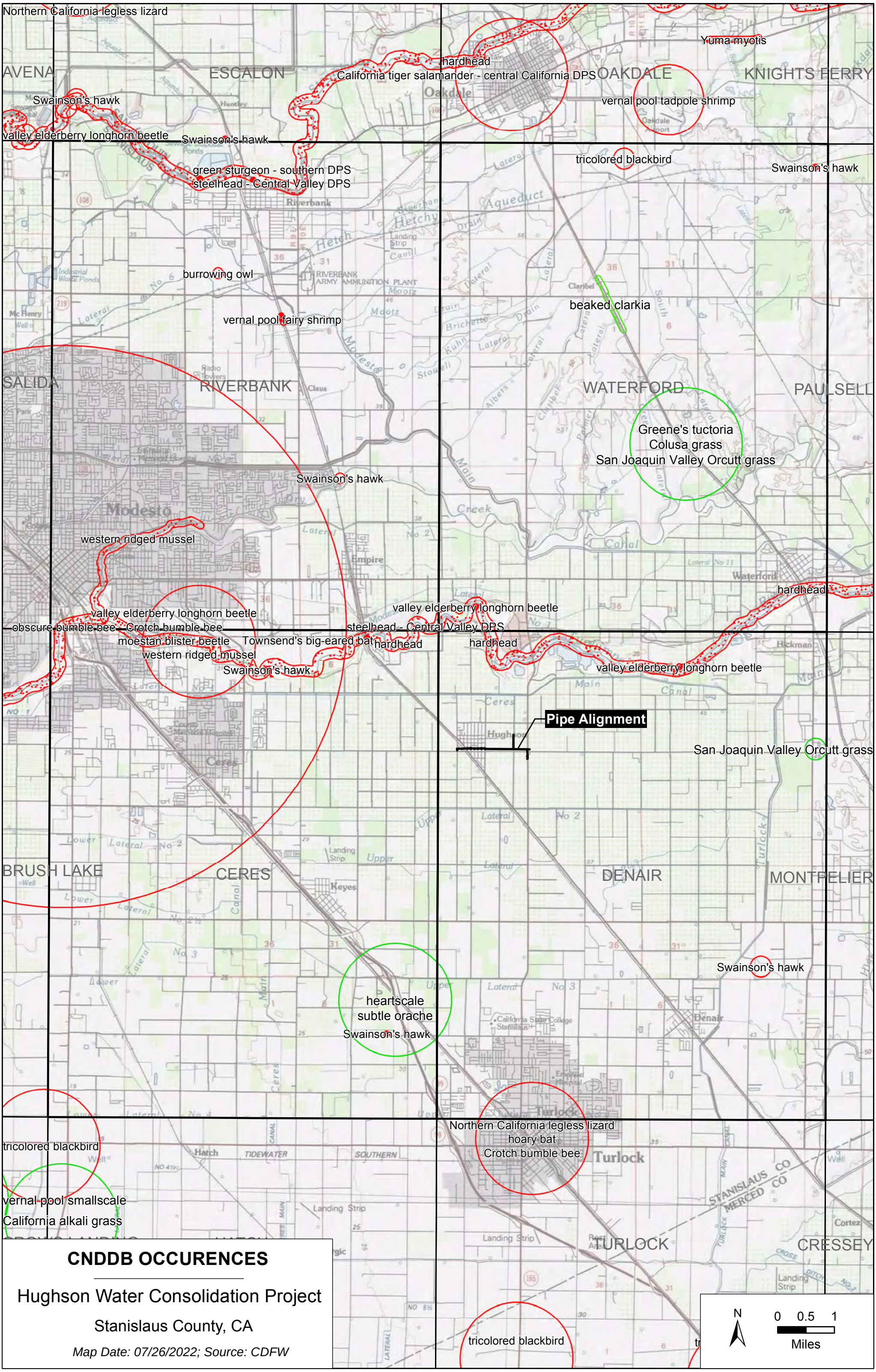
Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Oncorhynchus mykiss irideus pop. 11	AFCHA0209K	Threatened	None	G5T2Q	S2	
steelhead - Central Valley DPS						
Orcuttia inaequalis	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1
San Joaquin Valley Orcutt grass						
Tuctoria greenei	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
Greene's tuctoria						

Record Count: 22



CNDDB OCCURENCES

Hughson Water Consolidation Project

Stanislaus County, CA

Map Date: 07/26/2022; Source: CDFW

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Stanislaus County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS
Giant Garter Snake Thamnophis gigas Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2246

Flowering Plants

NAME	STATUS

San Joaquin Orcutt Grass Orcuttia inaequalis — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/5506

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH

IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for

that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

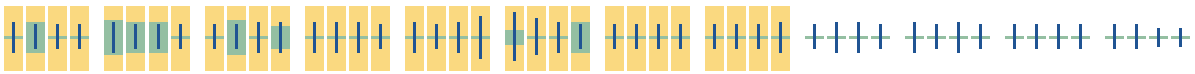
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

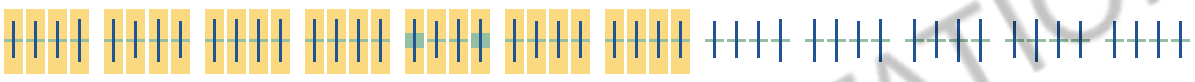
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

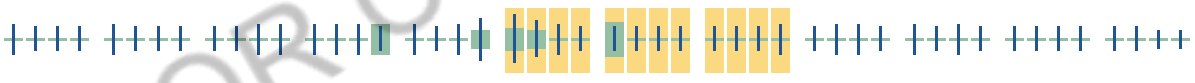
Bald Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



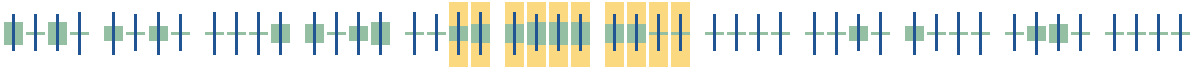
California Thrasher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



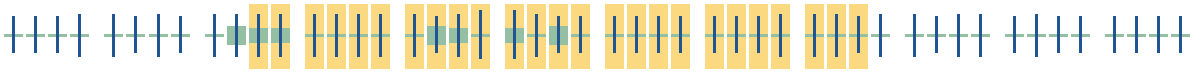
Clark's Grebe BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Common Yellowthroat BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



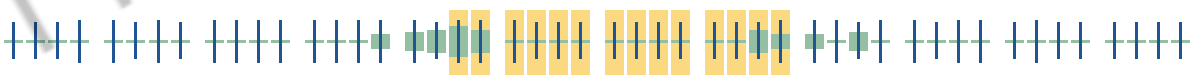
Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

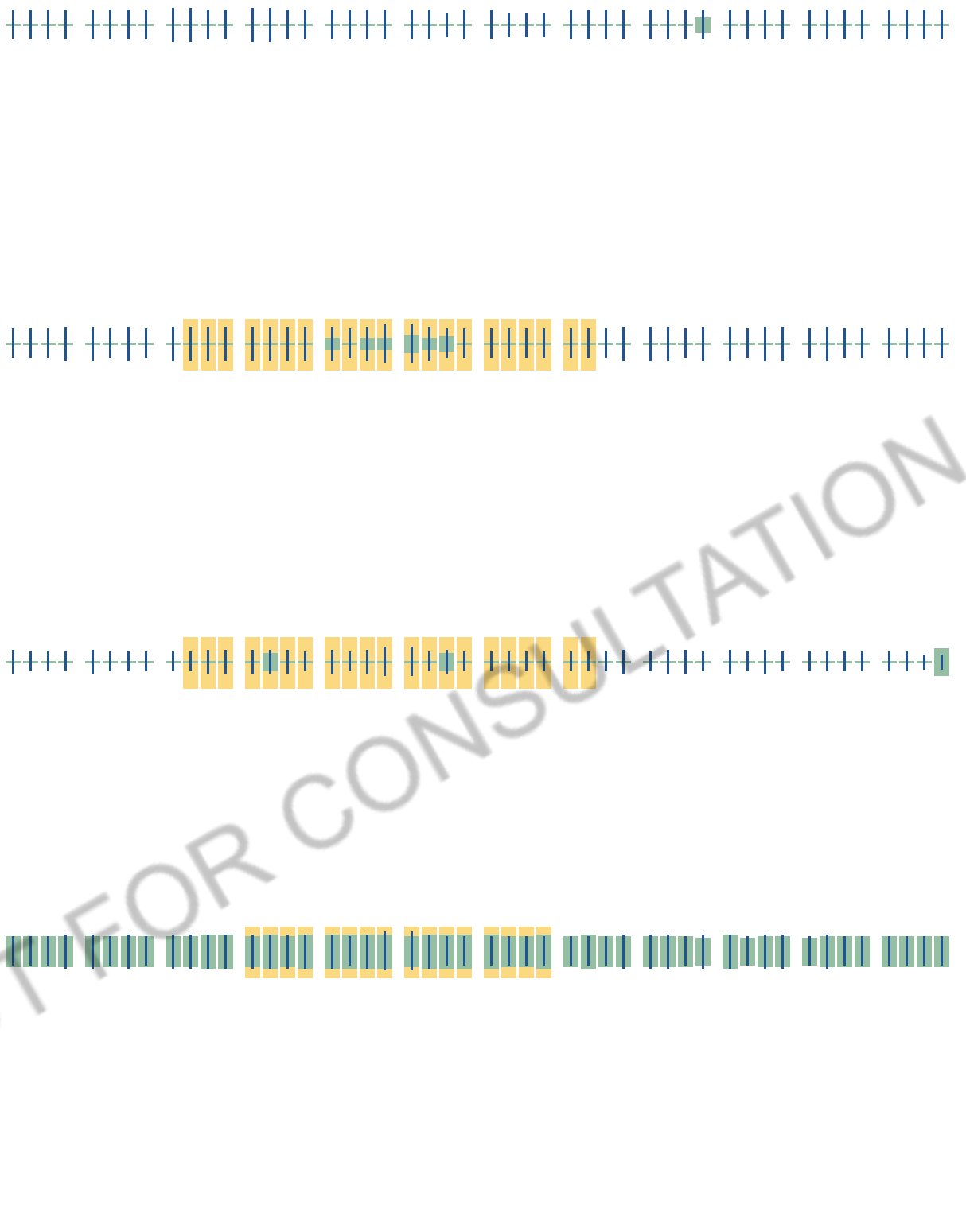


Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Olive-sided Flycatcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)





Short-billed Dowitcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tricolored Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Yellow-billed Magpie BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure.

To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment C

Photographs

West end of the alignment, looking north along Tully Road; 08/23/22.

Trees at the south end of a park in the west part of the alignment, looking northeast from E. Whitemore Avenue; 08/23/22.

Road shoulder in the approximate central part of the alignment, looking west along E. Whitmore Avenue; 08/23/22.

Large trees in the approximate central part of the alignment, looking northwest from the south road shoulder along E. Whitmore Avenue; 08/23/22. The Hughson Arboretum is located just east of this cluster of trees.

North end of the pipeline alignment, looking south down Euclid Avenue; 08/23/22.

Cluster of large trees near the north end of the alignment, looking northeast from Euclid Avenue; 08/23/22.

South end of the alignment, looking north along Geer Road; 08/23/22.

Appendix D

Designated Critical Habitat

Steelhead

California tiger Salamander

Colusa grass/Vernal pool tadpole shrimp

Greene's tuctoria

OAKDALE

KNIGHTS FERRY

SALIDA

RIVERBANK

WATERFORD

PAULSELL

Pipe Alignment

BRUSH LAKE

CERES

DENAIR

MONTPELIER

CROWS LANDING

HATCH

TURLOCK

CRESSEY

CRITICAL HABITAT

Hughson Water Consolidation Project

Stanislaus County, CA

Map Date: 07/26/2022; Source: USFWS; NOAA

N

0 0.75 1.5

Miles

APPENDIX C
CULTURAL RESOURCE REPORT

Cultural Resources Inventory and Evaluation Report
Hughson Water Consolidation Project

City of Hughson, Stanislaus County, California

Prepared for:

Basecamp Environmental, Inc.
802 West Lodi Ave.
Lodi, CA 95240

September 2022

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MANAGEMENT SUMMARY

The City of Hughson (the City) has proposed to install new water lines in several locations to service neighborhoods not presently connected to the City's system (the Project). The new pipelines would be installed within the right-of-way of Whitmore Avenue from Tully Road to approximately 800 feet (ft.) east of Geer Road – a distance of approximately 7,450 linear ft. Additional extensions off Whitmore Avenue result in a proposed new pipeline alignment of approximately 9,550 ft. The proposed Project would be funded through the State Water Resources Control Board's (SWRCB) Drinking Water State Revolving Fund (DWSRF) program. As a result of the funding mechanism, the Project is subject to both the California Environmental Quality Act (CEQA), and Section 106 of the National Historic Preservation Act (Section 106). To facilitate the Section 106 and CEQA compliance processes, Solano Archaeological Services, LLC was contracted by Basecamp Environmental to complete background research, an archaeological survey, and a Native American community outreach program to document and evaluate cultural resources that might be located within the Project's Area of Potential Effects.

Background research was conducted through the Central California Information Center of the California Historical Resources Information System which indicated that one historic-era cultural resource, a segment of Burlington Northern and Santa Fe Railway line, is present within the APE. SAS contacted the Native American Heritage Commission requesting a Sacred Lands File search, and a list of appropriate regional Native American tribal representatives and contacts. The NAHC reported that no documented Native American cultural sites or sensitive properties were known to be present within or near the APE. Contact letters were sent to each of the tribes listed by the NAHC but as of this report no responses have been received. Future input from tribal contacts, if any, will be included as an addendum to this study.

An intensive survey of the APE did not result in the discovery of any previously documented prehistoric or historic-era cultural resources and the proposed Project would not affect the segment of railway line in the APE. In addition, the APE appears to retain a low level of archaeological sensitivity, the NAHC did not identify any culturally significant properties within or near the APE, and none of the contacted tribal representatives expressed any concerns about the proposed Project. Due to the low level of archaeological sensitivity, a lack of documented resources in the APE that would be affected by the Project, and a lack of identified Native American properties or concerns, SAS recommends that the Project would have *no effect on historic properties* per Section 106, and *no impacts on historical resources* per CEQA.

Information contained in this document is subject to Section 304 of the NHPA (Public Law 89-665), which allows a federal agency official to withhold sensitive information about the location, character, or ownership of a historical resource from public disclosure when it is determined that disclosure may cause a significant invasion of privacy, risk harm to a historical resource, or impede the use of a traditional religious site by practitioners.

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APPENDICES

1.0 Introduction

This document presents the findings of background research, cultural resources inventory, and Native American community outreach for the Hughson Water Consolidation Project (the Project) located in the City of Hughson (the City), Stanislaus County, California. The proposed Project consists of the City extending water service to a residential neighborhood just to the east of downtown. The Project's Area of Potential Effects (APE) is situated near the southern limits of the City along East Whitmore Avenue (Figures 1–3). All aspects of this cultural resources investigation were conducted or supervised by Co-Principal Investigators Jason Coleman, M.A., RPA, and Brian Ludwig, Ph.D., of Solano Archaeological Services, LLC (SAS) (Appendix A).

1.1 Project Description

The proposed Project would install approximately 9,550 linear feet (ft.) of new water pipeline in several locations. A 16-inch (in.) diameter water pipeline would be installed within the right-of-way (ROW) of Whitmore Avenue from Tully Road to approximately 800 ft. east of Geer Road – a distance of approximately 7,450 linear ft. The western terminus of this pipeline would connect to the City's water system through a new pipeline, approximately 100 ft. in length and 16 in. in diameter, that would be extended south from Whitmore Avenue along Tully Road to an existing stub water line. The eastern terminus would be the point at which the Cobles Corner Mobile Home Park would connect to the City's water system by a looped pipeline approximately 10 in. in diameter. No land uses between the City and the mobile home park are planned to be connected to this pipeline.

Another water pipeline, approximately 700 ft. in length and 12 in. in diameter, would be installed within the ROW of Geer Road from its intersection with Whitmore Avenue to the Country Villa Apartments. The apartment complex would connect to the City's water system at the southern terminus of this pipeline by a looped pipeline approximately 10 in. in diameter. No other land uses in the vicinity of this proposed pipeline are planned to be connected. At both the mobile home park and the apartment complex, a master meter vault for wholesale delivery of water would be installed.

In addition, a water pipeline, approximately 1,300 linear ft. in length and 16 in. in diameter, is proposed to be installed along Euclid Avenue from the Whitmore Avenue intersection north. The northern terminus of this pipeline would connect to an existing portion of the City's water system, which would complete a loop that would improve water pressure and maintain water quality in the area.

Pipelines would be installed within trenches, bedded on engineered gravel material if native material is not suitable. Initial cover would be with engineered gravel material and the remainder of the cover material would be compacted excavated material. Any excess excavated material would be disposed within the adjacent ROW. Pipeline construction would be confined to the existing ROW of Whitmore Avenue and Geer Road; no additional ROW acquisitions would be required.
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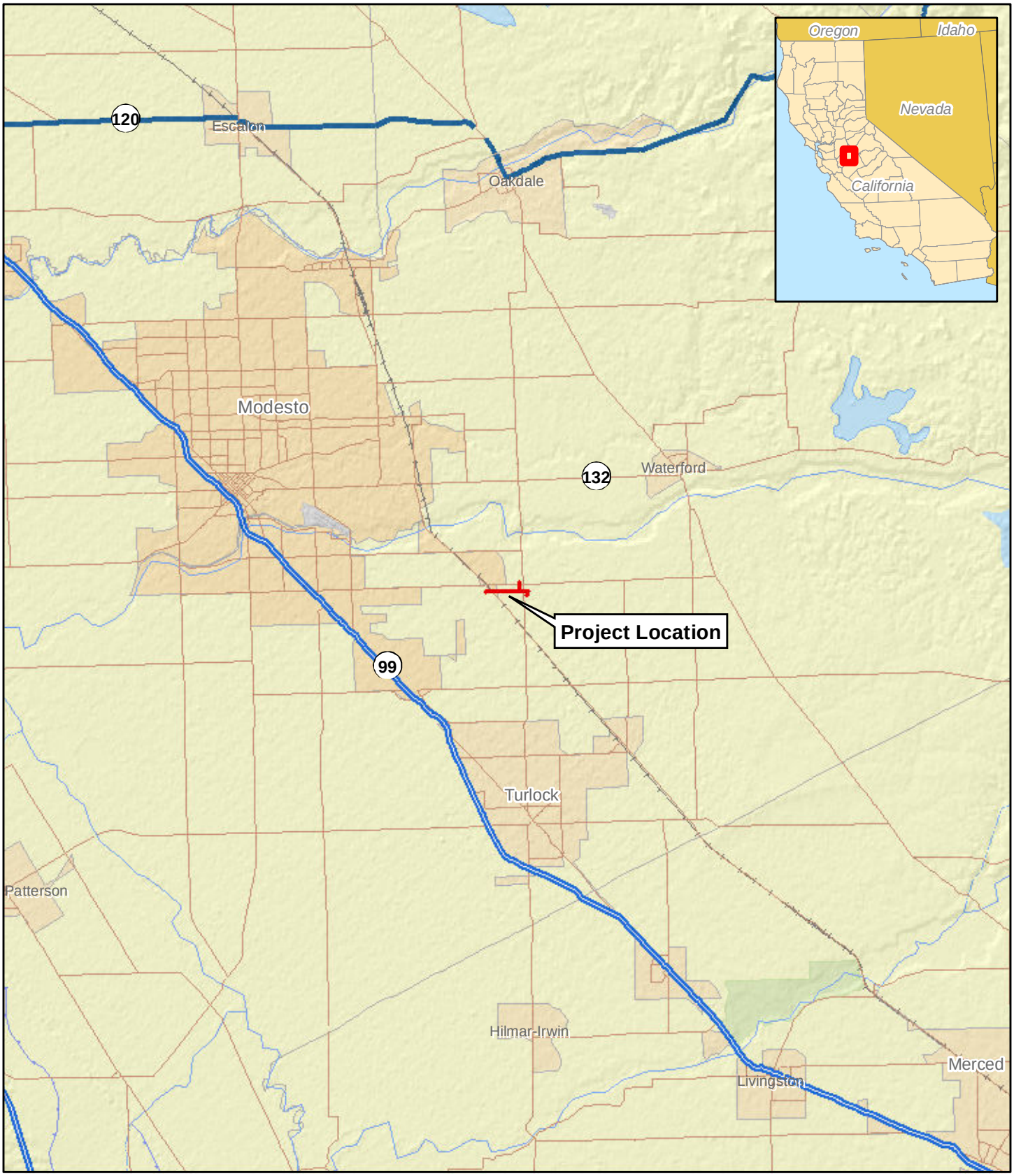

Figure 1. Project Vicinity Map.

Hughson Consolidation Project APE

1:250,000

0 3 Miles

0 6 Kilometers

Sources: *USA Base Map* [layer],*Data and Maps* [CD]. ESRI, 2006.

Figure 2. Project Location Map.

Hughson Consolidation Project APE

T04S, R10E, Sections 10 and 14-16.
Denair 7.5' Series Quadrangle, USGS, 1978.

1:24,000

0.5 Miles

1 Kilometers

Figure 3. Project APE Map.

Hughson Consolidation Project APE

Total Acres: 11.35

1:12,000

0 1,000 Feet

0 500 Meters

1.2 Project Location and Area of Potential Effects

The Project APE is located in the City of Hughson and an unincorporated area of Stanislaus County to the east. Most of the APE is located along the right-of-way of Whitmore Avenue from Tully Road to just east of Geer Road. Extensions of the APE alignment extend along Geer Road and Tully Road south of their intersections with Whitmore Avenue and Euclid Road north of its intersection with Whitmore Avenue (Figures 1–3). The APE is situated in projected Township 4 South, Range 10 East, sections 10, and 14–16 on the *Denair, California* U.S. Geological Service (USGS) 7.5' topographic quadrangle map.

Project construction plans suggest that the vertical APE would not extend beyond approximately 8 ft. below the present-day grade to accommodate the new water line, 16-in. butterfly valves, and other components of the Project. Overall, The APE has been established to encompass the maximum limits of potential ground-disturbing activities that would reasonably be expected from the proposed Project. These would include but not limited to, all existing parcels and rights-of-way, potential access routes, trenching, and equipment staging and laydown areas.

1.3 Regulatory Context

As the proposed Project is within both the City and in Stanislaus County, approvals from both agencies would be required, consisting mainly approval of construction plans and encroachment permits for work within City streets and County roads. In particular, the City's Public Works Department shall review and approve all connections to the City's water system.

It is anticipated that the project would be funded largely by the State Water Resources Control Board (SWRCB) through its Drinking Water State Revolving Fund (DWSRF) program. An application for DWSRF funding will be presented to the SWRCB, including an Environmental Package that evaluates the potential environmental impacts of the proposed project under California Environmental Quality Act (CEQA) and the National Environmental Policy Act. Consequently, the proposed Project is subject to Section 106 of the National Historic Preservation Act (NHPA or "Section 106"), and the cultural resources provisions of CEQA.

1.3.1 Section 106 of the National Historic Preservation Act

Section 106, as amended, and its implementing regulations found at 36 CFR Part 800, require Federal agencies to identify cultural resources that may be affected by actions involving federal lands, funds, or permitting actions. The significance of the resources must be evaluated using established criteria outlined at 36 CFR 60.4, as described below. If a resource is determined to be a *historic property*, Section 106 of the NHPA requires that effects of the undertaking on the resource be determined. A historic property is defined as:

> …any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property… (NHPA Sec. 301[5])

Section 106 prescribes specific criteria for determining whether an undertaking would adversely affect a historic property, as defined in 36 CFR 800.5. If it is determined that a historic property will be adversely affected by implementation of a proposed action, prudent and feasible measures to avoid or reduce adverse effects must be taken. The State Historic Preservation Officer must be provided an opportunity to review and comment on these measures prior to implementation of the proposed action.

1.3.2 National Register of Historic Places

The eligibility of a resource for listing on the National Register of Historic Places (NRHP) is determined by evaluating the resource using criteria defined in 36 CFR 60.4 as follows:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:

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

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing on the NRHP. In addition to meeting at least one of the criteria outlined above, the property must also retain enough integrity to enable it to convey its historic significance. The NRHP recognizes seven aspects or qualities that, in various combinations, define integrity. These seven elements of integrity are location, design, setting, materials, workmanship, feeling, and association. To retain integrity a property will always possess several, and usually most, of these aspects.

While most historic buildings and many historic archaeological properties are significant because of their association with important events, people, or styles (criteria A, B, and C), the significance of most prehistoric and historic-period archaeological properties is usually assessed under Criterion D. This criterion stresses the importance of the information contained in an archaeological site, rather than its intrinsic value as a surviving example of a type or its historical association with an important person or event. It places importance not on physical appearance, but rather on information potential.

1.3.3 California Environmental Quality Act

The management of cultural resources within California is guided in part by the provisions of CEQA. The significance of cultural resources per CEQA guidelines is an important consideration in terms of their management. Public agencies are required to avoid project-related impacts to historic and archaeological resources, particularly those that meet the criteria of significance outlined in the CEQA criteria. When impacts cannot be avoided, their effects can be mitigated, through application of one or more of the following:

- Avoidance during construction phases
- Incorporation of sites into open space
- Capping resources with chemically stable fill
- Deeding a site into a permanent conservation easement
- Data recovery, archival research, and/or photo documentation

Section 15064.5 of the CEQA Guidelines defines a “historical resource” as a cultural resource that is (1) listed on, or determined to be eligible by the State Historical Resources Commission for listing on, the California Register of Historical Resources (CRHR); (2) listed in a local register of cultural resources or as a significant resource in a historical resource survey; or (3) considered to be “historically significant” by a lead agency as supported by substantial evidence in the record. Generally, a cultural resource shall be considered by the lead agency to be “historically significant” if it meets any of the following criteria for listing on the CRHR:

1. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
2. is associated with the lives of persons important in our past
3. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual
4. possesses high artistic values; has yielded, or may be likely to yield, information important in prehistory or history

CEQA guidelines also require consideration of unique archaeological resources (Section 15064.5). As used in Public Resource Code (Section 21083.2), a unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition to meeting one or more of the above criteria, historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling and association.

2.0 NATURAL AND CULTURAL SETTING

2.1 Natural Environment

The APE is located within California's Central Valley, a north-south trending basin that is bounded by the Sierra Nevada Mountains to the east and south, the Coast Ranges to the west, and the Klamath Mountains to the north. The Central Valley is drained by the Sacramento and San Joaquin Rivers, which join and flow out to the Pacific Ocean through the Delta. The Central Valley is an asymmetric trough approximately 400 mi. long and 50 mi. wide that is characterized by a relatively flat alluvial plain made up of a deep sequence of sedimentary deposits from Jurassic to recent age; these sediments vary between 3 and 6 mi. in thickness and were derived primarily from erosion of the Sierra Nevada to the east, with lesser material from the Coast Ranges to the west (see Ornduff 1974).

Annual average temperatures in the Stockton area range between 92˚ F and 48˚ F with summer highs often exceeding 100˚ F and winter lows of 30˚ F. Mean annual rainfall in the area is about 17 in., with the majority of this falling from October through March (Western Regional Climate Center 2016). Although this pattern is characteristic of the region in general, there can be marked differences in local climate (and vegetation) as temperatures are dependent on elevation and proximity to seasonal and perennial water sources. Temperatures are lower in depressions and small valleys, particularly during nights when cooler air moves downward, while it remains warmer on slopes and ridge tops in the Coast Ranges to the west or the Sierra Nevada foothills to the east. Because of the earlier ripening of some plant foods on ridge tops, many prehistoric resource gathering, and processing sites tended to be located in these warmer areas, while Native American winter village locations were situated near perennial water sources such as the Mokelumne, Sacramento, San Joaquin rivers, and their numerous tributaries.

The APE and surrounding area is within the climatic band classified as the Lower Sonoran Zone (Storer and Usinger 1970). The climatic pattern is characterized as Mediterranean, with cool, wet winters and hot, dry summers. The dominant vegetative communities in the region consist of prairie grasslands and tule marshes, with some areas of riparian woodland also being present (Kuchler 1977). Prehistorically, Valley oak, cottonwood, sycamore, and willow trees once grew on the verge of streams and rivers. Vegetation tended to be sparse within the prairie grasslands, limited to grasses and flowering herbs. However, a single valley oak could produce 300–500 pounds of acorns each year (Baumhoff 1963) and tule roots could be ground into meal to supplement the abundant faunal resources (Wallace 1978). Faunal species that frequented the prehistoric prairie grasslands and tule marshes included mule deer, tule elk, pronghorn antelope, weasel, river otter, raccoon, and beaver, geese and swans, great blue and black-crowned herons, ibis, cranes, cormorants, bald eagles, badgers,

coyotes, skunks, jackrabbits, and cottontail rabbits. Within the waterways, Chinook salmon, steelhead trout, Pacific lamprey, and white sturgeon seasonally joined other fish species indigenous to the area (Moratto 1984).

2.2 Prehistoric Context

California prehistory can be divided into three periods that reflect similar cultural characteristics throughout the state: Paleo-Indian period (ca. 12,000 years before the present [BP] – 8,000 BP), Archaic period (8,000 – 1,500 BP), and Emergent period (1,500 BP – Euro-American contact) (Fredrickson 1973, 1974, 1993). The Archaic is divided further into Lower (8,000 –5,000 BP), Middle (5,000 –3,000 BP), and Upper (3,000 BP – 1,500 BP) periods which are defined by dramatic environmental changes and variability in subsistence, settlement, and technological systems seen in the archaeological record.

Human occupation in the Sacramento-San Joaquin Delta region may have occurred as early as 12,000 years ago, but few archaeological sites pre-dating 5,000 years BP have actually been documented in the Delta or the broader Central Valley. It is possible that Holocene alluvial deposits buried many prehistoric sites and the dynamic nature of the Delta and Central Valley waterways have obscured and destroyed earlier sites. For example, Moratto (1984:214) estimates that as much as 10 meters of sediment accumulated along the lower stretch of the Sacramento River drainage system during the last 5,000–6,000 years. One of the few early sites documented in the general region is CA-CCO-637 in eastern Contra Costa County which dates to approximately 8,500 BP and was found in an alluvial fan near present-day Kellogg Creek (Meyer and Rosenthal 1998).

Prehistoric material culture found in central California subsequent to the Paleo-Indian and Lower Archaic periods has been categorized according to "horizons" or "patterns" that define broad technological, economic, social, and ideological elements over long periods of time and large areas. Fredrickson (1973, 1974) defined three regional patterns that are most relevant to the APE. Referred to as the Windmiller, Berkeley, and Augustine patterns, each represents a general pattern of resource exploitation and cultural manifestations and occurred between about 4,500 BP and Euro-American contact around the year 1800.

Windmiller Pattern (4,500 - 2,500 BP)

Middle Archaic Windmiller Pattern sites date to as early as 4,500 BP and extend to and as late as 2,500 years ago. Windmiller sites appear to indicate an extensive reliance on plant foods although a wide variety of faunal remains have been noted as well. The presence of fishhooks and probable net and line sinkers along with the remains of sturgeon, salmon, and smaller species, indicate that fishing was an additional and important source of food (Fredrickson 1973; Heizer 1949; Ragir 1972). Items made of baked clay included net sinkers, pipes and manufactured cooking "stones" in an environment where suitable natural cobbles were generally scarce. Ground and polished charmstones, impressions of twined basketry, shell beads, and bone tools also have been found at Windmiller Pattern sites. Some items, such as shell beads, obsidian tools, and quartz crystals, were obtained by trade. Windmiller people appear to have resided in the Sacramento Valley during the winter months but shifted to higher elevations during the summer (Moratto 1984:206). Mortuary practices included the frequent addition of grave goods in the interments and the deceased were buried in cemeteries that were separate from the habitation sites.

Berkeley Pattern (2,500 BP - 1,500 BP)

By around 2,500 BP the archaeological record begins to show changes to more specialized adaptive patterns characteristic of the Berkeley Pattern. Acorns become a significant dietary staple and this shift can be seen in a dramatic increase in the occurrence of mortars and pestles on sites as opposed to manos and metates which were far more common during the Windmiller. Mortars and pestles are better suited to crushing and grinding acorns, whereas manos and metates were used primarily for grinding wild grass grains and seeds (Moratto 1984:209–210). The archaeological record, however, clearly indicates that hunting continued to be an important source of

food and useful materials (Fredrickson 1973:125–126). In addition, Berkeley Pattern sites adjacent to Bay and coastal shorelines often include significant shell mounds and middens indicating an intensive use of both fresh and saltwater aquatic resources.

Artifact assemblages and radiocarbon dates from Berkeley Pattern sites suggest the subsistence and technological patterns characteristic of this time may have developed in the San Francisco Bay region and later spread into central California. Moratto (1984:207–211) suggests the pattern may be associated with an expansion of Eastern Miwok populations from the San Francisco Bay area to the Central Valley and into the Sierra foothills.

Augustine Pattern (1,500 BP - historic contact)

The Augustine Pattern is marked by shifts in subsistence and land-use patterns that begin to resemble those noted in ethnographic observations. Tools and cooking implements include shaped mortars and pestles, hopper mortars, bone awls used for producing coiled baskets, and the bow and arrow. A type of pottery, referred to as Cosumnes Brownware, appears in some parts of the Central Valley and have evolved from the baked clay industry so prominent during earlier times.

During this period, increased sedentism, social stratification, and the rise of elaborate ceremonies and social organizations can be seen. Exchange networks expanded and became more complex also developed during this time (see Fredrickson 1973; Moratto 1984). Distinctive artifacts including flanged tubular pipes, harpoons, and Gunther barbed series projectile points are found on these sites. Moratto (1984: 211–214) suggests that these occurrences accompanied by the other notable aspects of the Augustine Pattern may represent a southward expansion of Wintu populations and territory.

2.3 Ethnographic Context

Ethnographically, the Northern Valley Yokuts occupied the APE and vicinity within a larger traditional territory including lands on either side of the San Joaquin River from the Sacramento-San Joaquin Delta to south of Mendota. The Diablo Range probably marked their western boundary (Wallace 1978:462) while the eastern extent would have lain along the Sierra Nevada foothills. The Yokuts occupied the APE and vicinity during the Spanish colonial period, as evidenced by mixed assemblages of historic-era and prehistoric artifacts on archaeological sites. The late prehistoric Yokuts may have been the largest ethnic group in pre-contact California and were organized into at least 11 small political units or tribes (Wallace 1978). Each tribe had a population of approximately 300 people, most of who lived within one principal settlement that usually had the same name as the political unit. The closest well-documented village site to the APE was probably *Tationes*, which was located about 12.5 mi. southeast on the east side of the San Joaquin River (Cook 1955). An un-named site possibly associated with the *Tagualames* band was noted by Bennyhoff (1977) about 9 mi. to the east/northeast on the north side of the Tuolumne River, just to the east of Waterford.

In many respects, the Yokuts' lifeways were very similar to that of other Central Valley groups. The hunting of terrestrial game such as tule elk, mule deer, antelope, pronghorn, rabbits, squirrels, and gophers was considered important, but it was subsidiary to collected foods that could be stored year-round. According to Powers in 1877, the typical California Native American diet consisted mainly of acorn, fish, and small seeds (Heizer and Elsasser 1980:83) although nearly 500 plant and animal species were commonly utilized. Subsistence practices of their Miwok neighbors were no different, as fresh greens, seeds, and acorn were harvested during their appropriate seasons. Bedrock outcroppings were frequently utilized for creating fixed, non-portable mortars used in grinding nuts and seeds into meal. In locales where bedrock outcroppings were nonexistent, smaller, portable mortars and stone pestles were used. Acorn by itself is not edible due to the bitter tannins inside the nut, but like many other California Native American groups, the Yokuts processed acorn by first grinding the nuts into flour. The acorn flour was then water-processed to leach out the bitter tannins, making the flour

usable for making mush or bread (Heizer and Elsasser 1980:91–93). As with the various seeds collected along the Central Valley grasslands (sunflower, clover, bunchgrass, and wild oats to name a few), acorn was stored in baskets to be used during leaner months of the year.

In riparian areas, fishing and the hunting of waterfowl were also utilized to supplement dietary intake. Important delta fish species included salmon, sturgeon, chub, steelhead trout, sucker, Sacramento perch, Sacramento pikeminnow, hardhead and splittail. Fish were typically caught with the use of a net, hook and line, or harpoons. Ducks and other waterfowl were captured with nets and decoys. In addition to the fish and waterfowl, reeds and tule were also important resources utilized by the Yokuts for creating structure thatching, cordage, canoes and rafts. The roots, pollen, and seeds of the tule were also eaten.

Early in the historic period, the Yokuts were severely impacted by the effects of Euro-American settlement. They were especially affected by disease and warfare and as a result these people were generally not well documented in the ethnographic record (Wallace 1978). Information on the Yokuts' lifeways has been compiled by ethnographers from various sources; primarily military and missionary reports, and diaries written during the Spanish and Mexican periods.

Euro-American contact with the Northern Valley Yokuts began with infrequent excursions by Spanish explorers traveling through the Sacramento, and San Joaquin Valleys in the late 1700s to early 1800s. Cook (1955) attempted to identify San Joaquin Valley village and tribal groups based on early accounts from Spanish explorers and Mission records. Many Yokuts were lured or captured by missionaries and taken to Mission San Jose or Mission Santa Clara. A probable malaria epidemic in 1833 decimated the indigenous population, killing thousands. The influx of Europeans during the Gold Rush era further reduced the population because of disease and violent encounters with the miners. Though little or no gold at all was found in the Yokuts territory, miners passing through on their way to the rich diggings in the Sierra Nevada foothills resulted in a significant degree of cultural upheaval. Former miners, who had seen the richness of the San Joaquin Valley on their way east to the diggings later returned to settle and farm the former Yokuts lands (Wallace 1978).

Presently, the Nototome/North Valley Yokut Tribe, Inc., represents the Northern Valley Yokuts in the Stockton region. The group is dedicated to the perpetuation of their cultural heritage which involves the preservation, documentation, and interpretation of their past including ethnographic, archaeological, and human remains.

2.4 Historic Context

A series of explorations in present-day Stanislaus County was conducted by the Spanish beginning with a 1776 expedition led by Jose Joaquin Moraga. That expedition followed the San Joaquin River into the vicinity of present-day Modesto. Another journey in 1806, led by Moraga's son Gabriel, revisited the area and traveled east as far as present-day Knight's Ferry, followed by another expedition in 1810 (Beck and Haase 1974:32; Heizer and Almquist 1971:4-22). Other expeditions were conducted by fur trappers including Jedediah Smith and Ewing Young in 1820 and 1829–1830 respectively. Smith and Young traversed Walker's Pass to enter the valley and frequently exploited fur resources along the Tuolumne and San Joaquin Rivers (Tinkham 1921).

After Mexico declared its independence in 1821, the mission system established by Spain in the coastal regions was gradually reduced to destitution. Mission lands were granted to prestigious Mexican citizens in the form of large land grants, or ranchos. Within Stanislaus County, five ranchos, none of which encompassed the Hughson area, were awarded: *Orestimba* (16,500 ac.), *El Pescadero* (16,148 ac.), *Rancho del Puerto* (13,340 ac.), *Rancheria del Rio Estanislao* (36,300 ac.), and *Thompson Rancho* (30,852 ac.). American settlers flooded California with the discovery of gold (1848) on the American River, resulting in an influx in population, while the Mexican regime struggled to gain control over the land. Following the Mexican-American War, the United States annexed California until it was granted statehood via the Compromise of 1850 (Tinkham 1921).

Stanislaus County was organized in 1854 from a portion of Tuolumne County (Beck and Haase 1974; Tinkham 1921).

The Mexican-American War ended with the 1848 Treaty of Guadalupe Hidalgo, which promised that the property rights of the Mexicans in California would be protected by the U.S. government. However, the U.S. ultimately did not protect the rancho lands from squatters and the government required that the rancheros prove that they owned the land. In 1851 the U.S. government set up a three-member Board of Land Commissioners in San Francisco to consider land claims. The rancho owners were required to show papers to prove just what land they owned. Any land not claimed or claims not accepted, became state or public land that could be transferred to new settlers. Many of the rancheros had no papers proving that they owned the land or no evidence of their rancho boundaries. Those who had some proof that they owned the land presented their evidence to the Land Commission, but it took an average of 17 years before the Commission issued a decision that the applicant could retain ownership (Hoover et al. 2002).

Throughout the 19th and 20th centuries, agriculture was the primary economic driver of the region. The first agricultural product produced in massive quantities in Stanislaus County was wheat, cultivated by a Mormon colony led by Samuel Brannan around 1846. Before the arrival of the railroad, much of Stanislaus County was grazed by large herds of cattle, hogs, horses, and sheep. Cattlemen prospered during the Gold Rush by supplying beef to miners. Following the Gold Rush, farmers began to till the fertile river bottom lands and cultivate crops, signaling a significant shift in land use. Prosperous cattlemen suffered a series of natural disasters beginning with thousands of cattle drowning in the catastrophic floods of 1861-1862, followed immediately by two years of severe drought killing over 550,000 head of cattle statewide (Cleland 1951:126-132). Cattle prices plunged and ranches burdened with heavy debts accrued during flush times were broken up and sold. The passage of "fence laws" required cattle ranchers to enclose their once-open range lands to prevent cattle from trampling and eating crops; this was the final blow to the vitality of the ranching economy.

The wheat boom ended in the late 1880s due to production competition from growers in Europe, Asia, South America, and Australia, many using techniques developed in California. Having overextended themselves by borrowing and speculating heavily in harvest yields, California growers watched helplessly as many were foreclosed in bankruptcy (Vaught 2007:203-205). One of those who took advantage of the economic shift was Hiram Hughson who arrived in Stanislaus County in 1882 area and purchased 1,000 acres for a grain ranch and gradually came to own nearly 5,000 ac. In the early 1900's, the San Joaquin Railroad purchased land from Hughson for their tracks and developed a stop, which became known as the Hughson Stop. In the surrounding areas new settlements began to spring up, such as Ceres and Denair. As a result, Hiram Hughson could demand a better price for his land. In 1907 that he placed his land in the hands of the Hughson Town Company, under the direction of Charles Flack and C.W. Minniear. John Tully, who owned a section of land to the south of Hughson, also opened up his land for settlement which directly led to the establishment of the town of Hughson. Hughson remained a township until 1972 when it was incorporated as a City.

3.0 Native American Consultation

On behalf of the SWRCB and the City, SAS contacted the Native American Heritage Commission (NAHC) via an emailed letter on July 14th, 2022 requesting a Sacred Lands File (SLF) search and a list of appropriate Native American tribal contacts for the proposed Project (Appendix B). On August 16th, 2022, Ms. Pricilla Torres-Fuentes replied to SAS and noted that the SLF search was negative. Ms. Torres-Fuentes also provided SAS with a list of suitable regional tribal representatives and on August 18th, 2022, SAS mailed letters soliciting information and concerns to the following individuals and organizations identified by the NAHC:

- Katherine Perez, Chair - North Valley Yokuts Tribe
- Timothy Perez, Most Likely Descendent Contact - North Valley Yokuts Tribe
- Calaveras Band of Mi-Wuk Indians, Gloria Grimes – Chair

- Calaveras Band of Mi-Wuk Indians, Debra Grimes – Cultural Resources Specialist
- Joey Garfield, Tribal Archaeologist – Tule River Indian Tribe
- Kerri Vera, Environmental Department – Tule River Indian Tribe
- Neil Peyron, Chair – Tule River Indian Tribe
- California Valley Miwok Tribe/Sheep Ranch Rancheria
- California Valley Miwok Tribe
- Kenneth Woodrow, Chair - Wuksache Indian Tribe / Eshom Valley Band
- Southern Sierra Miwuk Nation, Sandra Chapman - Chair

No responses to the letters sent by SAS were received and a series of follow-up phone calls to each of the individuals/groups on the NAHC list was completed on August 28th, 2022. SAS also followed up with emails to the same individuals (if emails were provided by the NAHC) on September 6th, 2022, but no responses were received as a result of the calls or the emails. If any substantive comments or information is provided by the contacted tribal representatives at a later date, this information will be provided as an addendum to this report.

4.0 RECORD SEARCH AND LITERATURE REVIEW RESULTS

4.1 Information Center Record Search Results

The Central California Information Center (CCIC) of the California Historical Resources Information System provided the results of a record search request to SAS on July 20th, 2022 (CCIC File No. 12242N). This search included a review of the CCIC archives for previously known or recorded cultural resources, studies, and isolates within the APE and a half-mi. radius (Appendix C). The CCIC search also included, but was not necessarily restricted to, a review of the following sources:

- The *National Register of Historic Places* (Historic Properties Directory, California Office of Historic Preservation)
- The *California Register of Historic Places* (Historic Properties Directory, California Office of Historic Preservation)
- The *California Historical Landmarks* (California Office of Historic Preservation)
- The *California Points of Historical Interest* (California Office of Historic Preservation)
- The *California Inventory of Historic Resources* (California Department of Parks and Recreation).

The CCIC record search indicated that one historic-era cultural resource, an alignment of the Burlington Northern & Santa Fe Railroad, had been previously documented in the APE. An additional two historic-era resources consisting of a residential complex, and a commercial building have been recorded within the half-mile search area (Table 1). The CCIC research also demonstrated that no previous studies incorporated the APE or were conducted in the immediate vicinity.

Table 1. Previously Recorded Cultural Resources in and Within a Half-Mile of the APE

Site No. (P-50-)	Association	Site Description	Location
001800	Historic era	Residential complex	Outside APE
002006	Historic era	Burlington Northern & Santa Fe Railroad alignment	In APE
002154	Historic era	Commercial building	Outside APE

4.2 Additional Archival Research

In order to ascertain patterns of public-private land ownership within the APE and identify potential undocumented cultural resources and sensitive landforms, SAS conducted additional archival research focused on historic mapping and federal land transfer records. This research consisted reviews of the Bureau of Land Management's General Land Office (GLO) archives including patent records, and plat maps, historical USGS topographic quadrangle maps, and other archival sources.

A review of the GLO's plat map for Township 4 South, Range 10 East dating to 1854 showed that no historic-era developments or natural features such as creek channels, landforms, or survey markers, were depicted within or in the vicinity of the APE. GLO land patent records, however, show an active pattern of private purchases and grants of government (federal) lands within and in the vicinity of the APE. Specifically, within and adjacent to the APE, John M. Kelsey purchased thousands of ac. including lands in sections 10, 14, and 15 in 1867. Kelsey based his purchases on the Land Act of 1820 which ended the ability of private individuals to purchase U.S. public domain lands on a credit or installment system over four years, as established under previous acts. The new act required full payment at the time of purchase and registration but to encourage more sales and make them more affordable, Congress also reduced both the minimum price from $2.00 to $1.25 per ac., and the minimum size of a standard tract from 160 to 80 ac. Together with the Homestead Act of 1862, the 1820 act was chiefly responsible for the setting of the American West during the last half of the 19th century (Ohio History Connection 2018).

Also employed in obtaining federal lands in and near the APE, specifically in Section 16, was the 1853 California Enabling Act. Enabling Acts of each of the public-land states admitted into the Union since 1802 included grants of designated sections of federal lands for the purpose of supporting public schools. The lands were not literally meant to be sites for school buildings. Instead, the state was able to sell and lease these lands to fund its school system. On March 3, 1853, "An Act to Provide for the Survey of the Public Lands in California, the Granting of Pre-Emption Rights Therein, and for Other Purposes" was adopted by the U.S. Congress. This Act provided that public lands in California, specifically sections 16, and 36 in each Township, other than those claimed by recipients of Spanish or Mexican land grants, could be granted to the State for public schools or reserved as mineral lands (Flushman and Barbieri 1986).

An examination of USGS mapping dating to as early as 1916 shows that Hughson was thoroughly laid out by the early 20th century and residential, public, and commercial development was underway. In 1916, buildings were depicted on both sides of the main APE alignment within the City, but no development or agricultural lands were depicted in the eastern part of the APE. This pattern continued throughout the 20th century and this pattern of land development can also be seen in mid-20th century aerial photos, the earliest of which dates to 1957.

5.0 SURVEY FIELD METHODS

On August 4th, 2022, SAS archaeologists Mark Pense, and Lauryn Stockert conducted an intensive survey of the APE where Project ground disturbing activities would occur. Given the narrow and mostly paved configuration of the APE, the survey was conducted using a single pedestrian transect along the proposed Project alignment. Areas within the APE exhibiting erosional surfaces and rodent backdirt piles were also examined closely for artifactual materials or indications of subsurface archaeological remains or sensitive soil deposits (i.e., prehistoric midden).

6.0 SURVEY FINDINGS

The intensive survey of the APE did not result in the discovery of any prehistoric or historic-era sites, features, artifacts. In addition, no potential archaeologically sensitive landforms or soil types (i.e., midden) were encountered. With the exception of small erosional areas within and immediately adjacent to the APE

alignment, the proposed pipeline route appears to be almost completely covered in asphalt pavement. Representative photos of the APE are provided in Appendix D.

7.0 Archaeological Sensitivity Assessment

Buried archaeological occurrences are the result of geophysical process specific to particular landforms as well as human behavior (Waters 1992). Consequently, landforms play a fundamental role in site preservation and burial, and ultimately the discovery of prehistoric sites and remains. Put simply, landform (and other affiliated characteristics like soils, geologic substrate, and climate) determines to a large degree whether and when an archaeological site is buried. In the Sacramento-San Joaquin Delta and the Central Valley, erosion and soil accumulation are the primary geological processes that interact with archaeological deposits resulting in younger deposits often burying older formations and archaeological occurrences and preventing their detection during surface surveys (see Rosenthal and Meyer 2004a, b).

The APE and surrounding area lie in a Quaternary (originating in the past 2 million years), and specifically Holocene basin formation (Rogers 1966). Although various factors may influence Holocene formation's archaeological sensitivity (e.g., proximity to perennial water, floral resources, etc.), in general, basin contexts are less likely to contain buried archaeological sites than Holocene alluvial fans and terraces where sediments are eroded and deposited at a much higher rate (ICF 2013). Notable formations that are considered highly sensitive in the region include supratidal floodplains, Pleistocene eolian deposits, the Montezuma Formation, the Riverbank Formation, and "piper" soils or "piper sand mounds", none of which have been recorded within or near the APE. In addition, no natural perennial or seasonal water sources are known to be present within or near the APE. Although the Tuolumne River channel (just under 1 mi. north of the APE) varied position significantly over time, there does not appear to be any evidence the main alignment or oxbows extended anywhere near the APE. Given the historical lack of water sources and when considered in relation to the moderate-low overall archaeological sensitivity of the landform, and the lack of prehistoric resources documented in the surrounding area (see Section 4 above), it is unlikely that presently undocumented and significant buried prehistoric archaeological remains would be encountered within the APE.

Concerning historic-era resources, the establishment of a rail line (present-day Burlington Northern & Santa Fe Railroad) during the 19th and early 20th centuries suggests that the APE could have been subject to early activities such as transportation infrastructure development, agriculture, or livestock ranching. However, archival and field research do not suggest that any particularly early sites, features, structures, or buildings are known to have existed within or immediately adjacent to the APE. As such, SAS recommends a low level of sensitivity for the APE to contain potentially significant historic-era archaeological traces.

9.0 RECOMMENDATIONS

A CCIC record search, additional archival research, outreach to the Native American community, and an intensive field survey did not result in the identification of any potentially significant cultural resources or properties within or adjacent to the APE. Although the proposed Project would include some significant depths of ground disturbances for the proposed water lines, it is unlikely that construction activities would affect presently undocumented cultural resources due to the low archaeological sensitivity of the APE. Consequently, SAS recommends that the proposed Project will have *no effect on historic properties* per Section 106, and *no impacts on historical resources* per CEQA.

In the event that human remains, or any associated funerary artifacts are discovered during Project construction, all ground-disturbing work within 50 ft. of the discovery shall cease and, in accordance with requirements of the California Public Resources Code Section 15064.5[e]), Public Resources Code Section 5097.98, and the California Health and Safety Code (Section 7050.5), the San Joaquin County Sheriff/Coroner shall be contacted immediately. If the remains are deemed to be of Native American origin, the Sheriff/Croner will notify the NAHC, which will in turn appoint a Most Likely Descendent (MLD) to act as a tribal representative. The MLD

will work with the SWRCB, the City, and a qualified archaeologist to develop a plan for the proper treatment of the human remains and any associated funerary objects. Ground-disturbing activities shall not resume within 50 ft. of the discovery until treatment has been completed.

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APPENDIX A

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KEY PERSONNEL RESUMES

Jason A. Coleman, M.A., RPA

Co-Principal Investigator - Project Manager

Summary of Qualifications

Mr. Coleman has nearly 30 years of experience in the cultural resources management field and as the founder of SAS has managed a diverse array of cultural resources management projects throughout California and the western United States. He has conducted and managed investigations in accordance with national, state, and local preservation guidelines such as Section 106 of the National Historic Preservation Act, and the California Environmental Quality Act. Mr. Coleman has extensive experience with the U.S. Forest Service, the Natural Resource Conservation Service, and numerous Resource Conservation Districts, and land and wildlife conservancies. As founder and Co-Principal Investigator for Solano Archaeological Services, Mr. Coleman is responsible for all aspects of SAS management, marketing, client development, human resources, and project and deliverable scheduling and quality control and assurance.

Length of Service

- 28 years in cultural resources management

Professional Focus

- Agency and tribal consultation
- Project Management
- Prehistoric resources
- Fuels management and environmental restoration

Education

- BA, Anthropology with Honors, U.C. Berkeley (1992)
- MA, Anthropology, CSU Hayward (1996)

Professional Associations and Certifications

- Society for California Archaeology
- Register of Professional Archaeologists
- Statewide BLM Principal

Representative Experience - Fuels Reduction Projects

- **2019 – Sly Park Fuels Reduction Project, Eldorado National Forest, Placerville Ranger District, El Dorado County**
  The project was part of an all-lands approach to create fire resilient forest ecosystems and fire-adapted communities on Eldorado National Forest (ENF) lands within portions of the South Fork American River (SOFAR) Watershed and the adjacent Cosumnes River Watershed in El Dorado County. Reduction in ladder and surface fuels were proposed on an estimated 3,000 acres of forest lands within the SOFAR and Cosumnes River Watersheds. SAS was contracted by the Mule Deer Foundation to survey an area of potential effect consisting of 2,995 acres to protect heritage resources that may exist in fuels reduction activity areas. A total of 27 cultural resources, including 24 previously recorded and 3 newly identified, were found to be present within the APE. All of the sites were evaluated for NRHP eligibility, and the Standard Protection Measures outlined in Appendix E of the Region 5 Programmatic Agreement (2018) were utilized to make site specific recommendations for mitigation. SAS worked closely with the ENF, the Natural Resources Conservation Service, the Mule Deer Foundation, the Oregon-California Trails Association, and local archaeologists to bring the project to a successful and timely closure. Client: Mule Deer Foundation

- **2019 – Plumas Collaborative Forest Health Projects, Plumas County**
  The Plumas Corporation, on behalf of the Plumas County Fire Safe Council, proposed to reduce hazardous fuels in three different locations (Genesee Woods/Red Clover Creek/Heart K HFR property, Meadow Valley, and Spanish Ranch) of Plumas County. The goals of the program were to reduce the risk of loss of life, property and natural resources to catastrophic wildfires by reducing hazardous fuels in these three locations. As these projects were funded by CAL FIRE California Climate Investment Forest Health Funds, they were subject to CEQA requirements. SAS conducted three CEQA–level cultural inventories to prepare the properties for the proposed fuels reduction. Covering an expanse of 334.79 acres for all three projects, SAS recorded or updated a total of 32 historic–era sites including can scatters, ditches, wagon roads, trails, tramway towers, railroad grades, water tank remains, single–family homes, and mining sites. None of the sites were recommended eligible for the CRHR Places given their condition and lack of qualities needed to satisfy the four criteria. Client: Plumas Corporation

- **2018–2019 – Crossroads Project, Shasta–Trinity National Forest (as administered by the Lassen National Forest), Hat Creek Ranger District, Shasta County**
  SAS conducted an inventory consisting of a total of 255.71 acres around Lake Britton, the McArthur Burney Memorial State Park, and on both sides of Long Valley and Burney Creek, north of the City of Burney. The project goals were to contribute approximately 400 acres of the 20,000–acre goal identified in the Upper Pit River Watershed Integrated Regional Water Management Plan to reduce the potential for large, uncontrolled fires, and thus subsequent erosion and runoff and property loss by implementing this forest health and small fuels reduction projects. SAS was tasked with updating information on previously–documented sites within the survey area and evaluating the significance of potentially affected resources. Record searches conducted through the California Historical Resources Information System and the Forest Service indicated that 19 previously documented cultural resources were located within the vicinity of the survey area. The SAS survey documented three previously unrecorded historic period resources in the survey area, including two road segments and a 1,080–foot long extension of the historic–era McCloud River Railroad. None of the resources were recommended eligible for NRHP listing. Client: Mule Deer Foundation.

- **2017–2018 – Plumas National Forest Hazardous Fuels Projects, Plumas County**
  On behalf of the Plumas Corporation (PC) SAS conducted four heritage resource inventories in multiple Plumas National Forest (PNF) ranger districts as part of a hazardous fuels reduction program. Because of the threat of catastrophic wildfires, the Plumas County Fire Safe Council (PCFSC) sought and received a federal Wyden Amendment grant to reduce hazardous fuels in selected residential neighborhoods in or adjacent to the PNF. The grant allowed for the implementation of four hazardous fuels reduction projects (East Shore Lake Almanor, Gold Mountain, C Road/Mohawk Vista, and Dixie Valley), each with varying acreage totaling 368.08 acres. The projects were designed to meet the goals of the PCFSC, the Plumas County Wildfire Protection Plan, and the National Fire Plan. In order to aid in the compliance with Section 106 of the NHPA, PC contracted with SAS to identify cultural resources within the APE that could be subject to project–related adverse effects. In sum, SAS identified 11 new sites and six new isolates, and updated two additional previously recorded sites. All discovered resources were flagged per PNF protocol. As three of the sites were potentially subject to adverse project effects, SAS worked closely with the involved forester and PNF to mitigate the effects through the use of specialized vegetation clearing equipment and methods, which was in keeping with the PNF Standard Resources Protection Measures. The masticator proposed for use in the fuels reduction efforts at the three sites retained a 35–foot–long arm that could extend a grinding head well into the bounds of each site with the tracked machine parked outside the taped site boundaries. Neither the machines tracks, boom, or grinding head would come in contact with the ground surface and recorded archaeological materials. Since the Project would not disturb ground surface or archaeological materials at any of the three sites, adverse effects were avoided. Client: Plumas Corporation

- **2011–2012 – USDA Natural Resources Conservation Service Fuel Modification Projects, San Bernardino County**
  The Natural Resources Conservation Service (NRCS), through an interagency agreement with the United States Forest Service, proposed to assist San Bernardino County with the treatment and removal of live and dead brush, dead, dying, and diseased trees of all sizes, and selective thinning of smaller diameter trees in order to reduce the threat of wildfires. As the fuel modification projects involved the utilization of federal funds and agencies, compliance with Section 106 of the NHPA was necessary. NRCS procured SAS (over two contracts) to conduct NEPA–level cultural inventories for 13 different properties throughout San Bernardino County. The properties included: Holcomb Valley, Los Rios Rancho, Mormon Rocks, Nuss Ranch, Oak Hills, Wildhorse Canyon, Wright Mountain Road, Baldy Mesa, Oak Hills, San Antonio, Waterman Canyon, Weesha, and West Cajon, and the inventories spanned over 4000 acres in varying landforms and vegetative zones. A total of 36 sites and 13 isolates were identified during the inventory process. SAS worked closely with NRCS to create avoidance measures to keep the sites safe during the fuels reduction process. Client: Natural Resources Conservation Service

Brian Ludwig, Ph.D.

Lead Principal Investigator – Cultural Resources

Summary of Qualifications

Dr. Ludwig has over 35 years of experience in the academic and cultural resources management fields and possesses a broad range of expertise in the implementation and management of technical investigations and programs for both the public and private sectors. He has conducted and overseen studies in accordance with national, state, and local preservation guidelines such as Section 106 of the National Historic Preservation Act, the California Environmental Quality Act, and Tahoe Regional Planning Agency standards. As Lead Principal Investigator for Solano Archaeological Services, Dr. Ludwig is responsible for client and agency outreach and collaboration, proposal development, personnel management, research, project management, and deliverable quality assurance and control.

Length of Service

- 38 years in cultural resources management

Professional Focus

- Program development
- Project Management
- Research

Education

- BA, Anthropology, Montclair State University (1986)
- MA, Anthropology, Rutgers University (1992)
- Ph.D., Anthropology, Rutgers University (1999)

Professional Associations

- Society for California Archaeology
- Society of American Military Engineers
- Association of Environmental Professionals

Certifications

- Register of Professional Archaeologists
- Statewide BLM Principal Investigator: California, Nevada, Oregon, Washington
- OSHA 10/30 Safety Outreach Trainer 500/501

Representative Experience

- **Bidwell Park Master Management Plan Update - City of Chico, Butte County, California**
  Dr. Ludwig conducted cultural resource investigations including extensive documentary research, field reconnaissance, and Native American consultation in support of this substantial update of the City of Chico's Bidwell Park Master Management Plan. The 3,670-acre Bidwell Park is one of the largest municipal parks in the United States and is an important resource for the Chico residents. The park's many recreational opportunities draw visitors from throughout the region; it stretches over 10 miles, from the valley floor into the Sierra Nevada foothills, and serves as an important biological corridor between the mountains to the Sacramento River.

- **Feather and Bear River Levee Setback Project - County, California**
  Dr. Ludwig led the cultural resources team in preparing a Land Acquisition and Management Plan (LAMP) addressing options for the treatment of lands within a levee setback area on the Bear River at the confluence with the Feather River and prepared an environmental impact report (EIR) on the levee setback, a key element of the Yuba-Feather Supplemental Flood Control Project. In response to the discovery of prehistoric archaeological remains and artifacts at two sites in the construction footprint, Dr. Ludwig directed archaeological site testing and reporting, including recovery and preservation of burials; coordinated with the pertinent Native American representatives, local authorities, and USACE archaeologists; used a geomorphic model as a predictor of where there is potential for the presence of subsurface archaeological deposits within the footprint of the setback levee; and facilitated discussions of treatment of the discovery sites.

- **U.S. Bureau of Land Management King Range National Conservation Area Resource Management Plan - Humboldt County, California**
  Dr. Ludwig helped the BLM revise and update the resource management plan for the KRNCA Area and prepared the associated environmental impact statement (EIS). The area is nationally significant in that it contains one of the two most remote coastal regions in the lower 48 states. The planning effort was comprehensive, evaluating existing management plans and resolving or addressing issues within the KRNCA as

identified through agency, interagency, and public scoping efforts. Dr. Ludwig conducted a cultural resources overview of the KRNCA and recommended resource management procedures. Sites included coastal and inland prehistoric and historic locales.

- **Pit 1 Hydroelectric Relicensing Project - Shasta County, California**
  This project included the inventory of a 7-mile stretch of the Pit River Canyon and several hundred acres near Pit 1 Forebay. Dr. Ludwig managed and directed all aspects of this project including the field survey, coordination with Native American community representatives, and the documentation and analysis of prehistoric and historic-era resources including lithic artifact scatters, prehistoric habitation and resource processing sites, and an early 20th century ranching complex.

- **Northern California Fiber Optic Program - Siskiyou and Modoc Counties, California**
  Dr. Ludwig Managed the cultural resources component of this telecommunication services project in Siskiyou and Modoc counties. The proposed project would enhance the reliability of the telecommunications network by using high-quality, state of the art fiber optic technology and provide redundancy protection. Dr. Ludwig oversaw the intensive surveys of the over 140-mile project alignment, record searches at the CHRIS and USFS, and coordinated with numerous Native American tribal organizations.

- **AT&T Caltrans Right-of-Way Encroachment Geoarchaeological Project - Plumas and Sierra Counties, California**
  AT&T proposed to replace aerial and buried telecommunications infrastructure located along a section of State Route (SR) 70 near the city of Portola in Plumas County, and SR 89 in the community of Sierraville in Sierra County, California. The right-of-way for the telecommunications infrastructure is located within California Department of Transportation and county road ROWs. A cultural resources investigation included background research, coordination and consultation with the Native American Heritage Commission and regional tribal organizations, an intensive field survey, and a subsequent geoarchaeological study. Dr. Ludwig directed and conducted all aspects of the project.

- **Lassen Volcanic National Park Archaeological Monitoring Projects - Lassen County, California**
  Dr. Ludwig managed all aspects of a series of intensive archaeological monitoring efforts for the Lassen Volcanic National Park at the NRHP-listed Park headquarters and nearby facilities. The projects mainly consisted of the replacement and/or repair of water conveyance and storage systems many of which were constructed at the time of the headquarters establishment in the 1920s. Monitoring typically occurred on a short-notice basis according to weather constraints and construction schedules.

APPENDIX B

— ♦ ♦ ♦ —

NATIVE AMERICAN COMMUNITY OUTREACH - CORRESPONDENCE

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

August 16, 2022

Dr. Brian Ludwig
Solano Archaeological Services

Via Email to: brian@solanoarchaeology.com

Re: Hughson Consolidation Project, Stanislaus County

Dear Dr. Ludwig:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Pricilla.Torres-Fuentes@nahc.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Stanislaus County
8/16/2022

Calaveras Band of Mi-Wuk Indians
Gloria Grimes, Chairperson
P.O. Box 899 — Mi-wuk
West Point, CA, 95255
Phone: (209) 419 - 5675
calaverasband.miwukindians@gmail.com

Calaveras Band of Mi-Wuk Indians - Grimes
Debra Grimes, Cultural Resources Specialist
P.O. Box 1015 — Mi-wuk
West Point, CA, 95255
Phone: (209) 470 - 8688
calaverasmiwukpreservation@gmail.com

California Valley Miwok Tribe
AKA Sheep Rancheria of Me-Wuk Indians of CA,
P.O. Box 395 — Miwok
West Point, CA, 95255
Phone: (209) 293 - 4179
l.ewilson@yahoo.com

California Valley Miwok Tribe
14807 Avenida Central — Miwok
La Grange, CA, 95329
Phone: (209) 931 - 4567
Fax: (209) 931-4333

North Valley Yokuts Tribe
Timothy Perez,
P.O. Box 717 — Costanoan
Linden, CA, 95236 — Northern Valley
Phone: (209) 662 - 2788 — Yokut
huskanam@gmail.com

North Valley Yokuts Tribe
Katherine Perez, Chairperson
P.O. Box 717 — Costanoan
Linden, CA, 95236 — Northern Valley
Phone: (209) 887 - 3415 — Yokut
canutes@verizon.net

Southern Sierra Miwuk Nation
Sandra Chapman, Chairperson
P.O. Box 186 — Miwok
Mariposa, CA, 95338 — Northern Valley
Phone: (559) 580 - 7871 — Yokut
sandra47roy@gmail.com — Paiute

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589 — Yokut
Porterville, CA, 93258
Phone: (559) 781 - 4271
Fax: (559) 781-4610
neil.peyron@tulerivertribe-nsn.gov

Tule River Indian Tribe
Kerri Vera, Environmental Department
P. O. Box 589 — Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
kerri.vera@tulerivertribe-nsn.gov

Tule River Indian Tribe
Joey Garfield, Tribal Archaeologist
P. O. Box 589 — Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
joey.garfield@tulerivertribe-nsn.gov

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. — Foothill Yokut
Salinas, CA, 93906 — Mono
Phone: (831) 443 - 9702
kwood8934@aol.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Hughson Consolidation Project, Stanislaus County.

P.O. Box 367
Elmira, CA 95625

707-718-1416 ▲ Fax 707-451-4775
www.solanoarchaeology.com

August 17th, 2022

California Valley Miwok Tribe
14807 Avenida Central
La Grange, CA, 95329

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

To Whom it may Concern:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

We would like to request any information you might have on presently undocumented Native American cultural resources within or in the vicinity of the APE and if you have any concerns with the proposed Project. Please be aware that is effort is subject to both Section 106 and CEQA but AB-52, and SB-18 do not apply to this project. For your information, the Native American Heritage Commission conducted a search of the Sacred Lands File and did not identify and culturally significant properties within or near the APE.

If you have any questions, information, or concerns, feel free to contact me at your convenience by phone at 530-417-7007 or via email at Brian@solanoarchaeology.com. Thank you very much for your time and I look forward to hearing from you soon.

Regards,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

Project Location Map

Hughson Consolidation Project APE

T04S, R10E, Sections 10 and 14-16.
Denair 7.5' Series Quadrangle, USGS, 1978.

1:24,000

0.5 Miles

1 Kilometers

P.O. Box 367
Elmira, CA 95625

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www.solanoarchaeology.com

August 17th, 2022

North Valley Yokuts Tribe
Timothy Perez
P.O. Box 717
Linden, CA, 95236

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Mr. Perez:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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Principal Investigator

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August 17th, 2022

California Valley Miwok Tribe
AKA Sheep Rancheria of Me-Wuk Indians of California
P.O. Box 395
West Point, CA, 95255

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

To Whom it may Concern:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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www.solanoarchaeology.com

August 17th, 2022

Southern Sierra Miwuk Nation
Sandra Chapman, Chairperson
P.O. Box 186
Mariposa, CA, 95338

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Ms. Chapman:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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August 17th, 2022

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville, CA, 93258

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Mr. Peyron:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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August 17th, 2022

Tule River Indian Tribe
Kerri Vera, Environmental Department
P. O. Box 589
Porterville, CA, 93258

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Ms. Vera:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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August 17th, 2022

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, CA, 93906

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Mr. Woodrow:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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August 17th, 2022

North Valley Yokuts Tribe
Katherine Perez, Chairperson
P.O. Box 717
Linden, CA, 95236

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Ms. Perez:

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Principal Investigator

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August 17th, 2022

Tule River Indian Tribe
Joey Garfield, Tribal Archaeologist
P. O. Box 589
Porterville, CA, 93258

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Mr. Garfield:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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Regards,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

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Elmira, CA 95625

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August 17th, 2022

Calaveras Band of Mi-Wuk Indians
Gloria Grimes, Chairperson
P.O. Box 899
West Point, CA, 95255

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Ms. Grimes:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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Regards,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

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Elmira, CA 95625

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www.solanoarchaeology.com

August 17th, 2022

Calaveras Band of Mi-Wuk Indians
Debra Grimes, Cultural Resources Specialist
P.O. Box 1015
West Point, CA, 95255

Re: Hughson Consolidation Project - City of Hughson, San Joaquin County, California

Dear Ms. Grimes:

BaseCamp Environmental, Inc., has retained Solano Archaeological Services, LLC (SAS) to conduct a Section 106 and CEQA analysis of an approximately 1.5-mile-long project Area of Potential Effects (APE) for the Hughson Consolidation Project (the Project). The proposed Project consists of extending City (City of Hughson) water service to an existing mobile home park and apartment complex located outside the City limits in Stanislaus County, California. As shown on the attached map, the Project's APE is situated in Township 4 South, Range 10 East of the *Denair, California* USGS 7.5' topographic quadrangle. .

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Regards,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

NATIVE AMERICAN CONSULTATION LOG FOR HUGHSON WATER CONSOLIDATION PROJECT, SAN JOAQUIN COUNTY, CALIFORNIA

SAS Contact: Brian Ludwig, Ph.D.

Native American Consultant	Date of Correspondence	Responses
Calaveras Band of Mi-Wuk Indians, Debra Grimes, Cultural Resources Specialist	8-18-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	8-23-2022	Follow-up phone call - left message, no response.
	9-6-2022	Follow-up email - No response.
Calaveras Band of Mi-Wuk Indians, Gloria Grimes, Chair	8-18-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	8-23-2022	Follow-up phone call - left message, no response.
	9-6-2022	Follow-up email - No response.
North Valley Yokuts Tribe Katherine Perez, Chairperson	8-18-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	8-23-2022	Follow-up phone call - left message, no response
	9-6-2022	Follow-up email - No response.
North Valley Yokuts Tribe Timothy Perez,	8-18-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	8-23-2022	Follow-up phone call - left message, no response.
	9-6-2022	Follow-up email - No response.
Tule River Indian Tribe Joey Garfield, Tribal Archaeologist	8-18-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	8-23-2022	Follow-up phone call - left message, no response.
	9-6-2022	Follow-up email - No response.
Tule River Indian Tribe Kerri Vera, Environmental Department	8-18-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	8-23-2022	Follow-up phone call - left message, no response.
	9-6-2022	Follow-up email - No response.
Tule River Indian Tribe Neil Peyron, Chairperson	8-18-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	8-23-2022	Follow-up phone call - left message, no response.
	9-6-2022	Follow-up email - No response.
California Valley Miwok Tribe AKA Sheep Rancheria of Me-Wuk	8-18-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.

NATIVE AMERICAN CONSULTATION LOG FOR HUGHSON WATER CONSOLIDATION PROJECT, SAN JOAQUIN COUNTY, CALIFORNIA

SAS Contact: Brian Ludwig, Ph.D.

Indians of California	8-23-2022 9-6-2022	Follow-up phone call - left message, no response. Follow-up email - No response.
California Valley Miwok Tribe	8-18-2022 8-23-2022 9-6-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity. Follow-up phone call - left message, no response. Second follow-up phone call - left message, no response.
Southern Sierra Miwuk Nation, Sandra Chapman, Chair	8-18-2022 8-23-2022 9-6-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity. Follow-up phone call - left message, no response. Follow-up email - No response.
Wuksache Indian Tribe/Eshom Valley Band Kenneth Woodrow, Chairperson	8-18-2022 8-23-2022 9-6-2022	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity. Follow-up phone call - left message, no response. Follow-up email - No response.

APPENDIX C

— ♦ ♦ ♦ —

CCIC RECORD SEARCH RESULTS

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

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

Date: 7/20/2022

Records Search File No.: 12242N
Project: Hughson Consolidation/
Whitmore Road

Brian Ludwig
Solano Archaeological Services
P. O. Box 367
Elmira, CA 95625
707-718-1416

Invoice to: Jason Coleman
jason@solanoarchaeology.com

Dear Dr. Ludwig:

The Central California Information Center received your record search request for the project area/radius referenced above, located on the Ceres and Denair 7.5' quadrangles in Stanislaus County. The following reflects the results of the records search for the project study area and radius:

As per data currently available at the CCaIC, the locations of resources/reports are provided in the following format: ☒ custom GIS maps ☐ GIS Data/shape files ☐ hand-drawn maps

Summary Data: No new data.

Resources within the project area:	1: P-50-002006
Resources within the 100-foot radius:	None formally reported to the Information Center.
Resources within ½-mile:	2: P-50-001800, 2154
Reports	Not requested

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Resource Digital Database Records:	☒ enclosed	☐ not requested	☒ nothing listed
Report Database Printout (list):	☐ enclosed	☒ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☒ nothing listed
Report Copies:	☐ enclosed	☒ not requested	☐ nothing listed

OHP Historic Properties Directory: New Excel File: Built Environment Resource Directory (BERD) Dated 11/17/2021

Not all resources listed in the BERD are mapped in GIS, nor do we have records on file for; if you identify additional resources in the BERD that you need copies of, contact the IC. See listing for Whitmore Road that might be within project/radius.

☒ enclosed ☐ not requested ☒ nothing listed

Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☒ not requested	☐ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed

Shipwreck Inventory: ☒ not available at CCIC; please go to http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp

Soil Survey Maps: ☒ not available at CCIC; please go to http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Note: Billing will be transmitted separately via email by our Financial Services office *($178.15), payable within 60 days of receipt of the invoice.

If you wish to include payment by Credit Card, you must wait to receive the official invoice from Financial Services so that you can reference the CMP # (Invoice Number), and then contact the link below:

https://commerce.cashnet.com/ANTHROPOLOGY

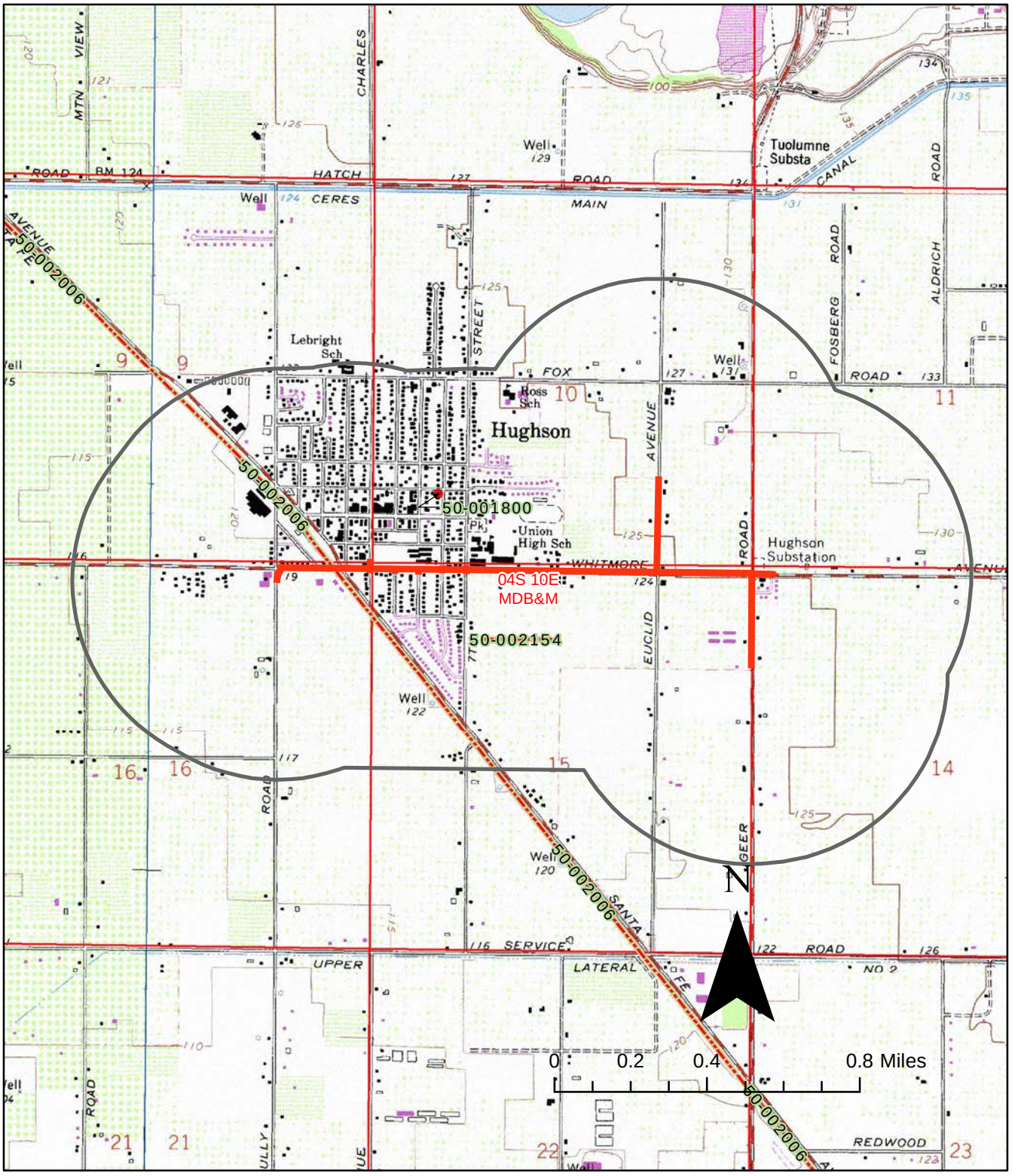
Sincerely,

E. A. Greathouse

E. A. Greathouse, Coordinator
Central California Information Center
California Historical Resources Information System

* Invoice Request sent to: ARBilling@csustan.edu, CSU Stanislaus Financial Services

CCaIC 12242N Hughson Consolidation/Whitemore Road
Resources 1/2-mile radius 1:24,000-scale
Ceres & Denair USGS 7.5' Quadrangles



Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-50-001800			Building	Historic	HP02		
P-50-002006	CA-STA-000424H	Resource Name - Burlington Northern & Santa Fe (1996 to present); Other - San Francisco and San Joaquin Valley Railroad; Resource Name - Atchison Topeka and Santa Fe Railroad;	Structure	Historic	AH07; HP04; HP19; HP39	2007 (Carey & Co., Carey & Co.); 2009 (Pamela Daley, Cultural Research Associates); 2014 (Vallaire K., and M. Kile, LSA Associates, Inc.)	SJ-07527, ST-06977, ST-07244, ST-07527, TO-07527
P-50-002154		Resource Name - HP-1	Structure	Historic	AH06	2014 (Hampson, RPH Consulting)	ST-07965

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # P-50-002006
HRI #
Trinomial
NRHP Status Code 6Z

New Segment

Review Code | Other Listings Reviewer | Date

Map Reference #: 10
***Resource Name or #:** Atchison, Topeka & Santa Fe Railway

P1. Other Identifier: Burlington Northern and Santa Fe Railway; San Francisco and San Joaquin Valley Railway 8/17

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
- ***a. County** Stanislaus
- ***b. USGS 7.5' Quad** *Riverbank, Calif.* **Date** 1968; **T** ; **R** ; **Sec** (See L2)
- c. Address City Zip
- d. UTM: See Continuation page 5
- e. Other Locational Data: N/A

***P3a. Description:** This resource consists of a 0.7-mile long segment of the Atchison, Topeka & Santa Fe Railway (ATSF). The segment contains three features. These features include: three sheds and their associated mechanisms (Feature A) near its intersection with Claribel Road; a bridge that crosses over Modesto Irrigation District Main Canal (Feature B); and a crossing gate and associated control shed (Feature C) near its intersection with Plainview Road. The history of this segment of the ATSF is presented in this record (see Building, Structure, and Object Record; Continuation Sheet; Linear Feature Record; and Location Map).

***P3b. Resource Attributes:** HP 39. Other; HP4. Ancillary Building; HP19. Bridge
***P4. Resources Present:** ☐ Building ☒ Structure ☐Object ☐Site ☐District ☐ Element of District ☐Other

P5b. Description of Photo: Photo: 1 View of Atchison Topeka & Santa Fe Railway, facing northwest, taken from Plainview Rd.

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric ☐ Both
1898 (*Encyclopedia of Western Railroad History: Vol. IV, California*).

***P7. Owner and Address:**
Burlington Northern and Santa Fe Railway
2650 Lou Menk Drive
Fort Worth, Texas 76131-2830

***P8. Recorded by:**
Katie Vallaire and Amanda Rose
LSA Associates, Inc.
4200 Rocklin Road, Suite 11B
Rocklin, California 95677
p. 916-630-4600 / f. 916-630-4603

***P9. Date Recorded:** 06/03/2014

***P10. Survey Type:** Intensive Survey

***P11. Report Citation**:
Nayyar, Margo and Nichole Jordan
2015 *Historical Resources Evaluation Report for the North County Corridor New State Route 108, Stanislaus County, California*. LSA Associates, Inc., Rocklin, California.

***Attachments:** ☐NONE ☒Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☒Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☒ Other (List): Sketch Map

BUILDING, STRUCTURE, AND OBJECT RECORD

Map Reference #: 10
***NRHP Status Code** 6Z
***Resource Name or #** Atchison, Topeka & Santa Fe Railway

B1. Historic Name: San Francisco and San Joaquin Valley Railway
B2. Common Name: Burlington Northern Santa Fe Railway (BNSF)
B3. Original Use: Railroad
B4. Present Use: Railroad
***B5. Architectural Style:** N/A
***B6. Construction History:**
This segment of the ATSF was constructed by 1898. The rails have been replaced with modern rails (date stamped 1998 and 2012) within the last 20 years. The baseplates are also replacements and many contain modern pandrol clips. Naturally, the ties have been replaced over time. The ballast also appears to have been regularly maintained.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location**_
***B8. Related Features:** Three modern sheds with associated signaling devices (Feature A); bridge over Modesto Irrigation District Main Canal (Feature B); Modern crossing gate and shed (Feature C).

B9a. Architect: Engineer – San Francisco and San Joaquin Valley Railway b. Builder: Claus Spreckels
***B10. Significance: Theme** N/A **Area** Riverbank
Period of Significance N/A **Property Type** Railroad **Applicable Criteria** N/A

This segment of the ATSF was originally constructed as part of the San Francisco and San Joaquin Valley Railway (SFSJV) by 1898 by industrial entrepreneur Claus Spreckels. Spreckels advertised the SFSJV as the "people's railroad" to appeal to the region's farmers in an attempt to compete with Southern Pacific Railroad's shipping rate monopoly in the San Joaquin Valley. Construction on the railroad started in 1895, and by July 1897, the SFSJV completed a line from Stockton to Hanford. They extended the line from Hanford to Bakersfield by June 1898. That same year, the SFSJV was sold to the Atchison Topeka and Santa Fe Railway Company (ATSF) (Robertson 1998:314-315; Pomeroy 2003:97). Although Spreckels had advertised the railroad as the "people's railroad," he never intended to stay in the railroad business unless the SFSJV was profitable for him. In fact, he assumed the SFSJV would be sold to a larger railroad company once it was completed. Presumably, Spreckels intended to sell the SFSJV railway to ATSF from the start (Daggett 1922:332).

Between 1895 and 1920, the ATSF obtained over 11,000 miles of track, consequently becoming one of the largest railroad companies in the country. Starting in 1926 with the Chief, the ATSF became well known for its passenger trains. These trains would take tourists to different parts of the country, specifically Los Angeles, San Francisco, the Grand Canyon, and Glacier National Park (Yenne 2005:61, 77). The ATSF grew steadily and prospered over the next couple decades, and in 1941, the amount of tracks owned by ATSF peaked at over 13,000 miles. Although the railroad expanded, in the 1920s railroad companies in general began losing revenue as a result of America's increasing dependency on automobiles. In response, the ATSF began offering bus services in California that provided lower fares and more frequent services. This new bus system increased the ATSF's revenue from 0.5 million in 1937 to 1.8 million in 1941 (Thompson 1993:129-130). The railroad as a whole, however, began losing customers in the 1940s. Long-distance travel by car was quicker and more affordable than by train, and the new improved roadways being constructed throughout the country made travelling by car more feasible. See Continuation page 7.

See Sketch Map, page 5.

B11. Additional Resource Attributes: N/A

***B12. References:** See Continuation page 7.

B13. Remarks: None.

***B14. Evaluator:** Katie Vallaire, LSA Associates, Inc., Rocklin, California.
***Date of Evaluation:** 6/26/14

(This space reserved for official comments.)

Map Reference #: 10
Resource Name or #: Atchison, Topeka & Santa Fe Railway

L1. Historic and/or Common Name: San Francisco and San Joaquin Valley Railway

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation **Designation:** Segment 1

b. Location of point or segment:
Segment 1: NE ¼ of Section 1 of Township 3S, Range 9E; and SE ¼ of Section 36 of Township 2S, Range 3E (See Location Map and Continuation Sheet for UTM points).

L3. Description: This segment of railroad was constructed by 1898 by Claus Spreckels as an extension of the San Francisco and San Joaquin Valley Railway. The segment is adjacent and parallel to Terminal Avenue, running northwest to southeast, bound on the north by Davis Road and on the south by Plainview Road. The segment totals 0.7 miles and consists of a railroad grade with two modern flat-bottomed rails, pressure-treated wood ties soaked in creosote, baseplates secured with both spikes and pandrol clips, and ballast. Splice bars were observed on the section north of Claribel Road; however, the rails south of Claribel Road had welded rail joints. (See Continuation page 7).

L4. Dimensions:
- **a. Top Width** 15 feet
- **b. Bottom Width** 40 feet
- **c. Height or Depth** 5 feet
- **d. Length of Segment** 0.7 miles

L4e. Sketch of Cross-Section **Facing: NW**

L5. Associated Resources: none.

L6. Setting: This segment of the ATSF lies amongst pastures and agricultural fields, southeast of Riverbank, California. The Riverbank Industrial Complex is located approximately 0.5 miles to the east.

L7. Integrity Considerations: This segment of the ATSF maintains its original location; however, it does not retain most of its integrity. As is necessary for railroad maintenance and safety, the ties have been replaced throughout its existence. The existing ties are pressure treated and soaked in creosote, a method used for railroad ties in the 1900s but didn't gain wide popularity in the United States until the 1920s. The rails are date-stamped 1998 and 2012, and have been welded together at their joints. Modern pandrol clips, as well as new spikes, secure the rails to modern baseplates. (See Continuation page 8).

L8b. Description of Photo, Map, or Drawing Overview of the Atchison, Topeka & Santa Fe Railway, facing southwest.

L9. Remarks: None.

L10. Form Prepared by:
Katie Vallaire, LSA Associates, Inc., Rocklin, California.

L11. Date: 6/27/14

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

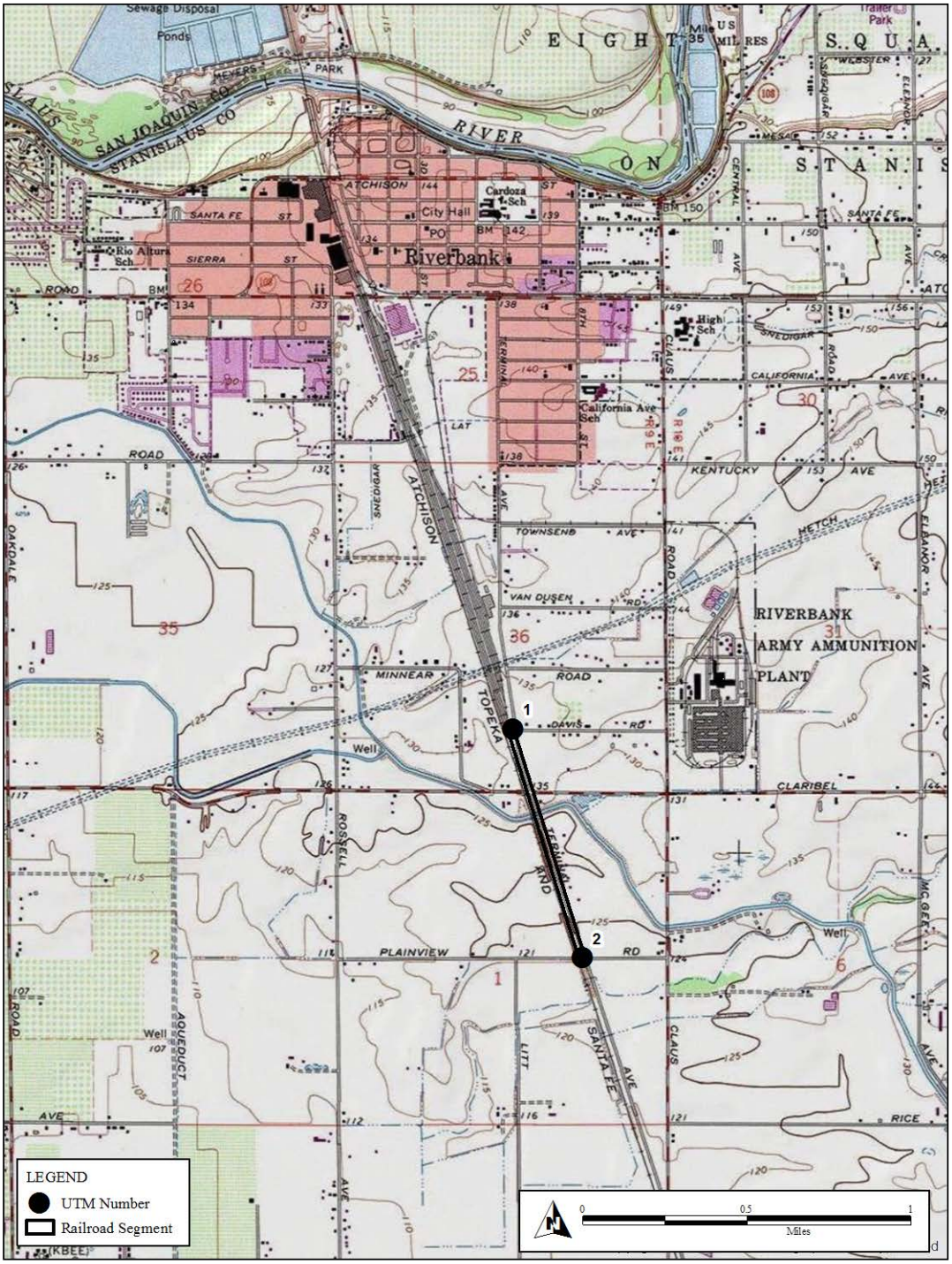
Page 4 **of** 8

Map Reference #: 10
***Resource Name or #** Atchison, Topeka & Santa Fe Railway

***Map Name:** *Riverbank, Calif.*

***Scale:** 1:24k

***Date of map:** 1968



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary #
HRI#
Trinomial

Map Reference #: 10
***Resource Name or #** Atchison, Topeka & Santa Fe Railway

***Drawn by:** Nichole Jordan, LSA, Associates, Inc., Rocklin, California

***Date of map:** 06/27/2014

*P2d. UTM (continued):

Name	UTM point	X	Y
ATSF Segment 1	1	6437197	2082610
ATSF Segment 1	2	6438314	2078918

*P5. Photographs (continued):

Photo 2: ATSF Segment 1 with Feature A in background, facing NW.

Photo 3: View of ATSF segment 1, facing N, taken from Plainview Rd.

Photo 4: Detail of modern baseplates, spikes, and 1998 date-stamped rail.

Photo 5: Detail of modern pandrol clips and 2012 date-stamped rail.

*P5. Photographs (continued):

Photo 6: Feature B (bridge), facing southwest.

Photo 7: Feature C (crossing gate and shed), facing northeast.

*B10. Significance (continued):

As a result of America's growing dependency on using personal automobiles for travel, the ATSF has declined since 1941. In 1968, they became a subsidiary of Santa Fe Industries, Inc. In 1971, they sold their passenger service to the National Railway Passenger Corporation (Amtrak). The company proposed a merger in 1983 with the Southern Pacific Transportation Company, but it was rejected by the ICC in 1987 because the merger was deemed monopolistic. Two years later, Santa Fe Industries, Inc. changed their name to Santa Fe Pacific Corporation. The corporation merged with the Burlington Northern Railway Company in 1995, forming the Burlington Northern and Santa Fe Railway Company (Encyclopædia Britannica 2013).

This segment of the ATSF was not part of the first or only railroad constructed during this time in opposition to Southern Pacific Railroad (SPRR). Although this line undoubtedly influenced the settlement and transportation of Stanislaus County, this railroad does not retain sufficient integrity to convey its period of significance. In this segment, the track itself has been completely updated with modern materials and the features associated with it are modern as well. Although this track is associated with Claus Spreckels, it does not convey his significance in the sugar business. Spreckels had the track constructed as an opposition to SPRR's hold over Central Valley freight and transport rates in 1897, but sold it the next year to ATSF. The segment does not represent the work of a master, nor is it architecturally significant. It is a standard railroad with modern flat-bottomed rails and wood crossties. Furthermore, it is unlikely to yield valuable information to future researchers. Because of both the modern development surrounding the segment and the alterations and modern materials that the segment currently contains, the feeling and association of this segment of the ATSF have also been compromised. While this segment of the railroad appears to retain its integrity of location, it lacks integrity of design, materials, workmanship, setting, association, and feeling (See Section *L7. Integrity Considerations).

In conclusion, this resource does not appear eligible for listing on the National Register of Historic Places under Criteria A, B, C, or D; nor does it appear eligible for listing on the California Register of Historical Resources under Criteria 1, 2, 3, or 4. Additionally, this segment of the ATSF and associated resources were evaluated in accordance with Section 15064.5 (a) (2)-(3) of the California Environmental Quality Act (CEQA) Guidelines using the criteria outlined in Section 5024.1 of the California Resources Code, and none appear to be historical resources for the purposes of CEQA.

***L3. Description** (continued):

Feature A consists of three metal sheds, a standard crossing gate, a defect detector, and a railroad signal light. The sheds appear to be modern. Each has a square plan, a low-pitched gabled roof, and a metal door. The sheds are all located just north of Claribel Road; two are located on the west side of the track and one on the east. The defect detector is located on the west edge of the track just north of Claribel Road. Feature A appears to be modern.

Feature B is a concrete bridge located approximately 0.1 miles south of Claribel Road adjacent to Stanislaus County bridge 38C0249. A railroad bridge has existed in the location since at least 1903; however, this bridge appears to have been constructed circa 1950 and was likely constructed in 1948 at the same time that Bridge 38C0249 was built. The bridge also appears to have been widened between 1993 and 2002. Feature C is a standard crossing gate and associated control shed, located at the track's intersection with Plainview Road. The control shed has a square plan, is constructed of metal, has a low-pitched gabled roof, and has a metal door. Feature C appears to be modern.

***L7. Integrity Considerations** (continued):

The ballast, also, has been regularly maintained and reinforced with modern fill. All of the features associated with this railroad segment appear to be less than 45 years old or have been altered within the last 45 years. The railroad segment retains its integrity of location. The rail and tie replacements are "in kind" with the original rails and ties; however, the use of modern pandrol clips and baseplates, as well as the use of continuous welded rail, compromise the aspect of workmanship and material. Welding rails at their joints did not become common in the United States until 1950. The track's design is basic: two rails secured to wooden crossties located on a grade. It is unknown whether there was an original gate crossing in 1897; however, the ancillary buildings and structures associated with the segment appear to be modern, and the bridge was presumably constructed circa 1950. These features affect the track's integrity of design. This segment has been situated amongst rural land since its construction. The Modesto Main Canal was hand-dug in 1903 and has since been widened and lined in concrete. Claribel Road and Terminal Avenue are high-traffic roads, compromising the track's integrity of setting.

***B12. References** (continued):

Daggett, Stuart
1922 *Chapters on the History of the Southern Pacific*. Ronald Press Company, New York.

Encyclopædia Britannica
2013 "Atchison, Topeka and Santa Fe Railway Company." Encyclopædia Britannica, Inc.

Pomeroy, Earl S.
2003 *The Pacific Slope: A History of California, Oregon, Washington, Idaho, Utah, and Nevada*. University of Nevada Press, Reno, Nevada.

Robertson, Donald R.
1998 *Encyclopedia of Western Railroad History: Volume IV, California*. Caxton Printers, Caldwell, Idaho.

Thompson, Gregory Lee
1993 T*he Passenger Train in the Motor Age: California's Rail and Bus Industries, 1910-1941*. Ohio State University Press, Columbus, Ohio.

Yenne, Bill
2005 *Great Passenger Trains: Santa Fe Chiefs*. Voyageur Press, Minneapolis, Minnesota.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # P-50-002006 Parent Record
HRI #
Trinomial CA-STA-424H STA Co
NRHP Status Code

Other Listings
Review Code Reviewer Date

Page 1 of 4 *Resource Name or #: Atchison Topeka Santa Fe Railroad (San Francisco and San Joaquin Valley Railroad)

P1. Other Identifier: Burlington Northern Santa Fe Railroad (1996 to present) 4/09

*P2. Location: ☐ Not for Publication ■ Unrestricted *a. County: Stanislaus

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Denair Date:1963 rev 1987 T 4S R ; 10E s/w¼ n/w¼ of Sec 15 ; M.D. B.M.

c. Address: Crossing at East Service Road City: Ceres Zip:

d. UTM: Zone: 10 ; Point A: 0689649 mE/ 4161408 mN; Point B: 0689036 mE/ 4162112 mN (NAD 84)

e. Other Location Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 121 feet AMSL

BNSF mile marker 1085.0 to 1084.26. The railroad line intersects with East Service Road. The railroad line runs parallel to Santa Fe Avenue. At this intersection the railroad line crosses over a portion of Turlock Irrigation District Upper Lateral No. 2.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This 3.4 mile segment of track has been altered with the construction of a new crossing for automobile traffic. There is a single set of standard gauge steel rail road tracks on wood cross ties set in a slightly raised bed of ballast rock. The tracks run through mainly agricultural areas outside of populated cities and towns in the Central Valley region of California.
This section of track is part of a much larger section of the western district of the historic Atchison Topeka & Santa Fe Railroad line that was run out of Santa Fe, New Mexico.

*P3b. Resource Attributes: AH7 (Railroad grade)

*P4. Resources Present: ☐Building ☑Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) 2/16/2009 BNSF crossing looking east from East Service Road across the BNSF railroad tracks.

*P6. Date Constructed/Age and Sources: Parent Record
☑Historic 1895-1898
☐Prehistoric ☐Both
Site form for P-39-000112, April 1996.

*P7. Owner and Address:
Burlington Northern Santa Fe Railroad Corporation
2650 Lou Menk Drive
Fort Worth, TX 76131

*P8. Recorded by:
Pamela Daly, M.S.H.P.
Cultural Research Assoc.
295 E 8th Street
Chico, CA 95928

*P9. Date Recorded: 3/19/2009

*P10. Survey Type: Pedestrian

*P11. Report Citation: (Cite survey report and other sources, or enter "none.")
Cultural Resources Inventory for the Hughson-Grayson 115kV Transmission Line and Substation Project in Stanislaus County, California.

*Attachments: ☐NONE ☑Location Map ☐Sketch Map ☐Continuation Sheet ■Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☑Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # P-50-002006
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD CA-STA-424H

*NRHP Status Code

***Resource Name or # Atchison Topeka Santa Fe Railroad (San Francisco and San Joaquin Valley Railroad)**

B1. Historic Name: San Francisco and San Joaquin Valley Railroad/Atchison Topeka & Santa Fe Railroad
B2. Common Name: Burlington Northern Santa Fe Railroad
B3. Original Use: Freight and Passenger railroad line B4. Present Use: Freight railroad line
***B5. Architectural Style:** Standard gauge railroad tracks
***B6. Construction History:** (Construction date, alterations, and date of alterations)
AT&SF Original construction in California: 1883 to 1900
San Francisco and San Joaquin Valley Railroad: 1895 to 1898 (AT& SF purchased the SFSJV in 1898)
Atchison Topeka Santa Fe merged with Burlington Northern Railroad in 1995, creating Burlington Northern Santa Fe.
***B7. Moved?** ■No □Yes □Unknown **Date:** **Original Location:**
***B8. Related Features:** culvert, canal, crossing guard and arms.

B9a. Architect: Chief Engineer: William Benson Storey
b. Builder:
***B10. Significance: Theme:** Transportation/Railroad **Area:** San Joaquin Valley
Period of Significance: 1885 to 1900 **Property Type:** Railroad System **Applicable Criteria:** NR/CR
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Claus Spreckels a leading citizen of San Francisco, and sugar merchant (Spreckels Sugar), underwrote the building of the San Francisco & San Joaquin Valley Railroad so as to break the stranglehold that the Southern Pacific Railroad had on all of California's rail shipping routes. Spreckels approached towns and the agricultural communities in the Central Valley and urged them to donate land for the rail line right-of-way, thereby lending populist financial support to the project.

The rail started to be laid in 1895 with 25 miles run south of Stockton. By 1898 they had completed the line to Bakersfield. In 1898, the Atchison Topeka & Santa Fe Railroad bought the SF&SJV. AT&SF leased railroad lines from the Southern Pacific from Bakersfield to Mojave where they connected with their own line which ran east to Santa Fe, New Mexico.

While the San Francisco & San Joaquin Railroad/Atchison Topeka & Santa Fe rail road line appears eligible for listing in the National Register and California Register under Criteria B/2 for its association with a leading California merchant, Claus Spreckels, and under Criteria A/1 for being a major railroad transportation line that was constructed by populist support in opposition to a rail monopoly held by the Southern Pacific Railroad at that time, this small segment is not eligible as it has been continually upgraded with the replacement of rails, ties, ballast bed, crossing guards and other related equipment. The segment has not retained the historical integrity of materials, workmanship, setting and feeling. It is not eligible for listing in the National or California Register.

B11. Additional Resource Attributes: (List attributes and codes) AH 7 (Railroad grades)

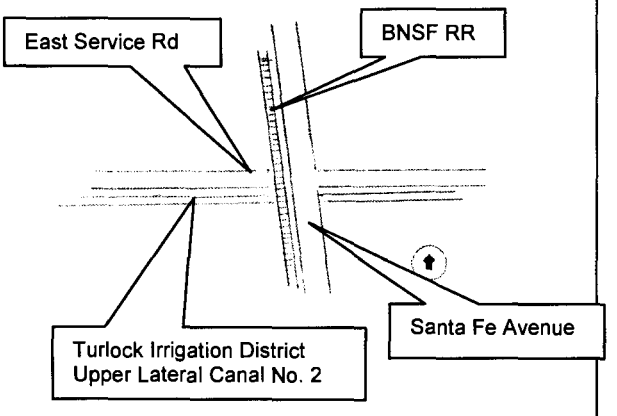
***B12. References:**
Site Form for Atchison Topeka & Santa Fe Railroad (San Francisco & San Joaquin Valley Railroad), P-39-000112, recorder: Unknown. Dated April 1996.

B13. Remarks: The proposed project for which this survey was performed will not physically impact the railroad line.

***B14. Evaluator:**
Pamela Daly, M.S.H.P.,
Cultural Research Assoc.
295 E. 8th St.
Chico, CA 95928

***Date of Evaluation:** March 18, 2009

(Sketch Map with north arrow required.)



(This space reserved for official comments.)

*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary # P-50-002006
HRI #
Trinomial CA-STA-424H

Page 3 **of** 4 **Resource Name or #:** Atchison Topeka Santa Fe Railroad (San Francisco and San Joaquin Valley Railroad)

L1. Common Name: Burlington Northern Santa Fe (1996 to present)

L2a. Portion Described: ☐ Entire Resource ☑ Segment ☐ Point Observation **Designation:**

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map)

BNSF mile marker 1085.0 to 1084.26.
This is a portion of the Burlington Northern Santa Fe railroad line. The segment runs northwest ¾ mile from the intersection of East Service Road and Santa Fe Ave. From Point A: UTM Zone 10 0689649mE / 4161408 mN) to the intersection of 7th Street and Santa Fe Ave., Point B: UTM Zone 10 0689036mE / 4162112 mN). This is currently, a working section of track.

L3. Description:
Standard gauge steel railroad tracks on wood ties, set in a slightly raised bed of rock ballast. The railroad crossing at the intersection with East Service Road has been upgraded for automobile traffic with the tracks set in a bed of concrete.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
Standard gauge tracks: 4 feet 8 ½ inches apart.

a. Top Width:
b. Bottom Width:
c. Height or Depth: Slight elevation (1-4 feet)
d. Length of Segment: .70 miles

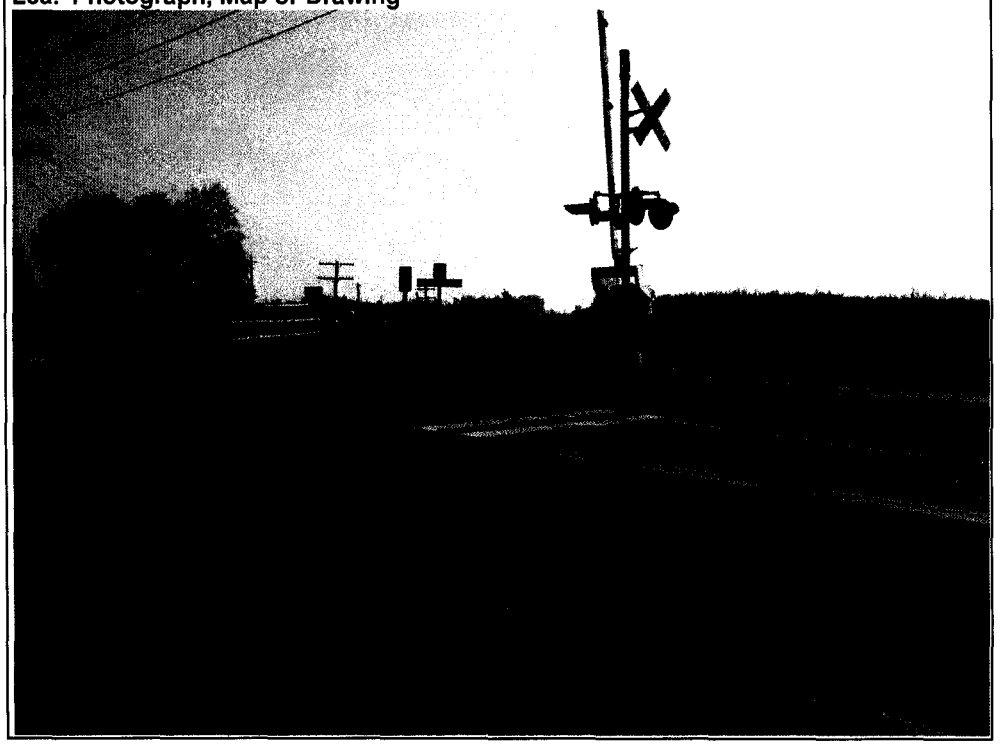
L5. Associated Resources: Upper Lateral No. 2, part of the Turlock Irrigation District.

L4e. Sketch of Cross-Section (include scale) **Facing:**

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.)
Rural setting, orchards and residential.

L7. Integrity Considerations: Good, line is still in use. While this railroad segment retains integrity of location and association with transportation and development, it has been altered over the years with the replacement of rails, ties, crossing guards, and other equipment necessary to keep the in good operating order. This segment no longer retains integrity of design, materials, workmanship, setting or feeling. It is not eligible for listing in the National or California Register.

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing: View of railroad line, looking south, while standing on the north side of East Service Road.

L9. Remarks:
None

L10. Form Prepared by: (Name, affiliation, and address)
Pamela Daly, M.S.H.P.
Cultural Resources Associates
295 E. 8th Street
Chico, CA 95928

L11. Date: 3/19/2009

DPR 523E (1/95)

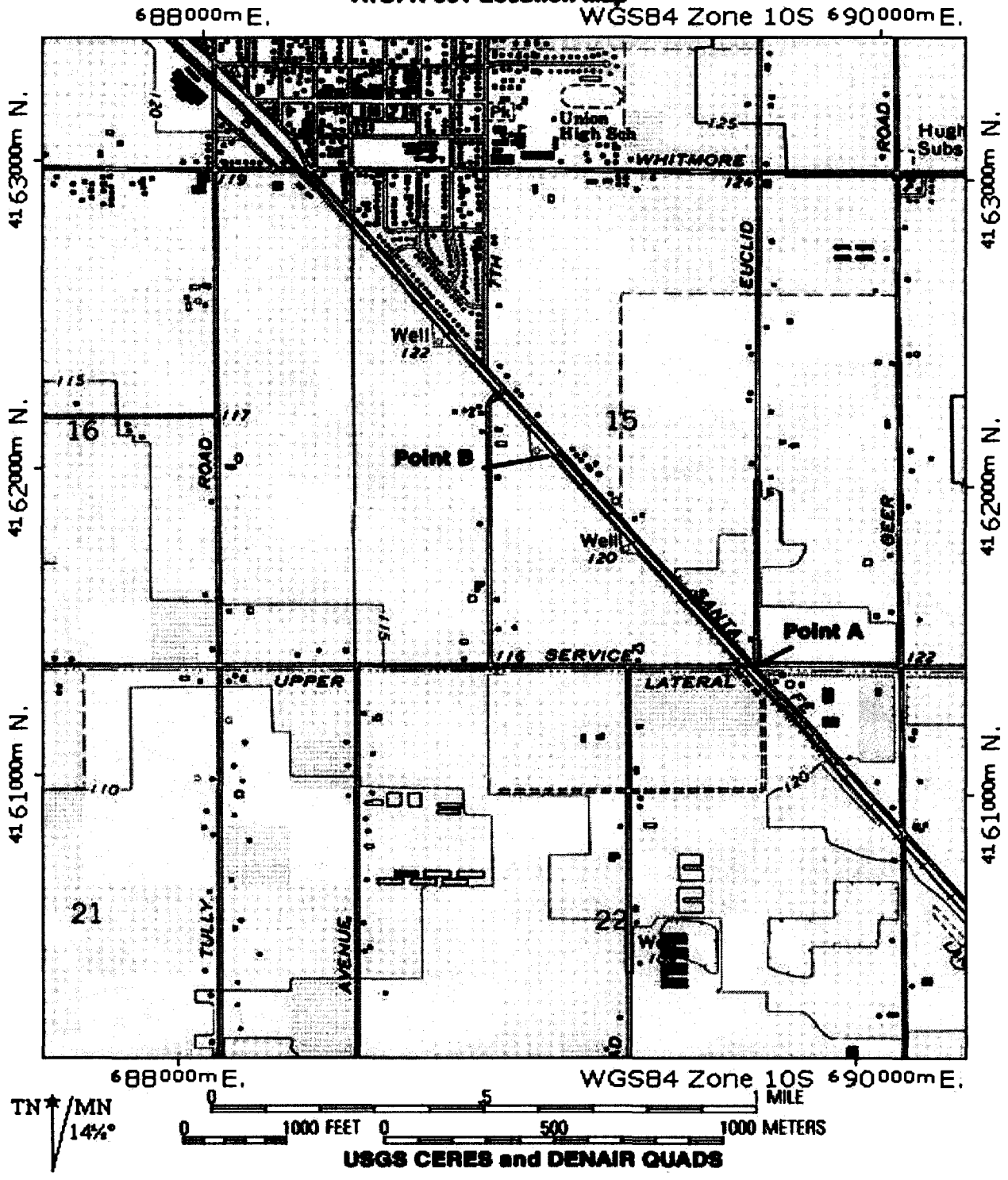
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # P-50-002006
HRI#
Trinomial CA-STA-424/H

Page 4 of 4 *Resource Name or #: Atchison Topeka Santa Fe Railroad (San Francsico and San Joaquin Valley Railroad)

*Map Name: Denair *Scale:1:24,000 *Date of Map: 1963 rev 1987 DPR 523J (1/95) *Required information

ATSFR-001 Location Map



USGS CERES and DENAIR QUADS

New Seg.

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-50-002006
HRI #
Trinomial CA-STA-424H
NRHP Status Code 6Z
Other Listings
Review Code _____ Reviewer _____ Date _____

Page 1 of 3 + map *Resource Name or #: (Assigned by recorder) Atchison, Topeka & Santa Fe Rail Road
P1. Other Identifier: Burlington Northern Santa Fe Railroad
*P2. Location: __ Not for Publication ✓ Unrestricted
*a. County Stanislaus and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad Riverbank Date _____ T 2S; R 9E; __ of SW 1/4 of Sec 36; MD B.M.
c. Address _____ City _____ Zip _____
d. UTM: (Give more than one for large and/or linear resources) Zone 10, 682422 mE/ 4176164 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
Crosses the San Joaquin Pipelines around MP 69.30.

2/2012

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Atchison, Topeka & Santa Fe Railroad crossing consists of tracks running north-south. A rail yard is located at the point where the railroad crosses the pipeline right-of-way, at approximately MP 69.30, and consists of multiple parallel tracks laid out on a wide swath of flat ground. The tracks consist of metal rails and timber ties on a berm of ballast.

*P3b. Resource Attributes: (List attributes and codes) HP39 -- other
*P4. Resources Present: __ Building ✓ Structure __ Object __ Site __ District __ Element of District __ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) ATSF Railroad tracks looking north, 7/26/06

*P6. Date Constructed/Age and Source: ✓ Historic __ Prehistoric __ Both
1897 (Brotherton, 1981)

*P7. Owner and Address:
Burlington Northern Santa Fe
P.O.Box 961056
Fort Worth, TX 76161-0056

*P8. Recorded by: (Name, affiliation, and address)
Carey & Co.
460 Bush Street
San Francisco, CA. 94108

*P9. Date Recorded:
8/13/2007

*P10. Survey Type: (Describe)
Intensive Survey

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") See [7527]
San Francisco Public Utilities Commission, San Joaquin Pipeline Existing Conditions Report, 2007.

*Attachments: __NONE __Location Map ✓ Continuation Sheet ✓ Building, Structure, and Object Record
__Archaeological Record __District Record __Linear Feature Record __Milling Station Record __Rock Art Record
__Artifact Record __Photograph Record __Other (List):

DPR 523A (1/95) *Required information

State of California The Resources Agency Primary # P-50-002006
DEPARTMENT OF PARKS AND RECREATION HRI# CA-STA-4244
BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6Z

Page 2 of 3 *Resource Name or # (Assigned by recorder) Atchison, Topeka & Santa Fe Railroad

B1. Historic Name: Atchison, Topeka & Santa Fe Railroad
B2. Common Name: Santa Fe Railroad
B3. Original Use: Transportation B4. Present Use: Transportation
*B5. Architectural Style: N/A
*B6. Construction History: (Construction date, alterations, and date of alterations)

Constructed in 1897.

*B7. Moved? ✓ No Yes Unknown Date: Original Location:
*B8. Related Features:

B9a. Architect: N/A b. Builder: N/A
*B10. Significance: Theme Central Valley Railroad Development Area Northern California

Period of Significance 1897 Property Type Railroad Applicable Criteria n/a

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Atchison, Topeka & Santa Fe Railroad was the fourth major line constructed in the region and began as the San Francisco & San Joaquin Valley Railroad. Claus Spreckels established the company in 1887 to directly compete with Southern Pacific service from Oakland to Bakersfield through Stockton and Fresno (Brotherton, 1981). The portion of track that crosses the expanded SJPL ROW was laid prior to 1897 when the line ran down the San Joaquin Valley to Visalia. The line was combined with the Atchison & Topeka Company in 1897. Cyrus K. Holliday chartered the Atchison & Topeka Railroad in 1859. The construction of this line resulted in the establishment of a number of communities, including Riverbank after the Riverbank station was built in 1911 (Brotherton, 1981). The line was eventually extended as far south as Bakersfield. Many of the local stations along the line shut down during the 1970s and 1980s (Benson, 1981). Starting in 1974, Amtrak used these tracks from Merced to Riverbank.. (See continuation sheet.)

B11. Additional Resource Attributes: (List attributes and codes) HP39 -- other
*B12. References:

(See continuation sheet.)

B13. Remarks:

*B14. Evaluator: E. Schultz & A. Vanderslice, Carey & Co.
*Date of Evaluation: 8/13/2007

(This space reserved for official comments.)

Primary # P-50-002006
HRI#
Trinomial CA-STA-4244

*Resource Name or # (Assigned by recorder) Atchison, Topeka & Santa Fe Railroad

*Recorded by: Carey & Co. Inc. *Date: 8/13/2007 ☒ Continuation ☐ Update

B10. Significance (continued)

The Atchison, Topeka & Santa Fe Railroad does not appear to be eligible for the National Register or the CRHR. Its inferred period of significance dates to 1897 when rail service started on the line crossing the SJPL. The Atchison, Topeka & Santa Fe Railroad is one of several railroads that expanded rail services in the San Joaquin Valley during the 1890s. While the overall Atchison, Topeka & Santa Fe Railroad is associated with early interstate railroad development, this line has little association with the first wave of rail transportation. The railroad was, however, directly responsible for the founding of several towns in the San Joaquin Valley, and therefore, has local significance under National Register Criterion A or CRHR Criterion 1. This portion of the line has loose association with Claus Spreckels, who is better known for his sugar empire, construction of the Spreckels Building, and the founding of the Independent Gas and Electric Company (Brechin, 1999). The San Francisco and San Joaquin Railroad does not signify the highlight of Spreckel's achievement, and therefore, is not significant under National Register Criterion B or CRHR Criterion 2. The Atchison, Topeka & Santa Fe Railroad does not have significance under National Register Criterion C or CRHR Criterion 3. It is one of many railroads in the San Joaquin Valley and does not exhibit unusual or exemplary construction techniques or workmanship. Additionally, it does not appear that the railroad has the potential to yield information important to the prehistory or history of the local area, state, or the nation.

The rail directly above the San Joaquin Pipelines was impacted during the laying of San Joaquin Pipe Line No. 2 when 216 feet of track from fifteen lines in the rail yard was removed and replaced during construction (Condon, n.d.). Since this portion of track was removed and replaced, it does not retain its integrity of materials, workmanship and design. The line does retain its integrity of location, having never been moved, and its integrity of association. However, it does not retain sufficient integrity to be considered eligible for the National Register or the CRHR.

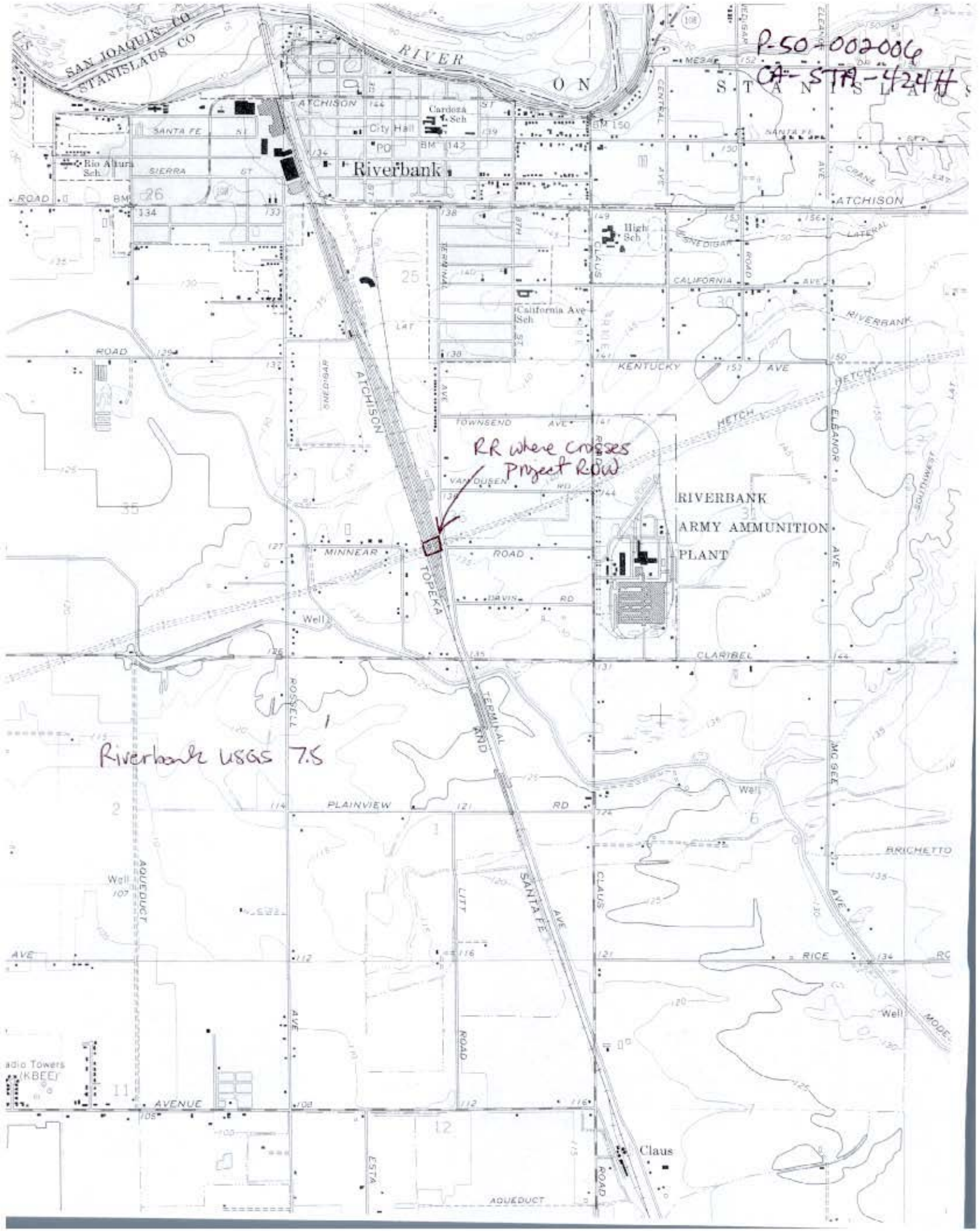
B12. References

Benson, Ted. "Daylight? What's A Daylight?" Stanislaus Stepping Stones, vol. 5, no. 2. Modesto, CA: Stanislaus County Historical Society, 1981.

Brechin, Gray, *Imperial San Francisco. Urban Power, Earthly Ruin.* University of California Press, Berkeley, 1999.

Brotherton, Jack. "Central Pacific Dominated Stanislaus County Railroading." Stanislaus Stepping Stones, vol. 5, no. 2. Modesto, CA: Stanislaus County Historical Society, 1981.

Condon, Thomas. *History of the San Joaquin Pipeline No. 2, 1948-1952.* Archives, Hetch Hetchy Water and Power, City and County of San Francisco Public Utilities Commission, Moccasin, CA (Box 693), n.d.


P-50-002006
CA-STA-424H
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ATCHISON
SANTA FE
SIERRA
ROAD
MINNEAR
DAVIS
RD
TOPEKA
TERMINAL
AVE
CLARIBEL
PLAINVIEW
RD
AQUEDUCT
AVENUE
ROSSELL
CLAUS
ROAD
Claus
ESTA
AQUEDUCT
TOWNSEND
AVE
KENTUCKY
AVE
RIVERBANK
AVE
HETCHY
HETCH
ELEANOR
AVE
SOUTHWEST
MC GEE
AVE
RICE
AVE
CALIFORNIA
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California Ave
Sch
High
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Cardoza
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City Hall
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BM 142
Rio Altura
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(KBEE)

***Recorded by:** Solano Archaeological Services, LLC, Elmira, CA ***Date:** August 2, 2022 ☐ Continuation ☑ Update

Solano Archaeological Services, LLC, (SAS) examined the previously recorded segment of this resource for the Hughson Water Consolidation Project in 2022. SAS did not document any changes to the rail alignment and associated features and components as documented on the 2014 DPR form developed by LSA Associates for the *Historical Resources Evaluation Report for the North County Corridor New State Route 108, Stanislaus County, California* (Nayyar, Margo and Nichole Jordan 2015).

APPENDIX D

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REPRESENTATIVE APE PHOTOGRAPHS

Photo 3164. APE overview, Greer Road – view to north

Photo 3163. APE overview, Greer Road at APE terminus – view to west

Photo 3156. APE overview, along E. Whitmore Ave. at Euclid Rd. – view to west

Photo 3151. APE overview, 7th St. at E. Whitmore Ave. – view to north

Photo 3140. Burlington Northern Santa Fe Railroad line - view to north

Photo 3141. Burlington Northern Santa Fe Railroad line – view to south