

Phase 1 Sewer Line Replacement

Initial Study/Mitigated Negative Declaration

Prepared for:

**The City of Angels Camp
Planning and Building Department**
200 Monte Verda Street, Suite #B
Angels Camp, CA 95222

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January 2020 | CIA-01

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ABBREVIATIONS AND ACRONYMS

| | |
|-----------------|---|
| amsl | above mean sea level |
| APE | Area of Potential Effect |
| APN | Assessors Parcel Number |
| AB | Assembly Bill |
| | |
| BMP | Best Management Practice |
| BTR | Biological Resources Technical Report |
| BTU | British Thermal Units |
| | |
| CAAQS | California Ambient Air Quality Standards |
| CalEEMod | California Emission Estimator Model |
| Caltrans | California Department of Transportation |
| CARB | California Air Resources Board |
| CBC | California Building Code |
| CCAPCD | Calaveras County Air Pollution Control District |
| CCIC | Central California Information Center |
| CCR | California Code of Regulations |
| CDFA | California Department of Food and Agriculture |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CGS | California Geologic Survey |
| CH ₄ | Methane |
| CIPP | Cured-In-Place Pipe |
| City | City of Angels |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO ₂ | Carbon Dioxide |
| CRHR | California Register of Historical Resources |
| CRLF | California Red-legged Frog |
| CRPR | California Rare Plant Rank |
| CVRWQCB | Central Valley Regional Water Quality Control Board |
| CWA | Clean Water Act |
| | |
| dB | Decibels |
| dBA | Decibels with A weighting |
| DPM | Diesel Particulate Matter |
| DTSC | California Department of Toxic Substances Control |

ABBREVIATIONS AND ACRONYMS (cont.)

| | |
|----------------------|---|
| EIR | Environmental Impact Report |
| ESA | Environmentally Sensitive Area |
| °F | Fahrenheit |
| FEMA | Federal Emergency Management Agency |
| FESA | Federal Endangered Species Act |
| FHWA | Federal Highway Administration |
| FMMP | Farmland Mapping and Monitoring Program |
| FYLF | Foothill Yellow-legged Frog |
| GHG | Greenhouse Gas |
| GWh | Gigawatt Hours |
| HFC | Hydrofluorocarbons |
| HR | House of Representatives Bill |
| HVAC | Heating, Ventilation, and Air Conditioning |
| IS/MND | Initial Study/Mitigated Negative Declaration |
| kWh | Kilowatt Hours |
| L _{DN} | Day Night noise level |
| LRA | Local Responsibility Area |
| MCAB | Mountain Counties Air Basin |
| MLD | Most Likely Descendant |
| MM | Mitigation Measure |
| mPa | Micro-Pascals |
| MT CO ₂ e | Metric Tons of Carbon Dioxide Equivalents |
| N ₂ O | Nitrous Oxide |
| NAAQS | National Ambient Air Quality Standards |
| NAHC | Native American Heritage Commission |
| NEPA | National Environmental Policy Act |
| NOA | Naturally Occurring Asbestos |
| NPDES | National Pollution Discharge Elimination System |
| NRHP | National Register of Historic Places |
| NRCS | Natural Resources Conservation Service |

ABBREVIATIONS AND ACRONYMS (cont.)

| | |
|------------------|---|
| O ₃ | Ozone |
| OSHA | Occupational Safety and Health Administration |
| PFC | Perfluorocarbons |
| PG&E | Pacific Gas & Electric |
| PM ₁₀ | Coarse Particulate Matter |
| PPV | Peak Particle Velocity |
| PVC | Polyvinyl Chloride |
| RCEM | Road Construction Emissions Model |
| RCNM | Road Construction Noise Model |
| RMS | Root Mean Square |
| ROW | Right-of-Way |
| RWQCB | Regional Water Quality Control Board |
| SAA | Streambed Alteration Agreement |
| SB | Senate Bill |
| SDR | Standard Dimension Ratio |
| SF ₆ | Sulfur hexafluoride |
| SIP | State Implementation Plan |
| SMAQMD | Sacramento Metropolitan Air Quality Management District |
| SPL | Sound Pressure Level |
| SR | State Route |
| SRA | State Responsibility Area |
| SSC | Species of Special Concern |
| SUVs | Sport Utility Vehicles |
| SWRCB | State Water Resources Control Board |
| TAC | Toxic Air Contaminant |
| TCR | Tribal Cultural Resource |
| TDBH | Trunk Diameter at Breast Height |
| USACE | United States Army Corps of Engineers |
| USFWS | United States Fish and Wildlife Services |
| UWPA | Utica Water and Power Authority |
| VHFHSZ | Very High Fire Hazard Severity Zone |

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INITIAL STUDY

1. Project title: Phase 1 Sewer Line Replacement Project
2. Lead agency name and address: City of Angels Camp
200 Monte Verda Street, Suite #B
Angels Camp, CA 95222
3. Contact person and phone number: Amy Augustine, AICP – City Planner
(209) 532-7376/(209) 743-2323 (cell)
tuolandplanner@gmail.com
4. Project location: Various properties along Angels Creek and
Vallecito Road, Angels Camp, CA 95222
5. General plan designation: Single Family Residential; Right of Way; Parks and
Recreation; Public; Historic Commercial; and
Community Commercial
6. Zoning: Single Family Residential; Multi Family
Residential; Industrial; Recreation; Public Service;
Right of Way; Historic Commercial

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1.0 PROJECT AND SETTING

1.1 Project Location

The proposed project is located in the City of Angels Camp (City), Calaveras County, in the central Sierra Nevada foothills. The proposed project is in a portion of Section 28, 33 and 34, T3N, R13E and Section 03, T2N, R13E Mount Diablo Baseline and Meridian, Calaveras County, CA. Angels Camp USGS 7.5-minute Quadrangle. The proposed project would pass through 32 Assessor's Parcel Numbers (APNs) including: 062-017-016, 062-017-015, 062-003-062, 062-004-043, 062-013-018, 062-013-019, 062-013-043, 062-013-044, 062-013-022, 062-013-023, 062-013-024, 062-013-025, 062-011-042, 062-014-018, 062-014-046, 062-003-019, 062-003-063, 062-003-067, 062-003-066, 062-003-042, 062-006-ROW, 062-004-ROW, 062-004-044, 062-009-057, 062-009-ROW, 062-009-016, 062-009-035, 062-013-039, 062-013-041, 062-013-042, 062-014-002, and 064-004-001. Refer to Figure 1 for a regional location map and Figure 2 for a USGS map of the project area.

1.2 Project Purpose

The purpose of the proposed project is to provide a safe, responsive, and reliable wastewater collection system to existing businesses and residents in the City, while allowing for planned development to occur in accordance with the City General Plan while also preventing surcharges in the sewer line that could threaten water quality.

1.3 Project Description

The proposed project includes upsizing and/or replacing approximately 5,446 linear feet of deteriorating sewer line described below as two separate segments: (1) the East Trunk segment which encompasses the southern portion of the proposed project; and (2) the Vallecito Road segment which encompasses the northern portion of the proposed project. An aerial view of the proposed project segments and surrounding area is depicted on Figure 3, below.

Construction methods to upsize and/or replace the existing sewer line include the following:

- Remove and replace. The traditional dig-up-and-replace method would require excavating a long, deep trench or trenches to remove the old pipe and install new pipe in its place;
- Pipe bursting. A pipe replacement method involving bursting the existing pipe through brittle fracture and pulling a new pipe of the same or larger size through the old fractured pipe from within. This construction method would require digging trenches (approximately 4 feet deep and 4 feet wide) at the pipe insertion point at various locations throughout the area planned for pipe bursting;
- Cured-in-place pipe (CIPP) liner. A trenchless pipe rehabilitation method that involves inserting and running a felt lining into a pre-existing pipe that is the subject of repair. Resin within the liner is then exposed to a curing element to make it attach to the inner walls of the pipe, and once fully cured, the lining acts as a new pipeline;
- New pipe installation.

Pipe sizes along the existing sewer line vary between 10 and 15 inches, and the proposed project would upsize the sewer line at various locations to a maximum 18-inch pipe to increase flow capacity. The proposed project would replace most of the existing clay pipes with polyvinyl chloride (PVC) standard dimension ratio (SDR) 35 pipes. See Appendix A for the project site plans and Figure 4 for the proposed project design and construction methods for the project.

East Trunk Segment

The East Trunk segment extends from manhole 9 at the southern terminus of the proposed project to manhole 34 at the northern terminus of the East Trunk segment and would be upsized at various locations throughout the segment. The proposed project would remove and replace the existing sewer line from manhole 9 to manhole 15A and would be upsized from the existing 15-inch pipe to a new 18-inch pipe. From manhole 15A to manhole 17, the existing 12-inch pipeline would be removed and replaced with a new 15-inch pipeline, and from manhole 17 to manhole 29, the existing 10-inch pipeline would be removed and replaced with a new 12-inch pipeline. From manhole 29 to the northern terminus of the East Trunk segment at manhole 34, the existing 10-inch pipeline would not be upsized but a CIPP liner would be inserted to reinforce the existing pipe.

Vallecito Road Segment

The Vallecito Road segment extends from manhole 34 at the southern terminus of the Vallecito Road segment to manhole 44-A1 at the northern terminus of the proposed project and would be upsized at various locations throughout the segment. A CIPP liner would be inserted into the existing 10-inch pipeline from manhole 34 to manhole 36 to reinforce the existing pipe. From manhole 36 to manhole 43, the existing 10-inch pipeline would be upsized to a 12-inch pipeline via pipe bursting, and the existing 10-inch pipeline from manhole 43 to manhole 45 would be removed and replaced with a new 12-inch pipeline. The existing 8-inch sewer line connection from manhole 44-A to manhole 44-A1 would be permanently removed, and a new 10-inch pipeline would be installed to connect manhole 45 to manhole 44-A1 at the northern terminus of the proposed project.

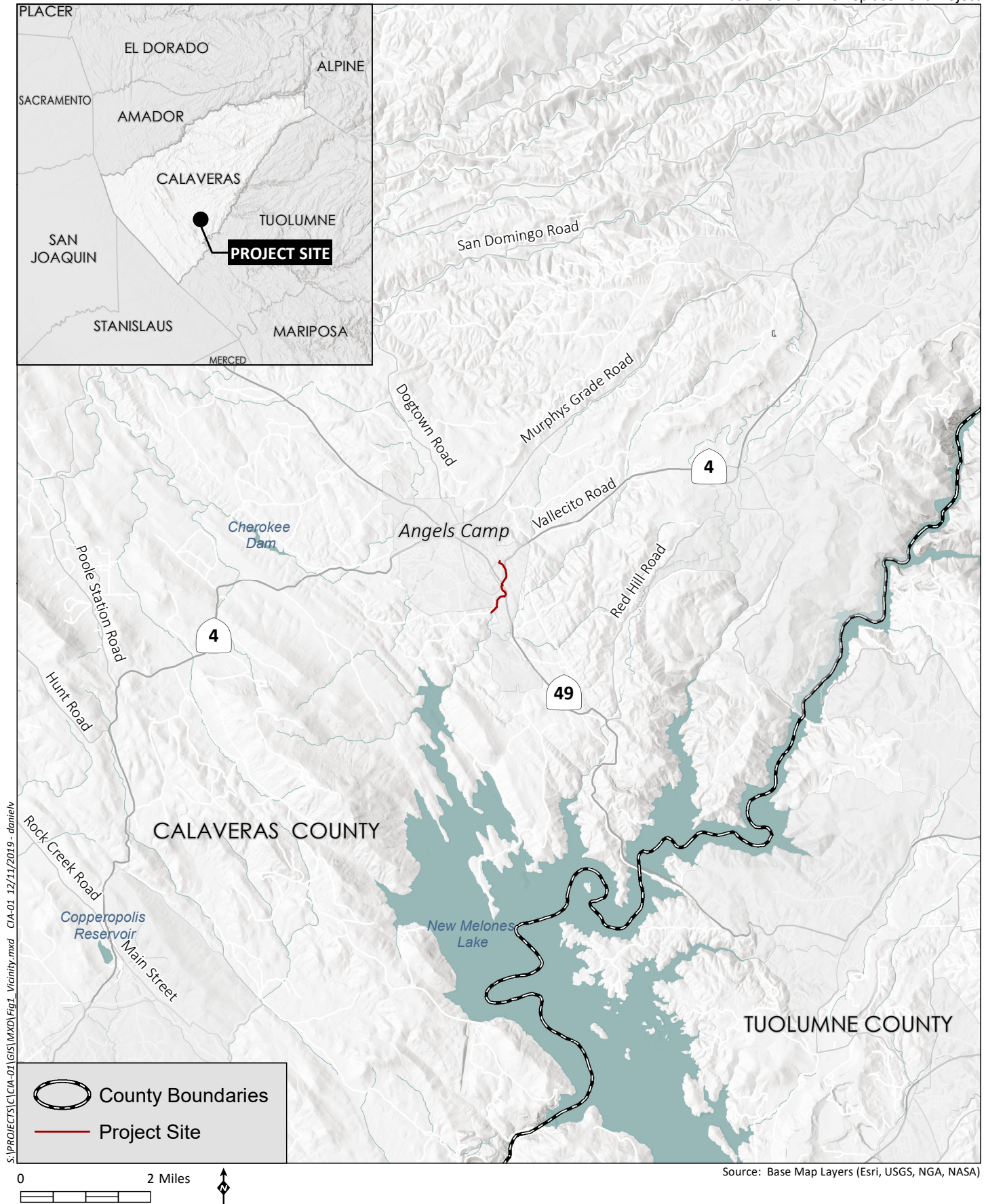
Construction Staging Areas and Equipment

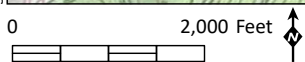
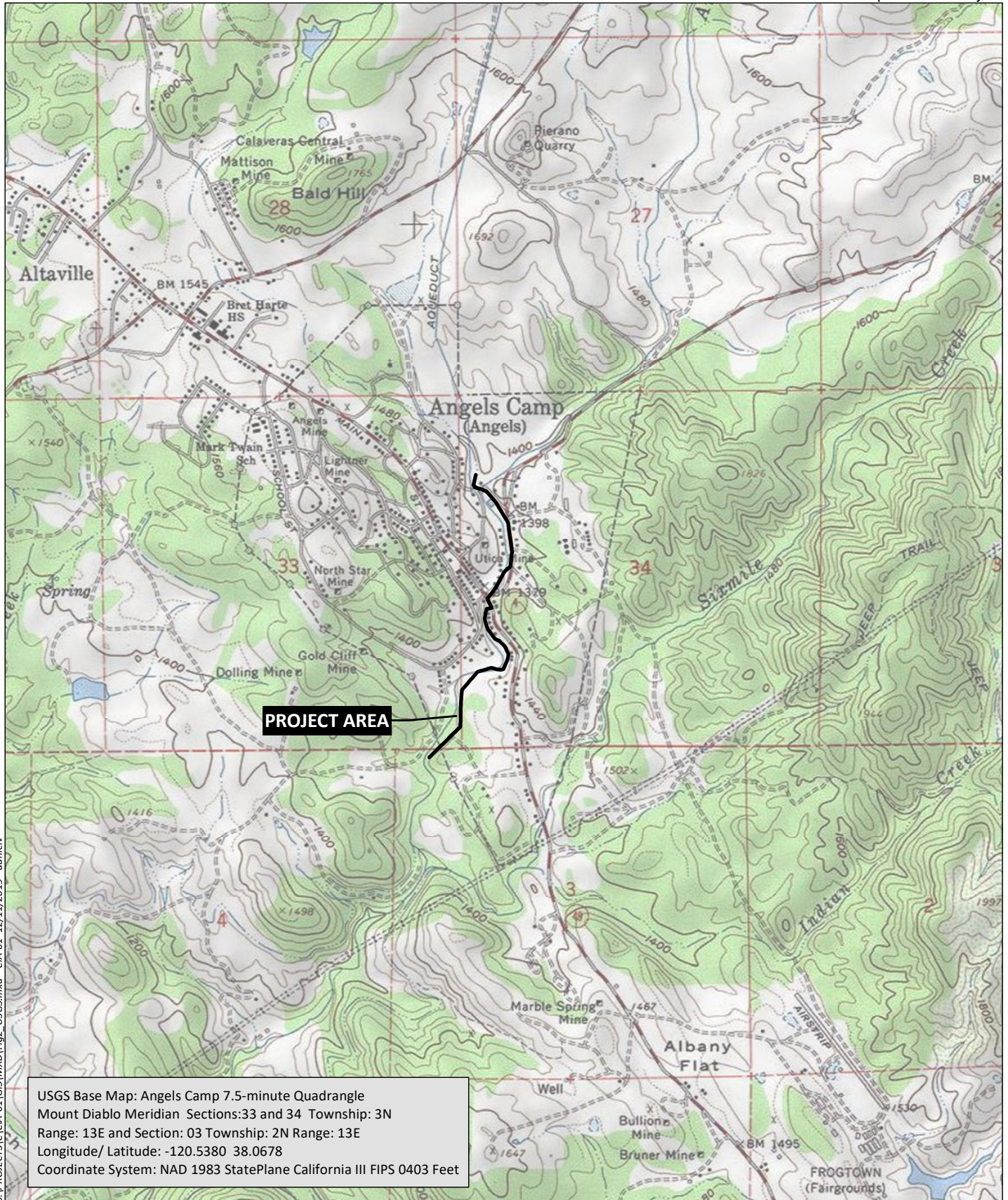
The total size of the proposed staging areas combined is approximately 2.02 acres, and potential impacts from the proposed staging areas have been evaluated as part of this environmental analysis. The locations of the proposed staging areas are depicted on Figure 3.

Anticipated equipment to be used includes: two excavators, two haul trucks, two backhoes, two mini excavators, and two pumps.

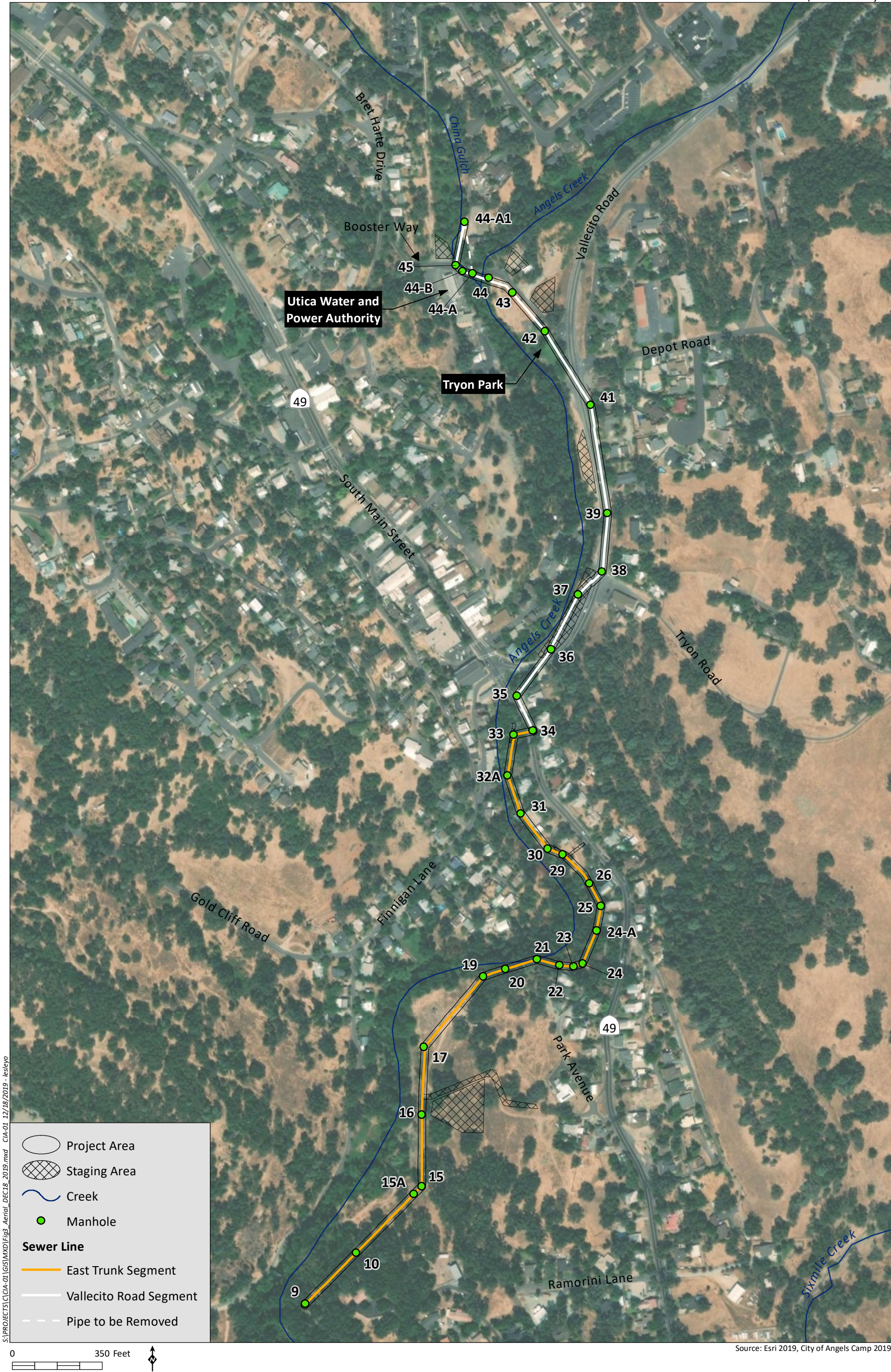
Construction Schedule

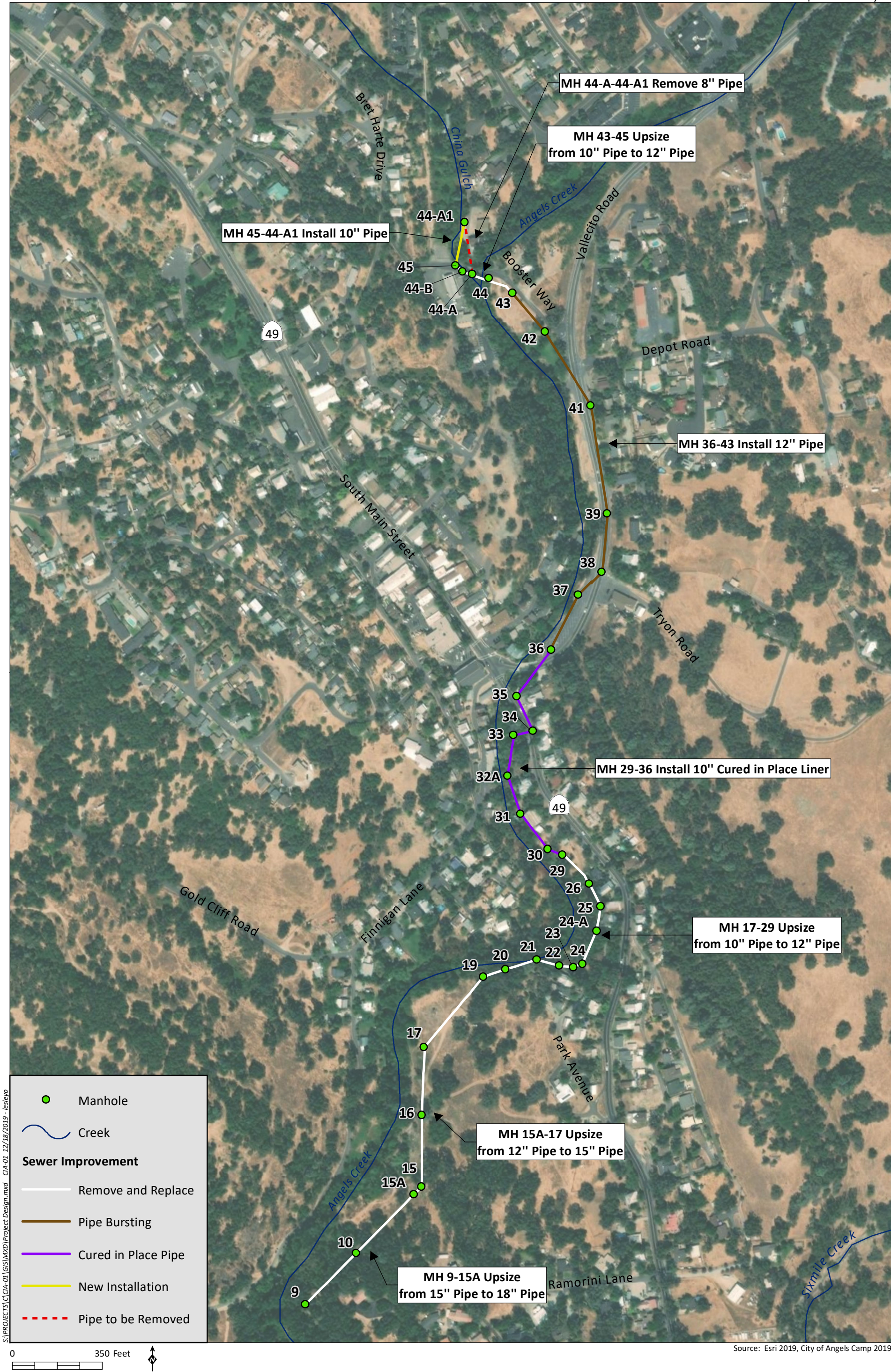
The City plans to initiate project construction in April 2021, and construction is anticipated to take 6 months to complete. Temporary disruptions to the sewer line service during project construction are not anticipated. The sewer line would be replaced or repaired in short segments, and the construction contractor would block the “upstream” and “downstream” manholes at the replacement locations and temporarily by-pass the replacement area utilizing a pumping system.





Source: Base Map Layers (USGS, NGS)





1.4 Site Description

The southern terminus of the proposed project is within the East Trunk segment and located east of Angels Creek at manhole 9. The existing sewer line continues northeast, passing through agricultural grazing land east of Angels Creek, until approximately manhole 21. From manhole 21 to the northern terminus of the East Trunk segment (manhole 34), the pipeline is located in close proximity to Angels Creek and passes through the backyards of a few residential properties along the east bank of the creek.

The southern terminus of the Vallecito Road segment begins at manhole 34 along State Route (SR) 49. The existing sewer line continues north, curves northbound along Vallecito Road, and passes through Tryon Park along Booster Way. The sewer line continues northwest along Booster Way and crosses Angels Creek and an unnamed tributary to Angels Creek (locally referred to as China Gulch) at Booster Way Bridge to manhole 45. A new 10-inch pipeline would be installed from manhole 45 to manhole 44-A1, which is just west of China Gulch in a rural residential area and would be the northern terminus of the Vallecito Road segment and the proposed project.

1.5 Public Resources Code Section 21080.3.1 Consultation

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) establishes a formal consultation process for California tribes as part of California Environmental Quality Act (CEQA). Under AB 52, tribes requesting formal consultation from the Lead Agency are notified of the project prior to preparing the CEQA document. AB 52 consultations were undertaken with the Shingle Springs Band of Miwok Indians and Calaveras Band of Me-Wuk for this project. The results of the consultations are summarized in Section 2.20, Tribal Cultural Resources.

1.6 CEQA Process

This document has been prepared to satisfy the requirements of CEQA (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before they approve or implement those projects.

The Initial Study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. In the case of the proposed project, the City of Angels is the lead agency and will use the Initial Study to determine whether the proposed project has a significant effect on the environment.

If the lead agency finds substantial evidence that any aspect of the proposed project, either alone or in combination with other projects, may have a significant effect on the environment, that agency is required to prepare an Environmental Impact Report (EIR), a supplement to a previously prepared EIR, or a subsequent EIR to analyze the proposed project at hand. If the agency finds no substantial evidence that the proposed project or any of its aspects may cause a significant impact on the environment, then a negative declaration may be prepared. If, over the course of the analysis, the proposed project is found to have a significant impact on the environment that, with specific mitigation measures, can be reduced to a less-than-significant level, then a supplemental mitigated negative declaration may be prepared. In the case of this proposed project, all significant or potentially significant impacts on the environment would be reduced to less-than-significant levels with incorporation of specific mitigation measures. Therefore, this document supports the adoption of a mitigated negative declaration.

1.7 Incorporation by Reference

The following studies applicable to the proposed project are hereby incorporated by reference. These studies are included as appendices to the Initial Study, and copies of these studies, unless identified as confidential, may be viewed at the City of Angels Planning Department offices located at 358 N. Main Street, Angels Camp, CA 95222 during regular business hours.

- Project Plans for the East Trunk Sewer Phase 1/Vallecito Road Sewer Phase 1 Replacement Project, prepared by Dewberry/Drake Haglan & Associates.
- Air Quality and Greenhouse Gas Emissions Impact Assessment for the Phase 1 Sewer Line Replacement Project, HELIX Environmental Planning, Inc. (HELIX).
- Biological Resources Technical Report for the Phase 1 Sewer Line Replacement Project, prepared by HELIX.
- Cultural Resources Assessment Report for the Phase 1 Sewer Line Replacement Project, prepared by HELIX.

1.8 Other Public Agency Approvals

A list of agency approvals required to implement the proposed project is provided in Table 1, *Other Agency Approvals or Reviews that may be Required* below.

Table 1
OTHER AGENCY APPROVALS OR REVIEWS THAT MAY BE REQUIRED

| Permitting Agency | Permit |
|---|---|
| California Department of Transportation (Caltrans) | Encroachment Permit |
| City of Angels | Grading Permit |
| Calaveras County Air Pollution Control District (CCAPCD) | Dust Control Plan |
| California Department of Fish and Wildlife (CDFW) | Section 1602 Streambed Alteration Agreement |
| Central Valley Regional Water Quality Control Board (CVRWQCB) | Section 401 Water Quality Certification |
| United States Army Corps of Engineers (USACE) | Section 404 Permit |

In addition to the agency approvals provided in Table 1 above, it is anticipated that this CEQA document will be used to support funding applications for project construction. Funding sources may include the State Water Resources Control Board State Revolving Fund.

2.0 ENVIRONMENTAL EVALUATION

The lead agency has defined the column headings in the environmental checklist as follows:

- A. “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.
- B. “Less Than Significant with Mitigation Incorporated” applies where the inclusion of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.
- C. “Less Than Significant Impact” applies where the project does not create an impact that exceeds a stated significance threshold.
- D. “No Impact” applies where a project does not create an impact in that category. “No Impact” answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone).

2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” or “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

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

2.2 DETERMINATION

On the basis of this initial evaluation:

| | |
|-------------------------------------|--|
| <input type="checkbox"/> | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. |
| <input checked="" type="checkbox"/> | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| <input type="checkbox"/> | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| <input type="checkbox"/> | 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. |
| <input type="checkbox"/> | 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. |

Amy L. Augustine, City Planner
City of Angels

Date

2.3 AESTHETICS

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

2.3.1 Background and Setting

The proposed project includes upsizing and/or replacing approximately 5,446 linear feet of existing, deteriorating sewer line. The sewer line to be replaced begins on an unnamed dirt road approximately 400 feet northeast of the intersection of Booster Way and Bret Harte Drive and ends on a dirt driveway approximately 1,400 feet southeast of the intersection of Gold Cliff Road and Finnigan Lane. The existing sewer line to be replaced is mostly subterranean aside from two creek crossings at Angels Creek and China Gulch and a few areas where the line runs above or flush with the ground. The sewer line to be replaced would cross through the backyards of rural residential properties, public rights of way, Tryon Park, a small portion of the historic downtown area, and dry grazing lands (City 2011).

2.3.2 Analysis

- a) Have a substantial adverse effect on a scenic vista?

Less than significant impact. A scenic vista is defined as a viewpoint that provides an expansive view of a highly valued landscape for the benefit of the general public. The sewer line proposed to be replaced runs through public land and along portions of Angels Creek with surrounding oak trees and open space; therefore, portions of the project area could be considered a scenic resource. However, the proposed project would replace an existing sewer line that is mostly subterranean. Construction of the proposed project would be temporary (approximately 6 months), and the improvements would not change the scenic vista as the proposed project would replace an existing sewer line in place. Therefore, the proposed project would have a less than significant impact, and no mitigation would be necessary.

- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No impact. Small sections of the proposed project are located along SR 49. These portions of SR 49 are eligible, but not officially designated as a state scenic highway. Because project construction would be subterranean in areas that are in close proximity to SR 49, no visible changes would occur. Therefore, the proposed project would have no impact.

- c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning, and other regulations governing scenic quality?

Less than significant impact. The proposed project would replace an existing sewer line and would have no permanent impact on the visual character or quality of the site and surrounding areas. Staging of construction equipment would temporarily alter the visual character of the site and surrounding areas; however, the staging areas are located primarily in previously disturbed areas, and equipment staging would be limited to the short-term construction period. The proposed project would have a less than significant impact on the existing visual character of the site and surrounding areas, and no mitigation would be necessary.

- d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less than significant impact. The proposed project would not introduce any new lighting or create a new source of glare. A majority of the sewer line would be placed underground, and the short segments of sewer line that would be located above ground would be replaced with PVC SDR 35 pipe which is a dull material that does not produce glare. Some artificial lighting may be needed during construction activities where portions of the sewer line to be replaced are located in dark areas, however, lighting for project construction would be temporary and short term. Therefore, the proposed project would have a less than significant impact, and no mitigation would be necessary.

2.4 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

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

2.4.1 Background and Setting

No portion of the proposed project is under a Williamson Act Land Conservation Contract, within an agricultural preserve, or timber management area. The sewer line to be replaced is surrounded by single family residences, a City park, a small portion of the historic commercial district and rural residential lots with dry land grazing.

Based upon a review of maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, there is no data available for Calaveras County identifying "Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance" (CDC 2019). The City's

2020 General Plan does not designate any of the land within the project area as agriculture or forestry land (City of Angels 2011).

2.4.2 Analysis

- 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?

No Impact. The proposed project involves replacing an existing sewer line, permanently removing a portion of sewer line, and installing new sewer line to replace the small portion of sewer line to be removed. This project would not convert any land to a new or modified land use. There is no data available for Calaveras County in the FMMP; therefore, farmland rankings (e.g., Farmland of Statewide or Local Importance) are not available for the project area. However, no portion of the proposed project is under a Williamson Act Land Conservation Contract, and the City's 2020 General Plan does not designate any of the project area as agriculture or forestry land. Therefore, no impact would occur for questions a) and b).

- 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))?

No impact. The proposed project would not traverse lands zoned as forest land, timberland, and/or Timberland Production. Therefore, the proposed project would have no impact.

- d) Result in the loss of forest land or conversion of forest land to non-forest use?

No impact. The proposed project would not result in the loss of forest land or the conversion of forest land. Therefore, no impact would occur.

- 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?

No Impact. The proposed project includes upsizing and/or replacing approximately 5,446 linear feet of an existing, deteriorating sewer line. Impacts from construction would be temporary, and trenches that are excavated to remove and replace the existing pipeline would be backfilled. Therefore, the proposed project would not result in the conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use and no impact would occur.

2.5 AIR QUALITY

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|-------------------------------------|--------------------------|
| Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

2.5.1 Background and Setting

The analysis is based on the Air Quality and Greenhouse Gas Emissions Impact Assessment Technical Letter Report for the project, which is included as Appendix B to this IS.

The proposed project is located in the Calaveras County portion of the Mountain Counties Air Basin (MCAB), which encompasses Amador, Calaveras, Mariposa, Nevada, Plumas, Sierra, and Tuolumne Counties, as well as portions of El Dorado and Placer Counties. The Calaveras County Air Pollution Control District (CCAPCD) is responsible for implementing emissions standards and other requirements of federal and state laws in the Calaveras County portion of the MCAB. Attainment plans for meeting the federal air quality standards are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the EPA, the federal agency that administrates the Federal Clean Air Act of 1970, as amended in 1990.

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The EPA has established national ambient air quality standards (NAAQS) for several air pollution constituents. As permitted by the Clean Air Act, California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air constituents.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for the ambient air quality standards. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least

once. The Calaveras County portion of the MCAB is currently in nonattainment for federal and state ozone (O₃) standards and nonattainment for state Coarse Particulate Matter (PM₁₀) standards. Calaveras County has been designated attainment or unclassified (insufficient data to determine status) for all other criteria pollutants.

While the final determination of whether or not a project has a significant effect is within the purview of the lead agency pursuant to State CEQA Guidelines Section 15064(b), the CCAPCD has developed thresholds of significance which lead agencies within their jurisdiction can use to evaluate the air pollutant emissions impacts of land use projects recommends that its air pollution thresholds be used to determine the significance of project emissions. These criteria pollutant and precursor thresholds and other assessment recommendations are contained in *CCAPCD's Guideline for Assessing and Mitigating Air Quality Impacts of Land Use Projects* and are discussed under the checklist questions below (CCAPCD 2014).

The CCAPCD requires the submittal of a Dust Control Plan to the District for approval prior to any surface disturbance larger than one acre, including clearing of vegetation. The CCAPCD recommend all of the following Best Management Practices (BMPs) be included in the Dust Control Plan (CCAPCD 2014):

1. The applicant shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of project development and construction.
2. All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.
3. All areas with vehicle traffic shall be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.
4. All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads.
5. All land clearing, grading, earth moving, or excavation activities on a project shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 mph.
6. All inactive portions of the development site shall be covered, seeded, or watered until a suitable cover is established. Alternatively, the applicant may apply County-approved non-toxic soil stabilizers (according to manufacturer's specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours) in accordance with the local grading ordinance.
7. All material transported off-site shall be either sufficiently watered or securely covered to prevent public nuisance, and there must be a minimum of six (6) inches of freeboard in the bed of the transport vehicle.
8. Paved streets adjacent to the project shall be swept or washed at the end of each day, or more frequently if necessary, to remove excessive or visibly raised accumulations of dirt and/or mud which may have resulted from activities at the project site.

9. In conjunction with implementing erosion control plans, the applicant shall re-establish ground cover on the site through seeding and watering.

2.5.2 Analysis

- a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact. The CAA requires states in violation of a NAAQS to prepare a SIP containing strategies and control measures to attain the NAAQS. CARB is responsible for creating and periodically updating the SIP for California to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them, including the Calaveras County portion of the MCAB. The EPA reviews SIPs to determine if they conform to the mandates of the CAA amendments and would achieve air quality goals when implemented.

As discussed in criterion b), below the project's estimated construction emissions would be well below the thresholds established by the CCAPCD. Long-term operation of the project would not result in an increase in emissions compared to existing conditions. Therefore, the project would not conflict with or obstruct implementation of the SIP and the impact would be less than significant.

- 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?

Less than significant impact. By its very nature, air pollution is largely a cumulative impact. No single project is of sufficient size to, by itself, result in the nonattainment of ambient air quality standards. Instead, the potential for a project's individual emissions to contribute to existing cumulatively significant adverse air quality impacts is evaluated.

Construction Emissions

Project construction is anticipated to start in April 2021 and require approximately 6 months to complete. It is expected that construction of the project would require the use of 2 excavators, 2 backhoes, 2 mini-excavators, 2 pumps, 2 haul trucks, and a water truck. Construction emissions were estimated using the Road Construction Emissions Model (RCEM), Version 9.0.0. The RCEM is a spreadsheet-based model developed by the Sacramento Metropolitan Air Quality Management District (SMAQMD) to evaluate the criteria air pollutant emissions of linear construction projects such as construction of a new roadway, road widening, roadway overpass, levee, or pipeline (SMAQMD 2018a). Model default values were utilized where specific project information was not available. In cases where RCEM default data was not available, including crew size estimates and worker commute distances, the methodology and default data for Calaveras County was taken from the California Emission Estimator Model (CalEEMod), a statewide land use emissions computer model developed by the California Air Resources Board (CARB 2017a).

The project's estimated construction emissions are shown below in Table 2, *Project Construction Criteria Pollutant and Precursor Emissions*. The emissions estimates assume: an export of approximately 50 cubic yards per day of vegetation and soil during grubbing and clearing, an export of approximately 25 cubic yards per day of soil, concrete and old sewer pipe during grading/excavation; and an import of approximately 18 cubic yards of aggregate (e.g., sand) per day during sewer line installation. Emissions estimates also assume the implementation of the BMPs, described above.

Table 2
PROJECT CONSTRUCTION CRITERIA POLLUTANT AND PRECURSOR EMISSIONS

| Activity | Emissions (pounds per day) | | | | | |
|--------------------------------|----------------------------|-------------|-----------------|------------------|-------------------|-----------------|
| | ROG | CO | NO _x | PM ₁₀ | PM _{2.5} | SO _x |
| Grubbing/Land Clearing | 0.4 | 4.0 | 4.4 | 1.8 | 0.5 | <0.1 |
| Grading/Excavation | 1.7 | 16.6 | 15.7 | 2.5 | 1.2 | <0.1 |
| Drainage/Utilities/Sub-Grade | 1.7 | 16.6 | 15.7 | 2.5 | 1.2 | <0.1 |
| Paving | 0.7 | 7.3 | 6.7 | 0.4 | 0.4 | <0.1 |
| Maximum Daily Emissions | 1.7 | 16.6 | 15.7 | 2.5 | 1.2 | <0.1 |
| CCAPCD Threshold | 150 | None | 150 | 150 | None | None |
| <i>Threshold exceeded?</i> | <i>No</i> | <i>No</i> | <i>No</i> | <i>No</i> | <i>No</i> | <i>No</i> |

Source: RCEM version 9.0.0; Thresholds – CCAPCD 2014.

As shown in Table 2, the project's construction emissions related to the criteria pollutants for which Calaveras County is designated nonattainment (ROG, NO_x, and PM₁₀) would not exceed the CCAPCD thresholds. Therefore, the project's construction emissions of criteria pollutants and precursors would be less than cumulatively considerable.

Operational Emissions

Long-term operation of the project would result in emissions of pollutants from the occasional use of equipment for maintenance. However, the replacement of existing, deteriorating clay sewer line with PVC pipes would be expected to reduce future maintenance requirements and any associated emissions compared to the existing maintenance activities. Therefore, the project's operational emissions of criteria pollutants and precursors would be less than cumulatively considerable.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact.

Diesel Particulate Matter

Construction of the project would result in emissions of diesel particulate matter (DPM) from the use of construction equipment. In 1998, the CARB identified DPM as a toxic air contaminant (TAC) based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. The amount to which the receptors could be exposed, which is a function of concentration and duration of exposure, is the primary factor used to determine health risk. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities.

The project may require the use of diesel-powered equipment near residences adjacent to the sewer line. The total construction period is anticipated to last approximately six months. Due to the linear nature of sewer line construction, the use of heavy diesel-powered equipment during construction near any individual residence would be limited to a few days before progressing on. Due to the variable and sporadic nature of construction activity and the anticipated short construction schedule in any one area,

DPM emissions from the project's construction activity would not expose sensitive receptors to substantial pollutant concentrations.

Asbestos

Some of the concrete (placed before 1979 when the use of asbestos was phased out) encountered during project construction could contain asbestos, a known carcinogen. Breaking or crushing asbestos bearing concrete could result in the release of respirable asbestos. All concrete encountered during the project construction would be tested for asbestos content. If feasible, asbestos bearing concrete would be abandoned in-place. Federal and state regulations prohibit emissions of asbestos from demolition or construction activities. If removal of asbestos bearing concrete is required, following the identification of friable asbestos, federal and state Occupational and Safety Health Administration (OSHA) regulations require that asbestos-trained and certified abatement personnel perform asbestos abatement and that all asbestos-containing materials removed must be hauled to a licensed receiving facility and disposed of under proper manifest by a transportation company certified to handle asbestos. These regulations specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers and require notice to federal and/or local government agencies, including the CCAPCD, prior to beginning demolition or that could disturb asbestos-containing materials.

Naturally occurring asbestos (NOA) most commonly occurs in ultramafic rock (i.e., igneous and metamorphic rock with low silica content) that has undergone partial or complete alteration to serpentine rock (or serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, is associated with ultramafic rock, particularly near geologic faults. NOA is known to occur in certain areas of Calaveras County; however, based on the map, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*, NOA in the County mainly occurs in an ultramafic rock band running from New Melones Reservoir to Pardee Reservoir, east of Copperopolis and Valley Springs, along the fault lines that run through that region, approximately 1 mile west of the proposed project (CDC 2000). Therefore, the proposed project is not located in an area where NOA is expected to be present. In addition, project construction would be subject to Section 93105(d) of the CARB regulation 2002-07-29, *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*, which is incorporated by reference in the CCAPCD Rule 906, *Asbestos Airborne Toxic Control Measure - Asbestos-Containing Serpentine*. The project would not expose sensitive receptors to substantial pollutant concentrations, including DPM and asbestos, and the impact would be less than significant.

d) Result in substantial emissions (such as odors) adversely affecting a substantial number of people?

Less than significant impact. Heavy diesel equipment could generate odors during construction activities. The generation of odors during the construction period would be temporary and would tend to be dispersed within a short distance from the active work area. In addition, the replacement of the sewer line could result in some odors from residual raw sewage in the old pipes as they are removed. However, due to the linear nature of a sewer line project, these potential odor emissions would only be located near any individual residence for a few days before work progresses. Once operational, the project would not result in any increase in odors compared to existing conditions. Therefore, due to the short duration of construction activity near any individual residence, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and the impact would be less than significant.

2.6 BIOLOGICAL RESOURCES

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

2.6.1 Background and Setting

The analysis is based on the Biological Resources Technical Report (BTR) prepared for the project, which is included as Appendix C to this IS.

Land uses surrounding the project area observed during the biological surveys included residential properties, state highways, public parking, park, and horse pasture (see Figures 3-4). The regional setting of the project area is residential in the old town areas of the small City that is located in the transition zone of the foothills of the Sierra Nevada to the floor of the Central Valley. The project area is located along Angels Creek and on gentle slopes along the creek. Elevation of the site is approximately 1,375 feet above mean sea level.

2.6.2 Regulatory Framework Related to Biological Resources

Federal Endangered Species Act

The USFWS enforces the provisions stipulated within the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 *et seq.*). Species identified as federally threatened or endangered (50 CFR 17.11, and 17.12) are protected from take, defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed species may be present in the study area and determine whether the proposed project will jeopardize the continued existence of or result in the destruction or adverse modification of critical habitat of such species (16 USC 1536 (a)[3], [4]). Other federal agencies designate species of concern (species that have the potential to become listed), which are evaluated during environmental review under the National Environmental Protection Act (NEPA) or CEQA although they are not otherwise protected under FESA.

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050 to 2097) is similar to the FESA. The California Fish and Wildlife Commission is responsible for maintaining lists of threatened and endangered species under CESA. CESA prohibits the take of listed and candidate (petitioned to be listed) species. “Take” under California law means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill (California Fish and Game Code, Section 86). CDFW can authorize take of a state-listed species under Section 2081 of the California Fish and Game Code if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, funding is ensured to implement and monitor mitigation measures, and CDFW determines that issuance would not jeopardize the continued existence of the species. A CESA permit must be obtained if a project will result in the “take” of listed species, either during construction or over the life of the project. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

California Code of Regulations Title 14 and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 §670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by CDFW to include in the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as “fully protected animals.” These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. CDFW is unable to authorize incidental take of fully protected species unless any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900-1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use (other than changing from one agricultural use to another), which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting and Migratory Birds

Nesting birds are protected by state and federal laws. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs; Fish and Game Code §3511 designates certain bird species “fully protected” (including all raptors), making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. Under the Migratory Bird Treaty Act of 1918 (16 USF §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbance must be reduced or eliminated during the nesting cycle.

California Food and Agriculture Code Section 403

This section directs the California Department of Food and Agriculture (CDFA) to prevent the introduction and spread of injurious pests including noxious weeds.

CDFA Code Section 7271 designates the CDFA as the lead department in noxious weed management responsible for implementing state laws concerning noxious weeds. Representing a statewide program, noxious weed management laws and regulations are enforced locally in cooperation with the County Agricultural Commissioner.

Under state law, noxious weeds include any species of plant that is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate, which the director, by regulation, designates to be a noxious weed (CDFA Code Section 5004).

Local Plans and Policies

Chapter 17.64 of the City of Angels Camp Municipal Code, known as the Oak and Heritage Tree Ordinance, provides for the protection of oak trees and heritage trees in the City. The ordinance requires that an oak tree or heritage tree removal permit be obtained from the director prior to the removal of any oak tree or heritage tree located wholly or partially within the city on any undeveloped property. Removal means the physical removal of the tree from the ground or the willful injury, trimming, disfiguring, or other harmful action which leads directly to physical removal or creates such a condition that makes disease likely or results in a significant risk of injury to persons or property. The ordinance defines “Oak tree” as an oak tree with a trunk diameter at breast height (TDBH) of nine inches or more and of a species identified in the guidelines, which is of good or fair quality in terms of health, vigor of growth, and conformity to generally accepted horticultural standards of shape for its species. “Heritage tree” means any tree with TDBH of twenty-four inches or more; which is of good or fair quality

in terms of health, vigor of growth, and conformity to generally accepted horticultural standards of shape for its species; and which includes the following species:

| Common Name | Scientific Name |
|--------------------|--|
| Madrone | <i>Arbutus menziesii</i> |
| Manzanita | <i>Arctostaphylos manzanita</i> (value as a mature specimen) |
| Ponderosa Pine | <i>Pinus ponderosa</i> |
| Incense Cedar | <i>Calocedrus decurrens</i> |
| CA Buckeye | <i>Aesculus californica</i> |
| Western Redbud | <i>Cercis occidentalis</i> |
| Arroyo Willow | <i>Salix lasiolepis</i> |

Jurisdictional Waters

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

Waters of the U.S. include navigable waters, tidal waters, interstate waters, tributaries to such waters, and wetlands. Wetlands are defined under the CFR Part 328.3 as those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

Clean Water Act (33 USC 1251-1376). The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there is no practicable alternative that would have less adverse impacts.

Porter-Cologne Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the State Water Resources Control Board (SWRCB) and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

California Fish and Game Code Section 1602 – Lake and Streambed Alteration Program

Diversions or obstructions of the natural flow of, or substantial changes or use of material from the bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW, pursuant to Section 1602 of the California Fish and Game Code. The CDFW requires notification prior to commencement of any such activities, and a Streambed Alteration Agreement (SAA) pursuant to Fish and Game Code Sections 1601-1603, if the activity may substantially adversely affect an existing fish and wildlife resource.

2.6.3 Methods

Studies conducted in conjunction with the preparation of this BTR included a desktop evaluation and background research to identify sensitive biological communities and/or special-status species with the potential to occur on or in the vicinity of the proposed project, as well as biological field surveys to document baseline conditions and special-status species and/or their habitats on the site.

Database and Literature Review

The most current available lists of special-status species known to occur and/or having the potential to occur in the project region were reviewed to determine their potential to occur on the project site or otherwise be affected by project-related activities.

For the purposes of this analysis, special-status species are defined as those species meeting one or more of the following criteria:

- Listed as Threatened or Endangered under the FESA;
- Listed as Threatened or Endangered under the CESA;
- Under review for listing under FESA or CESA (Candidate);
- “Fully Protected” under California Fish and Game Code Section 3511, 4700, 5050, or 5515;
- Included on the list of Species of Special Concern (SSC) by the California Department of Fish and Wildlife;

- Included on the Watch List of species that may qualify as SSC by the California Department of Fish and Wildlife, or;
- Having a California Rare Plant Rank (CRPR) of 1A (presumed extinct in California and rare elsewhere), 1B (rare in California and elsewhere), 2A (presumed extinct in California but more common elsewhere), 2B (rare in California but more common elsewhere), or 3 (more information needed).

The following lists were reviewed and are included in Attachment B of the BTR:

- The Sacramento Fish and Wildlife Office list of threatened and endangered species that may occur in the project site and/or may be affected by the project (USFWS 2019a).
- The California Native Plant Society (CNPS) list of special-status plants documented in the “Salt Spring Valley, CA”, “Angels Camp, CA”, “Columbia, CA”, “San Andreas, CA”, “Sonora, CA”, “Calaveritas, CA”, and “New Melones Dam, CA” 7.5-minute quads (CNPS 2019).
- The California Natural Diversity Database (CNDDB; CDFW 2019) list of special-status species documented in the “Salt Spring Valley, CA”, “Angels Camp, CA”, “Columbia, CA”, “San Andreas, CA”, “Sonora, CA”, “Calaveritas, CA”, and “New Melones Dam, CA” 7.5-minute quads.

The USFWS National Wetlands Inventory (USFWS 2019b) was reviewed to determine the presence of previously mapped wetlands and waters in the project area.

Biological Surveys

Biological surveys conducted at the project site by HELIX biologists include a biological reconnaissance survey (habitat mapping, botanical and wildlife inventories), focused surveys for special-status plant species, and jurisdictional delineation fieldwork. A list of plant and animal species observed during the biological surveys is included in Attachment D of the BTR.

General Biological Reconnaissance

HELIX biologists conducted a biological reconnaissance survey of the project site on April 18, 2019. The biological reconnaissance survey included habitat mapping, a bloom season botanical survey, and wildlife inventories.

Focused Surveys

HELIX biologists conducted focused botanical surveys of the project site on April 18, 2019. The survey was timed to capture the blooming periods of the special-status plant species in the region. Surveys were conducted on foot and achieved 100 percent visual coverage of the project site.

Invasive Species

Plant species observed in the project site were compared to the list of invasive plants in California maintained by the California Invasive Plant Council (Cal-IPC; Cal-IPC 2006) and the list of noxious weeds maintained by the CDFA (CDFA 2010). Several invasive and noxious weed species listed by Cal-IPC and

CDFA occur in the project site, as would be expected due its highly disturbed nature. Invasive and noxious weeds are identified on the plant species observed list in Attachment D of the BTR.

CDFA List “C” species warrant state-endorsed holding action and eradication only when found in a nursery; actions to retard spread outside of nurseries is conducted at the discretion of the commissioner; and warrant rejection only when found in a crop seed for planting or at the discretion of the commissioner. In addition, the Cal-IPC categorizes plants as “high, moderate, or limited,” reflecting the level of each species’ negative ecological impact in California. Each plant on the list received an overall rating of high, moderate, or limited based on the following evaluation criteria:

- High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- Moderate – These species have substantial and apparent, but generally not severe, ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- Limited – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

2.6.4 Habitat Types Present

Biological habitats and land covers present in the project area include developed, valley oak woodland, valley foothill riparian, ruderal/disturbed, annual grassland, and riverine (Figures 9-10 in Attachment A of the BTR). All these habitats with the exception of riverine include an herbaceous understory dominated by non-native species. Habitat nomenclature is generally derived from *A Guide to Wildlife Habitats of California*, (Mayer and Laudenslayer *et al.* 1988). Plant names are from *The Jepson Manual, Second Edition* (Baldwin *et al.* 2012).

Developed

Developed land includes areas in which structures or landscaping prevents the growth of native or naturalized vegetation. Developed areas include pavement, hardscape, irrigated landscaping, and permanently staged materials or debris. Developed lands in the project site total 1.78 acres and include a park, paved roads and buildings.

Valley Oak Woodland

Valley oak woodland is an open to continuous, deciduous woodland dominated by valley oak (*Quercus lobata*). A wide variety of other trees including interior live oak (*Quercus wislizeni*), California black walnut (*Juglans hindsii*), California buckeye (*Aesculus californicus*), and willows (*Salix* spp.) also occur in this community and within the project area. This community grows in deep, rich soils on floodplains and valley floors. Riparian stands are typically on the highest terraces in the floodplain. Shrubs are sparse to

common, depending on the canopy cover, and the herbaceous layer is usually grassy (Sawyer et al. 2009). This community includes both the Valley Oak Woodland and Great Valley Oak Riparian Forest communities described in Holland (1986). In the southern portion of the project area, although the alignment crosses through valley oak woodland, the understory is predominantly ruderal herbaceous species and the existing alignment is vegetated primarily with non-native weedy grasses and forbs. Valley oak woodland totals 1.58 acres in the project area.

Valley Foothill Riparian

Valley foothill riparian habitats are widespread and common throughout California, especially along seasonally or temporarily flowing streams (Sawyer et al. 2009). Within the project area, this community is characterized by a tree and shrub layer of valley oak as the dominant canopy cover. The subcanopy consists of white alder (*Alnus rhombifolia*), Fremont cottonwood (*Populus fremontii*), narrowleaf willow (*Salix exigua*) and red willow (*Salix laevigata*). White alder is the dominant subcanopy tree which is situated along the banks of Angels Creek. The shrubby understory consists primarily of Himalayan blackberry (*Rubus armeniacus*) or ornamental vegetation near residential properties. The herbaceous understory is dominated by non-native grasses and forbs. Valley foothill riparian totals 0.56 acre in the project area.

Ruderal/Disturbed

Ruderal and disturbed areas have been subject to past or on-going human disturbance but retain a soil substrate. If vegetated, there is no recognizable plant community, and the species assemblage depends on local colonization potential. Ruderal and disturbed areas include weedy open areas where the natural vegetation has been removed. Ruderal and disturbed areas are not described in treatments of plant communities.

Ruderal areas are present in the northern portion of the project area along Vallecito Road and Booster Way (Figure 9 in Attachment A of the BTR). Vegetation in these areas is dominated by annual grasses and forbs such as wild oats (*Avena fatua*), Bermuda grass (*Cynodon dactylon*), soft brome (*Bromus hordeaceus*), yellow star thistle (*Centurea solstitialis*), Indian sweetclover (*Melilotus indicus*), rose clover (*Trifolium hirtum*), common mullein (*Verbascum thapsus*), tree of heaven (*Ailanthus altissimum*), and Himalayan blackberry. Ruderal/disturbed areas total 0.40 acre in the project area.

Annual Grassland

Annual grassland occurs in a small portion of the project area south of the Vallecito Road and SR 49 intersection and includes areas dominated by annual herbaceous vegetation grazed by livestock. This annual grassland community is situated as large openings between riparian habitat and valley oak woodland. Within the project area, annual grassland is dominated by non-native grasses and forbs such as soft brome (*Bromus hordeaceus*), bulbous blue grass (*Poa bulbosa*), yellow-star thistle (*Centaurea solstitialis*) and ripgut brome (*Bromus diandrus*). Portions of the annual grassland that abut to the valley foothill riparian habitat along Angels Creek is more mesic and supports a mixture of upland annual grasses and wetland species such as field sedge (*Carex praegracilis*), smooth scouring rush (*Equisetum laevigatum*), and California mugwort (*Artemisia douglasiana*). Angels Creek likely floods occasionally during the winter and overtops the bank of the creek. However, evidence of flooding events, such as drift deposits or sediment deposits were not observed during the survey. Additionally, soils did not show redoximorphic features. Annual grassland habitat totals 1.43 acres in the project area.

Riverine

A total of 0.06 acre of riverine habitat is present in the project area consisting of Angels Creek and China Gulch. The incised channels of these streams are largely unvegetated except for patches of white alder, tall flatsedge (*Cyperus eragrostis*), sedge (*Carex densa*), and curly dock (*Rumex crispus*) growing along the banks. The streambed is predominately rock boulder with gravel and cobble. During the rainy season, the creeks experiences periods of high flow that scour the channel and prevent the formation of stable soils and plant communities. The creeks likely flow during the dry season and support some deep pools of 3 to 4 feet.

2.6.5 Special-Status Species and Protected Habitats with the Potential to Occur in the Project Site

Special-Status Plants

No special-status plant species were observed in the project area, despite a focused botanical survey conducted during the appropriate blooming season, and none are believed to occur in the project area. The project area does not provide potentially suitable habitat for most of the special-status plant species in the region, which are endemic to vernal pools or other wet habitats, serpentine soils, heavy clay soils, or rocky soils, which do not occur in the project area. Regionally-occurring special-status species that occur in woodland or grassland habitats that are present in the project area generally would not be expected to occur because the site is located in an urban area, and within the project area and vicinity, these habitats are disturbed and dominated by non-native species.

Special-Status Animals

San Joaquin Roach

Federal status – none

State status – CDFW species of special concern

Other status – none

Species Description

San Joaquin roach are found in mid-elevation small streams but may also occur in main channels of larger rivers. This subspecies may occupy a wide-range of temperature and dissolved oxygen fluctuations from cold water to warm water habitats with dissolved oxygen as low as 1-2 parts per million (Moyle et al. 2015). This subspecies is particularly well adapted to life in intermittent streams that dry up and form pools. Populations may become dense and isolated (Moyle et al. 2015).

Survey History

San Joaquin roach was not observed during the biological surveys in 2019. There are no CNDDDB reported occurrences in the project site for this species, with the nearest reported occurrence located ten miles south of the project site in Woods Creek (CDFW 2019a).

Habitat Suitability

Angels Creek is a perennial stream that is within the current range of this species. Angels Creek and pools throughout Angels Creek provide suitable aquatic habitat for San Joaquin roach. China Gulch may also provide habitat for San Joaquin Roach.

Foothill Yellow-legged Frog (FYLF)

Federal status – none

State status – Candidate for listing as threatened and a CDFW Species of Special Concern

Species Description

The FYLF range extends from the Transverse Mountains in southern California, north to the Oregon border along the Coast Ranges in California (Zeiner et al. 2000). The range of FYLF in the Sierra Nevada exists from the Cascade crest and along the western side of the Sierra Nevada to Kern County. Isolated records of the FYLF are known from San Joaquin County and Los Angeles County. The elevational range of FYLF extends from sea level up to 6,370 feet above mean sea level (Zeiner et al. 2000).

Several range wide reviews have been conducted detailing the current state of the FYLF population across its range and its steady decline. All studies (Sweet 1983, Jennings and Hayes 1994, Jennings 1996, Borisenko and Hayes 1999 and Lind 2005) reached similar conclusions regarding a contraction of the FYLF range by approximately 51% and by up to 2/3 in the Sierra Nevada. Currently there are approximately 4,000 museum specimens from 500 localities across the California geographic range of FYLF from as far back as 1850 (Hayes et al. 2016). Large numbers of FYLF were still be collected until the 1970s, and a notable decline was first described in a southern California study in 1983 (Sweet 1983). Studies in the Sierra Nevada also concluded that FYLF occupancy of past known localities also declined significantly (Lind 2005) and FYLF may be extirpated south of Madera County (Jennings and Hayes 1994).

The FYLF aquatic habitat consists of streams flowing through a variety of vegetation communities, such as valley foothill hardwood, riparian, hardwood-conifer, chaparral, wet meadow, ponderosa pine and mixed pine (Hayes et al. 2016). FYLF prefer stream habitat with some shading, greater than 20 percent, but seem to be absent from streams with a canopy closure of 90 percent or more (Hayes et al. 2016). The most important characteristics to FYLF habitat include the stream order, minimum temperatures, frequency of precipitation, stream gradient, and elevation (Hayes et al. 2016). Breeding and rearing habitat is generally located in gently flowing, low-gradient streams with variable substrates dominated by cobble and boulders (Hayes et al. 2016). In larger streams, breeding sites are usually in depositional areas at the tail end of pools or near tributary confluences (Hayes et al. 2016). In smaller streams egg masses are placed in similar locations amongst cobble in depositional areas near pools (Hayes et al. 2016). Egg masses are typically attached to leeward sides of boulders or cobbles to avoid exposure to high velocity flows (Hayes et al. 2016). Tadpoles tend to also occupy similar sites as the egg masses, which are typically more protected from scouring events (Hayes et al. 2016). The presence of sediment may reduce refugia for tadpoles and increase the likelihood they will be washed downstream during periods of high flow (Hayes et al. 2016).

Breeding typically starts in spring after high velocity flows begin to subside and air and water temperatures begin to increase (Hayes et al. 2016). FYLF typically lay eggs as early as March, but as late as June at higher elevations in the Sierra Nevada (Hayes et al. 2016). Eggs typically hatch after one to three weeks, which is dependent upon the temperature, with cooler temperatures decreasing the

hatching time. Larvae metamorphose in 3 to 4 months and cooler water also delays larval metamorphosis. Growth rates and timing of development are dependent on location, which varies with temperature and flow velocities (Hayes et al. 2016).

FYLF are active all year in warmer locations and may hibernate in colder areas. During periods of inactivity, FYLF seek cover under rocks in streams or within a few meters of water. Significant migrations or other seasonal movements from breeding areas have not been reported. Unlike other species of frogs, the FYLF is rarely encountered far from permanent water, regardless of rainy weather. This species coexists with the Cascades frog and the red-legged frog in different microhabitats (CDFW 2015).

Survey History

FYLF or egg masses were not observed in the project site during the April 2019 survey conducted by HELIX. However, habitat is suitable in Angels Creek and China Gulch for this species. The nearest CNDDDB reported occurrence is located 3.4 miles east of the project site in Coyote Creek, which is a tributary to New Melones Reservoir in a different watershed. One historical record for this species is located over five miles upstream along Angels Creek near Murphy's where this species was documented in 1953.

Habitat Suitability

The channels of Angels Creek and China Gulch provide suitable habitat for FYLF in the project site and in areas adjacent to the project site. These waterways are rocky streams with rocky bottom, bank with cobbles, gravel and boulders with surrounding oak woodland and riparian vegetation providing instream shade. The canopy over the creeks is not so dense as to prohibit potential basking sites for this species. FYLF prefer slow moving sections of rocky streams to lay eggs and for tadpole rearing. This breeding habitat is abundant in Angels Creek and also present in China Gulch where it enters Angels Creek. Potential upland habitat or habitat to move between smaller tributary streams is not present since the area surrounding the project site is largely developed in a rural setting. The movement corridor for this species would be limited to moving up and down Angels Creek and China Gulch within the stream channels.

California Red-legged Frog (CRLF)

Federal status – threatened

State status – CDFW Species of Special Concern

Species Description

The historic range of CRLF extends from Baja California, Mexico, north to the vicinity of Redding inland, and at least to Point Reyes, California coastally (Jennings and Hayes 1994). Today the species is known to occur in about 238 streams or drainages in 23 counties and is found primarily in wetlands and streams in the coastal drainages of Central California. Records of the species are known from Riverside County to Mendocino County along the Coast Range, from Calaveras County to Butte County in the Sierra Nevada, and in Baja California, Mexico. CRLF are still locally abundant within portions of the San Francisco Bay area (including Marin County) and the central coast. Within the remaining distribution of the species, only isolated populations have been documented in the Sierra Nevada, northern Coast, and northern Transverse ranges (USFWS 2010a). In the Sierra Nevada, CRLF historically occupied portions of the lower elevations west of the crest from Shasta County south to Tulare County. Almost all known CRLF

populations have been documented at elevations below 3,500 feet amsl with some historical sightings documented at elevations up to 5,200 feet amsl.

Within its range, CRLF occupies a distinct habitat of both aquatic and terrestrial components that consist of aquatic breeding and non-breeding areas embedded within a matrix of habitats used for dispersal, or refugia. Breeding and non-breeding aquatic habitat consists of low-gradient freshwater bodies, including ponds, marshes, sag ponds, dune ponds, stock ponds, lagoons, seeps, springs, and backwaters within streams and creeks. This species does not inhabit water bodies that exceed 70 degrees Fahrenheit if there are no cool, deep portions (USFWS 2002). Important characteristics of aquatic breeding habitat include still or slow moving fresh water (with salinities of less than 7.0 parts per thousand) deeper than 2.3 feet (0.7 meter) with dense, shrubby emergent or overhanging vegetation that provides egg deposition sites and cover for adult frogs (Jennings and Hayes 1994; USFWS 2002) and that persists for a minimum of 20 weeks following the breeding season to allow tadpoles to mature (USFWS 2010a). The breeding season typically occurs from November through April (USFWS 2002) and is likely influenced by local precipitation and ambient temperature. Females typically lay eggs between December and early April. Tadpoles typically metamorphose in 11 to 20 weeks, from July to September, but may overwinter in some sites. The largest populations of CRLF are associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) intermixed with cattails. Adults feed primarily on aquatic and terrestrial invertebrates, but may feed on tadpoles, smaller frogs, small mammals, and fish. Juvenile frogs are active diurnally and nocturnally, and adult frogs are largely nocturnal (USFWS 2002).

CRLF are generally found in or near water but may disperse into uplands during the wet season to migrate to breeding habitat or for foraging, or in response to receding water during the driest time of the year. Well-vegetated terrestrial areas within a riparian corridor may provide important sheltering habitat when temperatures are cold in the winter or when water is unavailable during dry periods. CRLF spend considerable time resting and foraging in riparian vegetation when it is present (USFWS 2002). The use of the adjacent riparian corridor during summer is most often associated with drying of creeks in mid- to late-summer (Rathbun in litt., 1994 in USFWS 1996). During dry periods, CRLF remain close to water and often disperse upstream or downstream from their breeding habitat to forage or seek aestivation sites if water is not available (USFWS 2002). This habitat may include shelter under boulders, rocks, logs, industrial debris, agricultural drains, water troughs, small mammal burrows, incised stream channels, or areas with moist leaf litter (Jennings and Hayes 1994; USFWS 2002). Most CRLF do not disperse farther than the nearest suitable cold-shelter or aestivation habitat. CRLF have been found up to 200 feet from water in adjacent dense riparian vegetation (USFWS 2010a).

During periods of wet weather, individuals may disperse through uplands to migrate between aquatic breeding sites and have been observed making straight-line point to point migrations rather than using stream corridors (USFWS 2002). Movements of up to two miles have been reported (Fellers 2005), but one mile represents a more typical dispersal distance for breeding migration. Most overland movements occur at night (USFWS 2002).

Survey History

CRLF was not observed in the project site during the April 2019 survey by HELIX, conducted by an experienced CRLF biologist with a Federal Recovery Permit for this species. CRLF could occur in Angels Creek and China Gulch since large pools are present and the project site is within the historical range of this species. However, there are no CNDDDB reported occurrences for this species within a 10-mile radius of the project site. The nearest CNDDDB reported occurrence is a small population on private property

located 17 miles north of the project site in Calaveras County (CNDDDB 2019). The project site is located in the historic range of the CRLF and populations in the Sierra Nevada foothills tend to be small and isolated (USFWS 2002). All records in the CNDDDB south of the only Calaveras County CNDDDB record are considered to be extirpated (CDFW 2019). Due to the proximity of Angels Creek to a developed and heavily trafficked area and the lack of reported occurrences of this species, the likelihood of CRLF occurring within the project site is very low.

Habitat Suitability

Angels Creek and China Gulch provide potentially suitable habitat for CRLF in the project site and in areas adjacent to the project site. These waterbodies are rocky streams with rocky bottom, bank with cobbles, gravel and boulders with surrounding oak woodland and riparian vegetation providing instream shade. The canopy over the creeks is not so dense as to prohibit potential basking sites for this species. CRLF prefer still water or slower deep-water habitat with emergent vegetation to lay eggs and for tadpole rearing. This breeding habitat is present in Angels Creek and China Gulch, however emergent vegetation is only limited to vegetation along the banks and is not present in the mainstream of the creek. CRLF is less tied to the aquatic habitat as FYLF and may move overland to other aquatic sites or refuge sites to avoid summer heat and the winter cold. However, potential upland habitat or habitat to move between upland habitat is not present since the area surrounding the project site is largely developed in a rural setting. The movement corridor for this species would be limited to moving up and down Angels Creek.

Western Pond Turtle

Federal status – none

State status – Species of Special Concern

Species Description

Western pond turtles are most commonly found in permanent or nearly permanent wetlands, ponds, slow-moving streams, and irrigation ditches (Zeiner *et al.* 1988a). Adjacent upland areas are also used for basking and egg-laying. Turtles will lay eggs up to 0.25-mile from water, but typically go no more than 600 feet (Jennings and Hayes 1994). Special habitat features that improve turtle abundance, survival and reproductive success are rocks, logs, open mud banks, emergent aquatic vegetation and streamside vegetation. These features provide the turtles with basking sites and cover from predators (Stebbins 1972). Although pond turtles feed primarily on aquatic invertebrates (USFWS 1992), they also feed on plants, small fish and carrion.

Survey History

Western pond turtles were not observed in the project site during the April 2019 survey by HELIX. However, western pond turtles could occur in Angels Creek and China Gulch since large pools are present. There are no CNDDDB records for western pond turtle within a 10-mile radius (CNDDDB 2019).

Habitat Suitability

Angels Creek and China Gulch provide suitable aquatic habitat for western pond turtle. Western pond turtle could also occur outside of the banks of these streams within leaf litter or other refugia features

like downed logs or debris. The uplands adjacent along Angels Creek and China Gulch are mostly developed, but there are limited areas within the uplands that provide suitable habitat for egg-laying.

White-tailed Kite

Federal status – none

State status – CDFW fully protected

Species Description

White-tailed kite is a year-round resident in coastal and valley lowlands, where it inhabits herbaceous and open stages of most habitat types. Individuals forage in grasslands, farmlands, and wetlands, preying mostly on small diurnal mammals. Nests are built near the top of dense tree stands, usually near open foraging areas (Zeiner et al. 1988b).

Survey History

White-tailed kite was not observed in the project site during biological surveys in 2019. Habitat is present for nesting, however open areas for foraging were not observed in the project site for this species. No raptor nests were detected during the surveys conducted during the 2019. No nests or nesting pairs of white-tailed kites were observed in or adjacent to the project site, although suitable nest trees are abundant in the project site. There are no CNDDDB reported occurrence of white-tailed kite within 10 miles of the project site (CDFW 2019).

Habitat Suitability

Open areas in oak woodlands in and adjacent to the project site provide suitable foraging and nesting habitat for white-tailed kite. Nesting habitat is present in the woodland vegetation communities in the project site. The lands surrounding the project site consists primarily of a mix of rural residential land and cattle pastures or annual grasslands. Trees in or adjacent to the project site could provide nesting habitat for this species, although no nests or individuals were observed during surveys.

Pallid Bat

Federal status – none

State status – CDFW species of special concern

Species Description

Pallid bat occurs throughout California except for the high Sierra Nevada and the northern Coast Ranges. Habitats include grasslands, shrublands, woodlands, and forests from sea level to 6,000 feet. Most common in open, dry habitats with rocky areas for roosting; roosts also include cliffs, abandoned buildings, bird boxes, and under bridges (Bolster, ed. 1998).

Survey History

Pallid bat was not observed in the project site during biological surveys. The project site contains no known roost sites or known records of this species in the CNDDDB. However, oak woodland and riparian forest habitat in the project site provide roosting habitat for this species. Water in the perennial Angels

Creek provides drinking water for this species. Forage, such as moths and beetles are likely abundant in the project site. There is one historical CNDDDB reported occurrence of pallid bat in the project site dated to 1895, which was a male specimen collected from the City of Angels and preserved in the Museum of Vertebrate Zoology (MVZ#: 30371) (CDFW 2019). The nearest current CNDDDB reported occurrences of pallid bat is located approximately 5 miles south of the project site near New Melones Reservoir. The record only states that pallid bat was detected in 1999 with no other details (CDFW 2019).

Habitat Suitability

The entire project site supports oak woodlands and riparian forest with openings that are potentially suitable foraging, roosting and breeding habitat for pallid bat. Rocky outcrops or rocky features are not present and roosting habitat is limited to crevices in rock walls, tree cavities and old buildings. Since roosting habitat is contiguous with the adjacent woodlands and grassland habitat, this species could roost on site. If this species is disturbed from project related noise, it may move away from the project site.

Western Red Bat

Federal status – none

State status – species of special concern

Species Description

Roosts primarily in woodlands and forests and forages in open habitat such as croplands, grasslands and shrublands. This species is typically associated with water and/or riparian habitats or mosaics of open space and forests. Forages along edge habitats and usually found foraging or drinking with other bat species (CDFW 1990). This species has a poor urine concentrating ability and is typically associated with water. Primarily roosts solitarily in trees from 2–40 feet high in the trees, with females and young roosting higher in the trees than males. Young are typically born from May through July, and volant between 3 to 6 weeks after birth (CDFW 1990). Reproduction typically occurs individually, with each litter consisting of 1-5 young. Occasionally maternity colonies are found, but they are rare. Western red bat may also move their young between roost sites and are not tied specifically to a roost location (CDFW 1990).

Survey History

Western red bat was not observed in the project site during biological surveys. The project site contains no known roost sites or known records of this species in the CNDDDB. However, oak woodland and riparian forest habitat in the project site along Angels Creek provides roosting habitat for this species. Water in the perennial Angels Creek provides drinking water for this species. Forage, such as moths and beetles are likely abundant in the project site. The nearest CNDDDB reported occurrences of western red bat is located approximately 5 miles south of the project site near New Melones Reservoir. The record only states that western red bat was detected in 1999 (CDFW 2019).

Habitat Suitability

The project site supports oak woodlands and riparian forest that are potentially suitable foraging, roosting and breeding habitat for western red bat. This species could occur roosting in the trees either individually or in small colonies. Since riparian habitat is contiguous with the adjacent woodlands and

riparian habitat, tree roosting habitat is plentiful in the area around the project site. If this species is disturbed from project related noise, it may move away from the project site.

Migratory Birds and Raptors

The project area provides nesting and foraging habitat for a variety of native birds common to the region, such as black phoebe (*Sayornis nigricans*), oak titmouse (*Baeolophus inornatus*), black headed grosbeak (*Pheucticus melanocephalus*), ash-throated flycatcher (*Myiarchus cinerascens*), acorn woodpecker (*Melanerpes formicivorus*), and red-shouldered hawk (*Buteo lineatus*). Trees in the project area provide nest sites for raptors and other nesting birds. Cavities in trees provide habitat for cavity nesting birds such as oak titmouse, ash-throated flycatcher and acorn woodpecker.

Jurisdictional Waters and Wetlands

Approximately 0.06 acre of riverine habitat is present in the project area consisting of small segments of Angels Creek and China Gulch. These waterways are potential waters of the U.S. and waters of the State protected by Section 404 and 401 of the CWA and Section 1600 of the Fish and Game Code.

2.6.6 Analysis

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

Less than significant impact with mitigation.

Potential Impact to Special-Status Plants

No special-status plant species were observed in the project site, despite a focused botanical survey conducted during the appropriate blooming season, and none are believed to occur in the project site. Because habitat is lacking or very marginal for regionally-occurring special-status plant species and none were observed in the project site during a focused botanical survey conducted during the blooming season, special-status plants are considered absent from the project site. Therefore, the proposed project would not impact special-status plant species.

Potential for Spread of Invasive Species

Many plant species ranked as highly- or moderately-invasive by Cal-IPC are present in the project site as would be expected due to its disturbed nature and location next to roads, residential properties, and other landscaped areas. These species predominantly occur in upland ruderal/disturbed habitats and the herbaceous understory of the valley oak woodland habitat. Most project activities would occur in existing disturbed areas and so would not result in a significant expansion of disturbed ground area susceptible to colonization by invasive species. However, there is a potential for further spread of invasive species as a result of the proposed project. This would be a significant impact.

With the implementation of MM BIO-7, Measures to Avoid Spread of Invasive Species, impacts from the spread of invasive species would be reduced to less than significant.

Mitigation Measure BIO-7: Measures to Avoid Spread of Invasive Species

- All equipment and vehicles shall be thoroughly cleaned to remove dirt and weed seeds prior to being transported or driven to or from the project site.
- All temporarily disturbed areas would be revegetated with a native seed mix to control erosion and reduce the likelihood of colonization by invasive species.

Potential Impact to San Joaquin Roach

Segments of the existing pipe that would be removed and replaced across Angels Creek, and the removal of old pipe and new installation across China Gulch would not result in any disturbance within these waterways. The existing and proposed sewer pipe across Angels Creek and China Gulch is above ground and spans the creek and/or creek banks; new pipe would also be above ground. Construction activities associated with removal, replacement, and installation of pipe in those areas would be conducted from disturbed areas along the top of the creek banks away from the wetted portions of the channels.

Because there would be no direct impacts to aquatic habitats within Angels Creek or China Gulch, no direct adverse effects to San Joaquin roach would occur. In the absence of the proposed mitigation measures to prevent impacts to water quality, pollutants or debris could enter the waterways and result in deleterious effects to San Joaquin roach if it was present. With the implementation of BMPs and other mitigation measures, no indirect effects on water quality or San Joaquin roach would occur.

With the implementation of MM BIO-1, General Avoidance Measures, to protect special-status species and aquatic habitats, impacts to the San Joaquin roach would be less than significant.

Mitigation Measure BIO-1: General Avoidance Measures

- Before any construction activities begin, a CDFW-approved biologist shall conduct a worker awareness environmental training session for all construction personnel regarding special-status species with the potential to occur on the project site. At a minimum, the training shall include a description of the special-status species and their habitat, the avoidance and minimization measures that are being implemented to conserve special-status species, and the boundaries within which work may occur. Personnel will also be instructed on the penalties for not complying with avoidance and minimization measures. If new construction personnel are added to the project, then the contractor will ensure that the new personnel received the mandatory training before starting work.
- Pre-construction surveys for special-status species will be conducted by a qualified biologist within 24 hours prior to any construction activities resulting in disturbance of vegetation or ground disturbance within riverine (Angels Creek and China Gulch) and valley foothill riparian habitats.
- A qualified biological monitor will be present daily during construction activities within or adjacent to riverine and valley foothill riparian habitats including but not limited to

equipment mobilization, site clearing, vegetation removal, and grading/ground disturbance to verify that no special-status species enter the project site during construction.

- If special-status species are found during construction, then work will immediately stop, all special-status species will be allowed to move out of harm's way on its own accord unless relocation is approved by CDFW and/or USFWS, and CDFW and/or USFWS will be contacted within 24 hours.
 - The biological monitor shall monitor the special-status species to make sure it is not harmed and that it leaves the site on its own and does not return. Alternatively, the biological monitor shall relocate the species to a pre-approved location designated in a relocation plan, if approved by CDFW and/or USFWS.
 - If FYLF or CRLF are observed within the work area, then work shall be halted and CDFW (FYLF and CRLF) or USFWS (CRLF only) shall be contacted for further guidance.
- Standard construction BMPs will be implemented throughout construction, in order to avoid and minimize adverse effects to the water quality within the project site. Appropriate erosion control measures will be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from the project site. The integrity and effectiveness of the BMPs will be inspected on a daily basis by the City engineer. Corrective actions and repairs shall be carried out immediately.
- Construction activities and clearing within the project site will be confined to the minimal area necessary to facilitate construction activities. To ensure that construction equipment and personnel do not affect sensitive habitat outside of designated work areas, orange barrier fencing will be erected to clearly define the habitat to be avoided. This will delineate the Environmentally Sensitive Area (ESA) on the project. The integrity and effectiveness of ESA fencing and erosion control measures will be inspected daily. Corrective actions and repairs shall be carried out immediately for fence breaches and ineffective BMPs.
- Staging areas will be located on existing roadways or other disturbed areas identified in the project layout (plan) sheets where they will not affect sensitive resources.
- Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials should not be allowed to enter into streams or other waters. A plan for the emergency clean-up of any spills of fuel or other materials should be available when construction equipment is in use.
- No equipment will be operated in the wetted portion of Angels Creek, if feasible. If work in the wetted portion of Angels Creek is unavoidable, the stream flow will be diverted around the work area by use of a barrier/cofferdam. The flow will be diverted only once the construction of the diversion is completed.
- Equipment shall be re-fueled and serviced at designated construction staging areas. All construction material and fill will be stored and contained in a designated area that is located away from channel areas to prevent transport of materials into adjacent streams. The preferred distance is 100 feet from the wetted width of a stream. In addition, a silt

fence will be installed to collect any discharge, and adequate materials should be available for spill clean-up and during storm events.

- Vehicles and equipment shall be driven only within designated areas.
- Construction vehicles and equipment will be maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Leaking vehicles and equipment shall be removed from the site.
- Building materials storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products will be located outside of the 100-year flood zone, have an impermeable membrane between the ground and the hazardous material, and will be bermed to prevent the discharge of pollutants to ground water and runoff water.
- All disturbed soils will undergo erosion control treatment prior to October 15 and/ or immediately after construction is terminated or within 48 hours of a likely qualifying rain event, whichever occurs first. A likely rain/precipitation event is any weather pattern that is forecasted to have a 30% or greater chance of producing precipitation in the project area. The discharger shall obtain likely precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at <http://www.srh.noaa.gov/forecast>). A qualifying rain event is one that produces 0.5 inch or more of precipitation within a 48 hour or greater period between rain events. Appropriate erosion control measures will be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from project sites. Erosion control blankets will be installed on any disturbed soils steeper than a 2:1 slope or steeper.
- All temporarily disturbed areas be restored to pre-construction contours and revegetated with an erosion control seed mix following completion of construction.
- No litter, debris, or sidecast shall be dumped or permitted to enter aquatic habitats. During project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- To prevent inadvertent entrapment of animals during construction, all excavated, steep walled holes or trenches more than one foot deep shall be covered at the close of each working day with plywood or other suitable material or provided with one or more escape ramps constructed of earth fill or wooden planks. At the beginning of each working day and before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist, or an on-site designee identified by the CDFW-approved biologist, will immediately place escape ramps or other appropriate structures to allow the animal to escape, or CDFW will be contacted for guidance and notified of the incident. All holes and trenches more than one foot deep shall be filled or securely covered prior to October 15.

Potential Impact to Foothill Yellow-legged Frog

FYLF has the potential to occur within Angels Creek and China Gulch in the project region and utilize these stream corridors for breeding and/or dispersal. If present in the project site, FYLF would be expected to be limited to the creek channels. As previously described, the species is closely associated with water, and only uses upland/terrestrial habitats during periods of inactivity, such as during hibernation. Due to the habitat conditions in the project site and the life history requirements of this species, FYLF movement would not be expected outside of the wetted portions of Angels Creek and China Gulch. Since construction would take place during the warmer months (the dry season), FYLF would be most active and would not be expected to be present in terrestrial habitat. FYLF would remain in the wetted portion of the creeks and would avoid direct contact with workers, equipment, or materials.

Because there would be no impacts to aquatic habitats within Angels Creek or China Gulch and FYLF is not expected to occur outside of the stream channel, no direct adverse effects to FYLF would occur. With the implementation of BMPs and other mitigation measures, no indirect effects on water quality or potential habitat for FYLF would occur. With the implementation of MM BIO-1, impacts to FYLF would be less than significant.

Potential Impact to California Red-legged Frog

CRLF has the potential to occur within Angels Creek and China Gulch in the project region and utilize these stream corridors for breeding and/or dispersal. If present in the project site, CRLF would be expected to be limited to the creek channels. Due to the habitat conditions in the project site and adjacent areas, CRLF movement would not be expected outside of the channels of Angels Creek and China Gulch. Since construction would take place during the warmer months (the dry season), CRLF would remain close to water and would not be expected to be present in terrestrial habitat. CRLF would remain in the wetted portion of the creeks and would avoid direct contact with workers, equipment, or materials.

Because there would be no impacts to aquatic habitats within Angels Creek or China Gulch and CRLF is not expected to occur outside of the stream channel during the construction period, no direct adverse effects to CRLF would occur. With the implementation of BMPs and other mitigation measures, no indirect effects on water quality or potential habitat for CRLF would occur. With the implementation of MM BIO-1, impacts to CRLF would be less than significant.

Potential Impact to Western Pond Turtle

Construction activities associated with removal, replacement, and installation of pipe in areas near Angels Creek and China Gulch would be conducted from disturbed areas along the top of the creek banks away from the wetted portions of the channels. Therefore, impacts to western pond turtle would not occur within aquatic habitats. However, western pond turtle could be present within the adjacent uplands during construction.

In the absence of proposed mitigation measures, potential adverse effects of the proposed project on western pond turtle could include harm to individual western pond turtles as a result of contact with construction equipment and/or personnel and a temporary loss of habitat for egg-laying and refuge habitat along Angels Creek in riparian and oak woodland habitat during construction. This would be a

significant impact. Implementation of MM BIO-2, Preconstruction Surveys for Western Pond Turtle, would reduce impacts to this species to less than significant.

Mitigation Measure BIO-2: Preconstruction Surveys for Western Pond Turtle

Preconstruction surveys for western pond turtles shall be conducted in the project site approximately two weeks prior to the initiation of construction activities to ensure that western pond turtles are not actively using the project site. Preconstruction surveys shall be conducted by a qualified biologist familiar with western pond turtles and their habitat. If nesting western pond turtles are identified, then no work shall commence within the area within 300 feet of the nest until turtles have hatched. If non-nesting western pond turtles are detected within the project site during ongoing construction monitoring surveys, then a qualified biologist will relocate any turtles that may be disturbed directly or indirectly by construction activities to a suitable site at least 200 feet upstream of the work area where necessary.

Potential Impact to White-tailed Kite

Nesting habitat is present in and/or adjacent to the project site, however, project construction has low potential to affect white-tailed kite nesting either directly or indirectly. White-tailed kite is a highly mobile bird species and individual birds foraging or otherwise occurring in the site could readily avoid construction areas or contact with construction equipment or personnel. Therefore, no impacts to individual kites is anticipated. If white-tailed kite were to nest in or adjacent to the project site during or prior to construction commencing in a portion of the project alignment, construction related activities could result in nest disturbance leading to abandonment of eggs or young. Potential impacts to nesting kites would be a significant impact.

Implementation of MM BIO-3, Preconstruction Nesting Bird Survey, would reduce impacts to white-tailed kite to less than significant.

Mitigation Measure BIO-3: Preconstruction Nesting Bird Survey

If project (construction) ground-disturbing or vegetation clearing, and grubbing activities commence during the avian breeding season (February 1 – August 31) in a portion of the project alignment that has been inactive for more than 14 days, a qualified biologist shall conduct a preconstruction nesting bird survey no more than 14 days prior to initiation of project activities. The survey area shall include suitable raptor nesting habitat within 300 feet of the project boundary (inaccessible areas outside of the project site can be surveyed from the site or from public roads using binoculars or spotting scopes). Pre-construction surveys are not required in areas where project activities have been continuous since prior to February 1, as determined by a qualified biologist. Areas that have been inactive for more than 14 days during the avian breeding season must be re-surveyed prior to resumption of project activities. If no active nests are identified, no further mitigation is required. If active nests are identified, the following measure is required:

- A suitable buffer (e.g. 300 feet for raptors; 100 feet for other nesting migratory birds) shall be established by a qualified biologist around active nests and no construction/decommissioning activities within the buffer shall be allowed until a qualified biologist has determined that the nest is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest, or the nest has failed).

Encroachment into the buffer may occur at the discretion of a qualified biologist. Any encroachment into the buffer shall be monitored by a qualified biologist to determine whether nesting birds are being impacted.

Potential Impact to Pallid Bat

Pallid bat could use the project site for roosting, including maternity roosts. Because the pallid bat is a highly mobile animal that typically roosts in crevices of rocks, manmade structures and trees, there is a low potential for pallid bat to occupy the project site prior to commencement of the project or to occur in the project site while foraging, breeding or dispersing through the site during construction. This species could occupy roosting habitat (e.g., trees or buildings) near the project site. Foraging would occur during the evening when project activities will not occur. In the absence of proposed mitigation measures, the project would have a low potential for adverse effects on pallid bat roosting in or adjacent to the project site. Removal of trees large enough to provide roosting habitat for bats is not anticipated, however, suitable roosting habitat in trees and buildings occurs adjacent to the construction areas. If pallid bat was present on or adjacent to the project site, construction related activities could lead to roost abandonment, which could expose the bats to increased risk of harm. This would be a significant impact.

Implementation of MM BIO-4, Roosting Bat Surveys, would reduce impacts to this species to less than significant.

Mitigation Measure BIO-4: Roosting Bat Surveys

A qualified wildlife biologist will conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required.

- If evidence of bat use is observed, then the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts.
- If roosts are determined to be present and have the likelihood to be disturbed by construction, then a qualified biologist will determine if the bats should be excluded from the roosting site before work adjacent to the roost occurs. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation if exclusion is recommended. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young).

As required by NOI-1 (see Section 2.15 below), construction activities will be limited to the hours between 7:00 a.m. and sunset Monday through Friday and between 8:00 a.m. and sunset on Saturdays. Limiting construction activities to daylight hours will further reduce potential project impacts to foraging bats.

Potential Impact to Migratory Birds and Raptors

The project area provides nesting and foraging habitat for a variety of native birds common to the region, such as black phoebe (*Sayornis nigricans*), oak titmouse (*Baeolophus inornatus*), black headed grosbeak (*Pheucticus melanocephalus*), ash-throated flycatcher (*Myiarchus cinerascens*), acorn woodpecker (*Melanerpes formicivorus*), and red-shouldered hawk (*Buteo lineatus*). Trees in the project site provide nest sites for raptors and other nesting birds. Cavities in trees provide habitat for cavity nesting birds such as oak titmouse, ash-throated flycatcher and acorn woodpecker. Project activities are not expected to directly disturb trees or shrubs but could result in noise and other indirect disturbance that has potential to cause nest failure. In the absence of proposed mitigation, destruction or abandonment of nests, eggs, or nestlings by vegetation clearing or ground-disturbing activities during the avian breeding season (February - August) could occur and would be considered a violation of California Fish and Game Code. This would be a significant impact.

Implementation of MM BIO-3 would reduce impacts to migratory birds and raptors to less than significant.

- 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?

Less than significant impact with mitigation. Of the habitat types in the project site, valley oak woodland and valley foothill riparian are considered sensitive natural communities protected by the regulations and ordinances described in Section 2.6.2 above.

Approximately 0.56 acre of riparian habitat (valley foothill riparian) is located along the banks of Angels Creek and China Gulch. This riparian habitat provides shade over Angels Creek for fish and stabilizes the banks of the stream, with complex root structures that also provide habitat for aquatic fish and wildlife. Riparian habitat is regulated by CDFW under the SAA program and is considered a sensitive natural community. No permanent impacts to riparian habitat would occur as a result of the proposed project. The existing pipeline is mostly above ground in riparian areas or located within ruderal herbaceous vegetation, so impacts would be limited to temporary disturbance to vegetation. Staging areas would be established in areas of developed or ruderal and herbaceous vegetation. Impacts to trees would be restricted to trimming limbs near existing access roads to allow passage of heavy equipment. No permanent impacts to riparian habitat are anticipated, however, segments of the pipeline cross through riparian habitat regulated by CDFW and a Lake and Streambed Alteration Agreement may be required.

With the implementation of the recommended mitigation measures for jurisdictional waters and wetlands (MM BIO-5), impacts to riparian habitat would be reduced to less than significant.

Mitigation Measure BIO-5: Jurisdictional Delineation and Regulatory Permitting

If it is determined prior to construction that impacts to jurisdictional waters cannot be avoided, then the project proponent shall apply for any necessary permits from the USACE, CDFW, and the RWQCB. If necessary, a routine delineation of wetlands and "other waters" of the United States will be prepared in accordance with the U.S. Army Corps of Engineers' (USACE) *Corps of Engineers Wetlands Delineation Manual*, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0). Impacts to jurisdictional waters shall be mitigated in accordance with agency requirements to ensure no net loss of acreage or

functions and values of waters of the U.S. and State. The City will coordinate with CDFW and, if needed, apply for a Lake and Streambed Alteration Agreement for installation of the new pipeline segment across China Gulch in the northern end of the project site and potentially for removal and replacement of other pipe segments next to the creek.

Approximately 1.58 acres of valley oak woodland is present outside of the riparian corridor of Angels Creek. Valley oak woodland provides habitat for numerous wildlife species and is considered a sensitive natural community. Individual oak trees are protected by Chapter 17.64 of the City of Angels Camp Municipal Code. The existing pipeline through the oak woodland is in ruderal herbaceous vegetation so impacts would be limited to temporary disturbance to vegetation. Staging areas would be established in areas of developed or ruderal and herbaceous vegetation. Impacts to trees would be restricted to trimming limbs along the existing pipeline or near existing access roads to allow passage of heavy equipment.

Some trenching may occur within the driplines of native oaks protected pursuant to Angels Municipal Code Chapter 17.64. This could impact the root zones and health of oaks protected pursuant to Chapter 17.64. The following mitigation measure will ensure the continued good health of protected oak trees to be preserved on site:

Mitigation Measure BIO-6: Environmentally Sensitive Area Fencing

Prior to initiating construction, the contractor shall install and the project biologist shall verify installation of Environmentally Sensitive Area (ESA) fencing around the drip lines of native oaks 9 inches or greater in diameter at breast height occurring within the construction area that may be directly or indirectly impacted by the proposed project (i.e., staging areas or proposed trenching located within 1-1/2 the dripline of native oaks 9 inches or greater diameter at breast height).

During project construction, unless otherwise approved by the project biologist:

- A. ESA fencing shall remain on site. Damaged ESA fencing shall be repaired or replaced immediately throughout project construction. The biological monitor has the authority to require additional protection measures for Protected Oak Trees where ESA fencing is inadequate or repeatedly disturbed by construction activities in the opinion of the qualified biologist.
- B. No equipment, materials, supplies, vehicles, debris, construction wastewater, paint, stucco, concrete or any other clean-up or construction waste and no temporary or permanent structures shall be placed within the driplines of Protected Trees throughout project construction unless approved by the project biologist. This condition does not apply to parking on paved parking areas within Protected Oak Tree driplines; however, heavy equipment and materials shall not be stored on paved areas within oak tree driplines to the maximum extent feasible.
- C. During trenching, protected oak tree roots two inches and greater in diameter that are exposed will be protected to the maximum extent feasible. Specifically, pipe shall be installed as soon as practicable with trenches backfilled with soil and soaked—preferably

within the same day. Excavation within the dripline of Protected Trees shall not occur during hot, dry weather.

- D. Avoid equipment damage to limbs, trunks, and roots of Protected Trees.
 - E. Trimming and limbing shall be accomplished with a power saw and shall not be torn from the tree using heavy equipment.
 - F. Signs, ropes, cables or other items shall not be attached to Protected Trees.
- c) With implementation of the preceding, no permanent impacts to oak woodland or protected trees are anticipated. Have a substantial adverse effect on state or federally protected wetlands, (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than significant impact with mitigation. Approximately 0.06 acre of riverine habitat is present in the project site consisting of small segments of Angels Creek and China Gulch. These waterways are potential waters of the U.S. and waters of the State protected by Section 404 and 401 of the CWA and Section 1600 of the Fish and Game Code. No impacts to potential waters of the U.S. or waters of the State is anticipated as a result of the proposed project. However, an SAA will be required from CDFW prior to installation of the new pipeline segment across China Gulch in the northern end of the project site and potentially for removal and replacement of other segments next to the creek.

With the implementation of MM BIO-5, impacts to jurisdictional waters and wetlands would be reduced to less than significant.

- 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?

Less than significant impact. No terrestrial wildlife nurseries of significance were identified on the project site. Impacts to wildlife nurseries would be less than significant.

The project site is not included in any corridors mapped by the California Essential Habitat Connectivity project. A potential movement corridor for terrestrial wildlife occurs in riparian forest and woodland habitat along Angels Creek and China Gulch, which could provide habitat for common wildlife to move through the area. Angels Creek flows to New Melones Reservoir, which is an impoundment along the Stanislaus River, which is an inaccessible stream to anadromous fish. The project site and surrounding lands are predominantly developed and consist of urban residential homes, commercial buildings with some open space utilized for livestock grazing. Temporary impacts to wildlife movement through the riparian corridor and oak woodland could occur as a result of construction activities deterring wildlife use of the area. However, once construction of the project is complete, wildlife movement would be expected to resume like pre-project conditions. Therefore, no permanent impacts to wildlife movement corridors would occur, and impacts would be less than significant.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than significant impact with mitigation. The removal of native oak trees of 9 inches or greater diameter and “Heritage Trees” from undeveloped land as part of the project would conflict with Chapter 17.64 of the City of Angels Camp Municipal Code, known as the Oak and Heritage Tree Ordinance. However, no removal of protected trees is anticipated to occur. If removal of protected trees was determined necessary, the project seeks to be consistent with local policies, including tree protection ordinances and would mitigate for impacts to native trees protected by the City in accordance with Chapter 17.64 of the City code.

With the implementation of MM BIO-8, Mitigation for Removal of Native Oak or Heritage Trees, impacts to trees would be reduced to less than significant.

Mitigation Measure BIO-8: Mitigation for Removal of Native Oak or Heritage Trees

Removal of native oak trees that are 9 inches or greater in TDBH or heritage trees will be compensated either by replacement on-site at a 2:1 ratio (two trees planted on site for each tree removed) or by payment into the City of Angels oak tree preservation fund.

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

No impact. The project site is not within the boundaries of any adopted habitat conservation plan; therefore, the project would not conflict with the provisions of any adopted habitat conservation plan. No impact would occur.

2.7 CULTURAL RESOURCES

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

2.7.1 Regulatory Setting

State and federal legislation require the protection of historical and cultural resources. In 1971, President's Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places. In 1980, the Governor's Executive Order No. B-64-80 required that state agencies inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic Places." Section 15064.5(b)(1) of the CEQA Guidelines specifies that projects that cause "...physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired" shall be found to have a significant impact on the environment.

For the purposes of CEQA, an *historical resource* is a prehistoric or historic-era resource listed in or determined eligible for listing in the California Register of Historical Resources (CRHR). When a project could impact a resource, it must be determined whether the resource is an historical resource, which is defined as a resource that:

(A) is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and,

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

CEQA applies to prehistoric or historic-era archaeological resources when (1) the archaeological resource satisfies the definition of a historical resource, or (2) the archaeological resource satisfies the definition of a *unique archaeological resource*. A unique archaeological resource is an archaeological

artifact, object, or site that has a high probability of meeting any of the following criteria (PRC § 21083.2(g)):

1. The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
2. The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

2.7.2 Data Source/Methodology

The following analysis of cultural resources is based on a Cultural Resources Assessment Report prepared by HELIX for the proposed project, which is included as Appendix D. Data for the assessment were provided by an archaeological records search at the Central California Information Center (CCIC) at California State University, Stanislaus, analyses of professional and academic literature related to the region, and an intensive pedestrian survey of the project area.

2.7.3 Cultural Context

Calaveras County is one of California's original 27 counties, established in 1850 when California was admitted to the Union. The County seat was first established at Pleasant Valley (currently known as Double Springs), and later moved to Jackson, then Mokelumne Hill, and finally to San Andreas in 1866. The discovery of gold in 1848 precipitated a worldwide rush of peoples to the Sierra Nevada foothills. By 1849 California's population had grown by over 10,000 and largely populated with gold-seekers from the Atlantic seaboard, the Midwest, Mexico, Central and South America, Europe, and Asia.

Angels Camp was one of the earliest important mining communities along the Mother Lode region of California. Situated in southwestern Calaveras County, on State Routes 49 and 4, it lies at the confluence of Angels Creek, China Gulch, and Dry Creek. The town is named for prospectors Henry and George Angel, who established a store at the intersection of Angels Creek and Dry Creek in 1848. There they prospected and set up a primitive trading post to exchange native goods for gold. By the spring of 1849 the Gold Rush had fully overtaken the camp, which had a population of over 300 at the time.

Angels Camp became one of the major gold-mining districts in California. Lode mining in the area began in the 1850s along the Mother Lode vein which coursed northwest-southeast just through Angels Camp, and over the next few years the vein was developed all the way to the creek by utilizing small open pits or shallow shafts and milling in mule or horse-powered arrastras, as well as water powered mills with overshot wheels. By 1858 four steam mills and nine water mills were operating in the town.

There was intermittent mining activity through the 1860s, and another small boom in the 1870s, but not much appreciable activity. However, there was a resurgence in mining activity in the area from the late 1880s to the advent of World War I as improvements were made in mining and milling methods. These changes enabled many more lode deposits, especially large but low-grade accumulations, to be profitably worked. Mining continued at Angels Camp until World War I, when most of the mines closed, never to reopen, and were sold for scrap metal (Marvin and Brejla 2011).

The project is located within what was recorded ethnographically as territory of the Central Sierra Miwok (Kroeber 1925). The Miwokan family of languages, a member of the Utian sub-stock, was made up of seven distinct languages variously situated in central California from Clear Lake south to the Bay Area and east to encompass the foothills and mountains of the central Sierra Nevada. Sierra Miwok was initially a single language, which developed into the Northern, Central, and Southern Miwok languages over time. The central group occupied the foothills and mountains of the Stanislaus and Tuolumne river drainages. The name "Miwok", from Central Sierra Miwok *miwü* (person), was an appellation of ethnographers and had little meaning to Miwok speakers, in that they did not consider themselves a single group. They were, instead, separate, independent tribelets which together shared common language and culture.

2.7.4 Area of Potential Effects and Study Area

Area of Potential Effects

The Area of Potential Effects (APE) is defined as the geographic area or areas within which a project may directly or indirectly cause alterations in the character or use of significant historical or archaeological resources. The APE is influenced by the scale and nature of the project as well as by the types of cultural resources in the vicinity. For the purposes of this analysis, the APE is understood to be the area that would be subjected to ground disturbance during construction of the proposed project. Due to the nature of the project, secondary impacts to cultural resources, including visual impacts, are expected to be negligible.

The APE for the proposed project measures approximately 7.3 acres, and includes a 50-foot wide corridor centered over the existing sewer line between manhole 9 and manhole 29 within the East Trunk Segment, and between manhole 36 and manhole 45 within the Vallecito Road Segment; a 50-foot wide corridor between manholes 45 and 44-A-1 where a new sewer line will be installed; a 50-foot wide corridor between manholes 44A and 44A-1 where the existing sewer line will be removed; and all proposed staging areas. In some areas the APE is narrower because a portion of the 50-foot corridor falls within Angels Creek. The existing sewer line between manholes 29 and 36 is excluded from the APE because repairs will involve installing a CIPP liner, thereby avoiding any ground disturbances.

Study Area

A cultural resources Study Area representing the records search area for the project was established in consultation with the State Water Resources Control Board. The Study Area for the proposed project includes the APE and a 0.25-mile buffer around the APE, resulting in an area measuring approximately 278.8 acres.

2.7.5 Cultural Resources Records Search

A cultural resources records search was completed at the CCIC on April 12, 2019. The purposes of the record search were to: (1) identify prehistoric and historic resources previously documented in the Study Area; (2) determine which portions of the APE may have been previously studied, when those studies took place, and how the studies were conducted; and, (3) ascertain the potential for archaeological resources, historical resources, and human remains and other potential Native American areas of traditional cultural significance to be found in the APE. This search also included a review of the appropriate USGS topographic maps on which cultural resources are plotted, archaeological site records,

building/structure/object records, and data from previous surveys and research reports. The California Points of Historical Interest, the California Historical Landmarks, the CRHR, the National Register of Historic Places (NRHP), and the California State Historic Resources Inventory listings were reviewed to ascertain the presence of designated, evaluated, and/or historic-era resources within the project area. Historical maps and historical aerial photographs of the area were also examined.

Previous Studies Conducted Within the APE

The cultural resources records search identified 10 previous studies that have been conducted within the study area. Of these, four studies (CA-02895, CA-03378, CA-04948, and CA-05501) addressed portions of the proposed project's APE (Table 3, *Previous Studies Conducted within the APE*).

Table 3
PREVIOUS STUDIES CONDUCTED WITHIN THE APE

| Report | Year | Author(s) | Affiliation | Title |
|----------|------|-------------------------------|---|--|
| CA-02895 | 1993 | Davis-King, S., et al. | Infotec Research, Inc. | Waterscapes in the Sierra: Cultural Resources Investigations for the Angels Project (FERC 2699), Volumes I and II |
| CA-03378 | 1998 | Davis-King, S. and J. Marvin | Davis-King & Associates and Foothill Resources, Ltd. | Historic Resources Survey Report (Negative) for the City of Angels Roadside Rest and Parking Facilities Project, City of Angels, Calaveras County, California |
| CA-04948 | 2003 | Davis-King, S. | Davis-King & Associates | Historical Resources Survey Report for the CDBGTA Water and Waste Water Line Extension to Whittle Road, Finnegan/Centennial Loop, Calaveras County, California (Project No. 2003PUB-001) |
| CA-05501 | 2004 | Rosenthal, J. S. and J. Meyer | Far Western Anthropological Research Group, Inc.; Sonoma State University | Cultural Resources Inventory of Caltrans District 10 Rural Conventional Highways; Volume III: Geoarchaeological Study |

Previously Documented Cultural Resources Within the Study Area

The cultural resources records search determined that 11 previously recorded cultural resources are located within 0.25-miles of the project area. Of these, one resource (05-002856) is located in the proposed project's APE (Table 4, *Previously Documented Cultural Resources within the APE*). 05-002856 is an extensive placer mining area containing mounds of placer tailings and hand-stacked waste rock. Initially recorded in 2003, the site has been evaluated as ineligible for the CRHR and therefore does not require avoidance or mitigation.

Table 4
PREVIOUSLY DOCUMENTED CULTURAL RESOURCES WITHIN THE APE

| Primary | Trinomial CA-CAL-__ | Description | Year | Recorder | Affiliation | NRHP Status |
|-----------|---------------------|------------------------|------|----------------|-------------------------|--------------|
| 05-002856 | None | Placer mining features | 2003 | Davis-King, S. | Davis-King & Associates | Not eligible |

2.7.6 Cultural Resources Survey

An intensive pedestrian survey for cultural resources was conducted by HELIX Senior Archaeologist Clarus J. Backes, Jr., RPA on April 17, 2019. The entire 7.3-acre APE, exclusive of portions that were inaccessible within Angels Creek, was investigated. The ground surface was examined for the presence of historic-era artifacts (e.g., metal, glass, ceramics, structural remnants), prehistoric artifacts (e.g., flaked- or ground- stone tools, tool-making debris), and other features that might represent human activity that took place more than 50 years ago.

East Trunk Segment

The survey of the East Trunk Segment included the portion of the APE between manholes 9 and 29, a large staging area immediately east of manhole 16, and a small staging area immediately northeast of manhole 29. The existing sewer line is underground throughout this area. The terrain between manholes 9 and 29 is flat and appears to be part of the Angels Creek floodplain. Ground visibility was generally poor throughout this portion of the project area, with only isolated patches of ground visible due to tall grasses. The area is covered with a thin scatter of modern trash, corrugated metal scraps, and lumber fragments.

In the southern portion of the East Trunk Segment between manholes 10 and 15 the ground surface of the corridor of the existing sewer line has been mechanically leveled. The staging area adjacent to manhole 16 forms the northern edge of a placer mining landscape that extends for an unknown distance to the south. This area is marked by small dredge piles, borrow pits, and circular depressions that appear to represent the northern edge of site 05-002856, the extensive placer mining area described in section 2.5.4. No historic-era artifacts that may be associated with the site were observed. As stated above, 05-002856 was determined ineligible for the CRHR in 2003 and therefore does not require avoidance or mitigation.

Between manholes 19 and 26 the bank rises steeply on the east side of the creek, and the existing sewer corridor in this area has been cut into the hillside and leveled. Likewise, the small staging area adjacent to manhole 29 consists of a leveled pad that may have originally held a structure. No cultural materials were found in this area, although ground visibility was poor due to vegetation.

No previously undocumented prehistoric or historic-era resources were found during the survey of the East Trunk Segment.

Vallecito Road Segment

The survey of the Vallecito Road Segment included the portion of the APE between manholes 36 and 45, two staging areas along the west shoulder of Vallecito Road between manholes 36 and 41, and three small staging areas in the vicinity of manholes 42, 43, and 45. The Vallecito Road Segment is considerably more developed than the East Trunk Segment, with the sewer line running beneath Vallecito Road from manhole 36 to midway between manholes 41 and 42. From manholes 42 to 44 the sewer line runs under the eastern edges of Tryon Park and a vacant field north of the park, until it crosses Angels Creek at manhole 44-A.

The three small staging areas at the north end of the Vallecito Road Segment are all located on flat, graded and graveled parking areas that have been heavily disturbed. Access to the staging area adjacent

to manhole 45 was not possible during the survey because of a locked gate, but it was visually inspected through the fence that surrounds it. Like the other staging areas, this area is graded and is currently used as a parking area.

No previously undocumented prehistoric or historic-era resources were found during the survey of the Vallecito Road Segment.

2.7.7 Analysis

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?
- c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than significant impact with mitigation. No previously undocumented prehistoric or historic-era resources were found during the survey of the project area. Placer mining site 05-002856 is located within the APE, but it was determined ineligible for the CRHR in 2003 and therefore does not require avoidance or mitigation. However, the long history of use of the area by Native Americans, gold miners, and residents of Angels Camp make the project area extremely sensitive to buried cultural resources. Subsurface construction activities such as excavation and trenching have the potential to damage or destroy previously undiscovered cultural resources, resulting in a potentially significant impact.

No human remains are known to exist within the project area. However, there is always the possibility that subsurface construction activities associated with the proposed project, such as excavation and trenching, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is also a potentially significant impact.

With implementation of Mitigation Measures CUL-1 through CUL-3 proposed below and TCR-1 and TCR-2 (see Section 2.20, Tribal Cultural Resources), potential impacts to known and previously undiscovered cultural resources would be reduced to a less than significant level.

Mitigation Measure CUL-1: Construction Monitoring

All trenching and/or excavation associated with the proposed project shall be monitored by a trained archaeological monitor. Archaeological monitoring is defined as on-the-ground, close-up observation by a qualified archaeologist, watching for any kind of archaeological remains that might be exposed during trenching and/or excavation activities. The monitoring program should include the following:

- **Retention of a Qualified Archaeologist.** A qualified archaeologist shall be retained to implement a monitoring and, if necessary, recovery program during trenching and/or excavation associated with the project. The qualified archaeologist shall meet the Secretary of Interior's Professional Standards for prehistoric and historic archaeology.
- **Construction Monitoring.** An archaeological monitor working under the supervision of the qualified archaeologist will observe all excavation and trenching, unless determined

unnecessary by the qualified archaeologist. The monitor shall be authorized to halt construction, if necessary, in the immediate area where buried cultural resources are encountered. If a cultural resource is discovered during construction activities, the following shall be implemented:

- i. The person discovering the resource shall notify the qualified archaeological professional by telephone immediately.
- ii. When the cultural resource is located outside the area of disturbance, the Project's designated qualified archaeological resource professional shall be allowed to photo document and record the resource, and construction activities may continue during this process. The area of disturbance includes the sewer line plus 100 feet unless otherwise determined by the qualified archaeological resource professional.
- iii. When the cultural resource is located within the area of disturbance, all activities that may impact the resource shall cease immediately upon discovery of the resource. All activity that does not affect the cultural resource as determined by site's designated qualified archaeological resource professional may continue. The project's designated qualified archaeological resource professional shall be allowed to conduct an evaluative survey to evaluate the significance of the cultural resource, which evaluation shall be complete within 2 weeks of the discovery unless extraordinary circumstances require additional time.
- iv. When the cultural resource is determined to be not significant, the project's designated qualified archaeological resource professional shall be allowed to photo document and record the resource. Construction activities may resume after authorization from the project's designated qualified archaeological professional.
- v. When a resource is determined to be significant, the resource shall be avoided with said resource having boundaries established around its perimeter by the project's designated qualified archaeological resource professional or a cultural resource management plan shall be prepared by the project's designated qualified professional to establish measures formulated and implemented in accordance with Sections 21083.2 and 21084.1 of the California Environmental Quality Act (CEQA) to address the effects of construction on the resource. The project's designated qualified archaeological resource professional shall be allowed to photo document and record the resource. Construction activities may resume after authorization from the Project's designated qualified archaeological resource professional. All further activity authorized by this permit shall comply with the cultural resources management plan, if necessary.

For the purposes of implementing this measure, a "cultural resource" is any building, structure, object, site, district, or other item of cultural, social, religious, economic, political, scientific, agricultural, educational, military, engineering or architectural significance to the citizens of Calaveras County, the State of California, or the nation which is 50 years of age or older or has been listed on or is eligible for listing on the National Register of Historic Places, the California Register of Cultural Resources, or any local register.

- **Monitoring Report.** A complete set of the daily monitoring logs should be kept on site throughout the earth-moving activities and be available for inspection. The daily monitoring log should be keyed to a location map to indicate the area monitored, date, assigned personnel, and results of monitoring, including the recovery of archaeological material, sketches of recovered materials, and associated geographic site data. Within 90 days of the completion of the archaeological monitoring, a monitoring report should be submitted to the City and filed with the CCIC.

Mitigation Measure CUL-2: Worker Training Program

Prior to the initiation of ground-disturbing activities, all construction personnel shall be trained in the protection of cultural resources, the recognition of buried cultural remains, and the notification procedures to be followed upon the discovery of archaeological materials, including human remains (CUL-3). The training shall be presented by an archaeologist who meets the Secretary of Interior's Standards for Prehistoric and Historic Archaeology and shall include recognition of both prehistoric and historic resources. Personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials is illegal, and that violators will be subject to prosecution under the appropriate state and federal laws. Supervisors should also be briefed on the consequences of intentional or inadvertent damage to cultural resources. A Native American representative from a local tribe will be invited to participate in the training, if available.

Mitigation Measure CUL-3: Discovery of Human Remains

The discovery of human remains is always a possibility during a project. If such an event did occur, the specific procedures outlined by the Native American Heritage Commission (NAHC), in accordance with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code, must be followed:

1. All excavation activities within 60 feet of the remains will immediately stop, and the area will be protected with flagging or by posting a monitor or construction worker to ensure that no additional disturbance occurs.
2. The project owner or their authorized representative will contact the Calaveras County Coroner.
3. The coroner will have two working days to examine the remains after being notified in accordance with HSC 7050.5. If the coroner determines that the remains are Native American and are not subject to the coroner's authority, the coroner will notify NAHC of the discovery within 24 hours.
4. NAHC will immediately notify the Most Likely Descendant (MLD), who will have 48 hours after being granted access to the location of the remains to inspect them and make recommendations for their treatment. Work will be suspended in the area of the find until the County Coroner approves the proposed treatment of human remains.

2.8 ENERGY

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

2.8.1 Background and Setting

This section provides an evaluation of existing energy production/consumption conditions, as well as potential energy use and related impacts from the proposed project. The following discussion is consistent with and fulfills the intent of Appendix G, Energy, from the State CEQA Guidelines.

The unit of energy used in this section are the British thermal units (BTU) and kilowatt hours (kWh). A BTU is the quantity of heat required to raise the temperature of one pound of water one-degree Fahrenheit (°F) at sea level. Because the other units of energy can all be converted into equivalent BTU, the BTU is used as the basis for comparing energy consumption associated with different resources. A kWh is a unit of electrical energy, and one kWh is equivalent to approximately 3,413 BTU, taking into account initial conversion losses (i.e., from one type of energy, such as chemical, to another type of energy, such as mechanical) and transmission losses. Natural gas consumption is described typically in terms of cubic feet or therms; one cubic foot of natural gas is equivalent to approximately 1,050 BTU, and one therm represents 100,000 BTU.

California Energy Overview

Electricity

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers and community choice aggregators. In 2017, the California power mix totaled 292,039 gigawatt hours (GWh), and in-state generation accounted for 206,336 GWh, or 71 percent, of the state's power mix. The remaining electricity came from out-of-state imports (CEC 2018). Table 5, *California Electricity Sources 2017* provides a summary of California's electricity sources as of 2018.

Table 5
CALIFORNIA ELECTRICITY SOURCES 2017

| Fuel Type | Percent of California Power |
|-----------------------------------|------------------------------------|
| Coal | 4.13% |
| Large Hydro | 14.72% |
| Natural Gas | 33.67% |
| Nuclear | 9.08% |
| Oil | 0.01% |
| Other (Petroleum Coke/Waste Heat) | 0.14% |
| Renewables | 29% |

Source: CEC 2018

Natural Gas

Natural gas provides the largest portion of the total in-state capacity and electricity generation in California, with nearly 50 percent of the natural gas burned in California used for electricity generation in 2017. Much of the remainder was consumed in the residential, industrial, and commercial sectors for uses such as cooking, space heating, and as an alternative transportation fuel. In 2012, total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (bcf/year), up from 2,196 bcf/year in 2010 (CEC 2017a).

Transportation Fuels

Transportation accounts for a major portion of California's energy budget. Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (SUVs). In 2015, 15.1 billion gallons of gasoline were sold in California (CEC 2017b). Diesel fuel is the second most consumed fuel in California, used by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats, and farm and construction equipment. In 2015, 4.2 billion gallons of diesel were sold in California (CEC 2017c).

2.8.2 Regulatory Framework Relating to Energy

Energy Independence and Security Act of 2007

House of Representatives Bill 6 (HR 6), the federal Energy Independence and Security Act of 2007, established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most substantial new standard that HR 6 established is for general service lighting that is being deployed in two phases. First, phased in between 2012 through 2014, common light bulbs were required to use about 20 to 30 percent less energy than previous incandescent bulbs. Second, by 2020, light bulbs must consume 60 percent less energy than today's bulbs; this requirement would effectively phase out the incandescent light bulb.

Energy Improvement and Extension Act of 2007

The formerly entitled "Renewable Energy and Job Creation Act of 2008," or Division B of HR 1424, was signed into law by President Bush in October 2008. The signed bill contains \$18 billion in incentives for clean and renewable energy technologies, as well as for energy efficiency improvements.

2.8.3 Analysis

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than significant impact. The proposed project would involve upsizing and/or replacing an existing sewer line, which will improve wastewater delivery to the City's existing wastewater treatment plant. While construction activities would result in the temporary consumption of energy resources in the form of vehicle and equipment fuels (gasoline and diesel fuel) and electricity/natural gas (directly or indirectly), such consumption would be incidental and temporary and would thus not have the potential to result in wasteful, inefficient, or unnecessary consumption of energy resources. With regard to long-term operations, although the project would improve wastewater delivery in existing sewer lines by increasing the size of the pipe at various locations, the project would necessitate very limited new equipment that would create additional energy demands. Thus, although the project would improve the existing sewer line system in the City, it would not involve notable new energy demand sources in the long-term. Overall, the proposed project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be less than significant.

- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No impact. See the discussion under question a) above. The proposed project would not result in a substantial new demand for energy resources nor have any direct or indirect effect on any state or local plan for renewable energy or energy efficiency. No impact would occur.

2.9 GEOLOGY AND SOILS

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

2.9.1 Background and Setting

The proposed project is located in a mildly seismic region of the Sierra Nevada, and several moderately active strike-slip faults belonging to the Foothills Fault system, which trends northwest-southeast, are located 1 to 6 miles southwest of the site. Several other active faults belonging to the Eastern Sierra Fault system are located on the east side of the Sierra Nevada Mountains. The Foothills Fault System is classified by the California Geological Survey (CGS) as a Class C fault system that is capable of generating smaller earthquakes less frequently than most other California faults.

According to the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) Web Soil Survey, the project area consists of a complex of Loafercreek-Bonanza with 3 to 15 percent slopes, Cumulic Humixerepts-Riverwash with 0 to 8 percent slopes, and Urban land-Loafercreek-Dunstone with 3 to 15 percent slopes. These soils are well drained and susceptible to erosion.

City Regulation of Geology and Soils

The City regulates the effects of soils and geological constraints on development primarily through enforcement of the California Building Code (CBC), which requires the implementation of engineering solutions for constraints to urban development posed by slopes, soils, and geology.

2.9.2 Analysis

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?
 - ii. Strong seismic ground shaking?
 - iii. Seismic-related ground failure, including liquefaction?
 - iv. Landslides?

No impact. The proposed project is not located in a Fault-Rupture Hazard Zone as established by the Alquist-Priolo Earthquake Fault Zoning Act (CDC 2018). Therefore, ground rupture from faulting is not considered a significant hazard.

The proposed project is located within Region 1 as defined by the 2019 CBC. Compliance with applicable State standards for Region 1, as provided in the CBC, would ensure that the utility line would be properly designed to withstand strong seismic ground shaking should it occur.

The soils in the project area do not contain the characteristics typical of soils most susceptible to liquefaction, and because the depths to groundwater are more than 6 feet below the ground surface, it is unlikely that the proposed project would be exposed to liquefaction hazards (NRCS 2019). Further, the proposed project would be constructed in accordance with standards imposed by the City through the City Code and in compliance with CBC requirements. Compliance with these regulations would further reduce potential impacts related to liquefaction.

Steep slopes combined with highly erosive soils are not found on site, and no risk of landslides is anticipated. Therefore, no impact would occur for questions i), ii), iii), and iv).

- b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact with mitigation. As noted, on-site soils are susceptible to erosion. Temporary construction activities associated with the project may disturb soils and result in loss of

topsoil and soil erosion, a potentially significant adverse impact. With the implementation of **Mitigation Measure HYD-2** (see Section 2.12) the impact would be reduced to less than significant.

- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No impact. The site is relatively flat and in an area with stable slopes (i.e., slopes are less than 15%); therefore, impacts associated with slope stability are not anticipated. Compliance with provisions in the CBC related to soil testing and application of relevant design considerations would ensure that the sewer line replacement would not be located on expansive soils creating a substantial risk. Therefore, no impact is anticipated.

- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No impact. The proposed project is a sewer line replacement project, and no septic tanks are proposed. Therefore, no impact would occur.

- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact with mitigation. No previous surveys conducted in the project area have identified the project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically sensitive resources. While the likelihood of encountering paleontological resources and other geologically sensitive resources is considered low, project-related ground disturbing activities could affect the integrity of a previously unknown paleontological or other geologically sensitive resource, resulting in a substantial change in the significance of the resource. Therefore, the proposed project could result in potentially significant impacts to paleontological resources. Implementation of the proposed mitigation (MM GEO-1) would reduce potentially significant impacts to a level of less than significant.

Mitigation Measure GEO-1: Avoid and Minimize Impacts to Paleontological Resources

In the event a paleontological or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of project construction, all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at the City of Angels who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the City shall implement those measures which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2.

2.10 GREENHOUSE GAS EMISSIONS

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

2.10.1 Background and Setting

The analysis is based on the Air Quality and Greenhouse Gas Emissions Impact Assessment Technical Letter Report for the project, which is included as Appendix B to this IS.

GHGs, as defined under California's AB 32, include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). AB 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states that:

Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to help avert these potential consequences, AB 32 established a State goal of reducing GHG emissions to 1990 levels by the year 2020, which is a reduction of approximately 16 percent from forecasted emission levels, with further reductions to follow. In addition, AB 32 required CARB develop the Climate Change Scoping Plan (Scoping Plan) to help the state achieve the targeted GHG reductions. In 2015, Executive Order (EO) B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. As a follow-up to AB 32 and in response to EO-B-30-15, Senate Bill (SB) 32 was passed by the California legislature in 2016 to codify the EO's California GHG emission reduction target of 40 percent below 1990 levels by 2030. The most recent update to the Scoping Plan was adopted in December 2017 and establishes a proposed framework for California to meet the EO-B-30-15 reduction target (CARB 2017b).

There are no established federal, state, or local quantitative thresholds applicable to the project to determine the quantity of GHG emissions that may have a significant effect on the environment. CARB, the SMAQMD, and various cities and agencies have proposed, or adopted on an interim basis, thresholds of significance that require the implementation of GHG emission reduction measures. The Calaveras County Air Pollution Control District has not formally adopted a GHG threshold or GHG guidance for lead agencies. Therefore, the SMAQMD Land Development and Construction Projects GHG Thresholds has been chosen as the most appropriate threshold for the proposed project due to the SMAQMD's proximity to the Mountain Counties Air Basin (SMAQMD 2018b). SMAQMD was one of the first districts to adopt GHG thresholds and are one of the only districts that has a construction emissions threshold. Per the SMAQMD GHG thresholds, a significant impact would occur if the proposed project's construction or operation would exceed the SMAQMD screening threshold of 1,100 metric tons (MT) of carbon dioxide equivalents (CO₂e) per year.

2.10.2 Analysis

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

Less than significant impact.

Construction

Construction GHG emission sources include construction equipment exhaust, on-road hauling truck exhaust, vendor vehicle exhaust, and worker commuting vehicle exhaust. GHG emissions were modeled using the same methodology and assumptions as described in the Air Quality analysis, above.

The estimated construction GHG emissions for the project are shown in Table 6, *Annual GHG Emissions from Project Construction*. To be conservative, all construction emissions are assumed to occur in one calendar year (2020). As shown in Table 6, *Annual GHG Emissions from Project Construction*, the project's construction emissions of 155 Metric Tons (MT) of CO₂e would be well below the SMAQMD construction screening threshold of 1,100 MT CO₂e. Therefore, the project's construction period GHG emissions would be less than cumulatively considerable.

Table 6
ANNUAL GHG EMISSIONS FROM PROJECT CONSTRUCTION

| CONSTRUCTION YEAR | EMISSIONS (MT CO ₂ e) |
|----------------------------|-------------------------------------|
| 2020 | 155 |
| SMAQMD Threshold | 1,100 |
| <i>Threshold Exceeded?</i> | <i>No</i> |

Source: RCEM version 9.0.0; Thresholds – SMAQMD 2018b.
MT CO₂e = Metric tons of carbon dioxide equivalents.

Operation

Wastewater treatment facilities can be a source of GHGs during decomposition of solids in wastewater (primarily CH₄ and CO₂) and following nitrogen removal processes (primarily N₂O). There would be no

anticipated change in net GHG emissions from wastewater treatment in the City resulting from the proposed sewer line replacement and upgrade.

Long-term operation of the project would result in GHG from the occasional use of equipment for maintenance. However, the replacement of existing, deteriorating clay sewer line with PVC pipes would be expected to reduce future maintenance requirements and any associated emissions compared to the existing maintenance activities. Therefore, the project's operational GHG emissions would be less than cumulatively considerable.

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

Less than significant impact. As discussed in criterion a) above, the project would not exceed the screening GHG emissions threshold during construction and long-term operation of the project would not result in an increase in GHG emissions compared to existing conditions. In addition, many long-term GHG reduction plans, including the CARB Scoping Plan, estimate future GHG emissions and corresponding reduction targets based on local and statewide growth estimates. The project would not contribute to any future growth in population or employment in the City or State. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and impacts would be less than significant.

2.11 HAZARDS AND HAZARDOUS MATERIALS

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|-------------------------------------|-------------------------------------|
| Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

2.11.1 Background and Setting

The following databases were reviewed for the proposed project and surrounding area to identify potential hazardous contamination sites: the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2019a); California Department of Toxic Substance Control's Hazardous Waste and Substances Site List (DTSC 2019b); and, the U.S. EPA's Superfund National Priorities List (EPA 2019b).

The EnviroStor database identified one site (Brown-Utica Mine) within a mile of the proposed project. The Brown-Utica Mine is located approximately 450 feet west of manhole 41 on the opposite side of Angels Creek. The Brown-Utica Mine is a former gold and silver hard-rock mine. Based on available information, the DTSC states that there is a potential risk that the flooded tunnels and underground

working of the former mine could collapse, resulting in sink holes and soil subsidence at the Site and in the surrounding portions of Angels Camp (DTSC 2019a).

Federal and state laws include provisions for the safe handling of hazardous substances. The federal Occupational Safety and Health Administration (OSHA) administers requirements to ensure worker safety. Construction activity must also be in compliance with the California OSHA regulations (Occupational Safety and Health Act of 1970). The proposed project would comply with all applicable federal and state laws.

2.11.2 Analysis

- 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?

Less than significant impact with mitigation. Replacing the existing sewer line would result in an increase in the generation, storage, and disposal of hazardous wastes. During project construction, oil, gasoline, diesel fuels, and other materials may be used. If spilled, these substances could pose a risk to the environment and to human health. The routine transport, use, and disposal of hazardous materials are subject to local, state, and federal regulations to minimize risk and exposure.

The Utica Water and Power Authority (UWPA) has a hydropower facility located at 1168 Booster Way, which is adjacent to manholes 44-B and 45 (see Figure 3). The UWPA hydroelectric water delivery line crosses a small portion of the existing sewer line that is planned to be removed and upsized to a 12-inch pipe. Accidentally cutting into the hydroelectric line could be fatal and would result in a significant impact. With the implementation of **Mitigation Measure HAZ-1**, the impact would be reduced to less than significant for questions a) and b).

Mitigation Measure HAZ-1: UWPA Monitoring of Hydro Water Line

The City will contact UWPA to have the location of where the existing sewer line segment crosses the UWPA hydroelectric water delivery line flagged prior to construction. The City will coordinate with UWPA, and a monitor, approved by UWPA, will be present to monitor the replacement of the existing sewer line where it crosses the hydroelectric water delivery line to ensure the water line remains intact.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than significant impact. Mark Twain Elementary School is located over 0.5 mile west of manhole 44-A-1, the northern terminus of the propose project. During project construction, oil, gasoline, diesel fuel, and other hazardous materials may be used. If spilled, these substances could pose a risk to the environment and to human health. The routine transport, use, and disposal of hazardous materials are subject to local, state, and federal regulations to minimize risk and exposure. The potential risk of exposure or impacts from transport, use, and disposal of hazardous materials to schools and other nearby sensitive receptors would be minimized through implementation of the regulations. The

potential for risks associated with the accidental release of hazardous materials during routine transport, use, or disposal would result in a less than significant impact.

- 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?

No impact. The proposed project is not located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. The Brown-Utica Mine site identified on the EnviroStor database is located approximately 450 feet west of manhole 41 on the opposite side of Angels Creek and is listed on the DTSC's hazardous site database. The site is a former gold and silver hard-rock mine and could pose a potential risk if its tunnels were to collapse. However, the proposed project would not involve any ground disturbance near the site and would therefore have no impact.

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

No impact. The project area is not located in an Airport Land Use Plan area, and no public or private airfields are within two miles of the project area; therefore, the proposed project would not result in a safety hazard for people residing or working in the project area. No impact would occur.

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than significant impact with mitigation. The proposed project would involve construction activities in close proximity to the rights-of-way (ROW) of SR 49, Vallecito Road, and Booster Way and may result in temporary disturbance to traffic or lane closures along these roads. However, a Traffic Control Plan would be prepared in compliance with **Mitigation Measure TRA-1** identified in Section 2.17, Transportation, which would reduce potential impacts to less than significant.

- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No impact. Due to the nature of the proposed project, impacts associated with wildland fires are not anticipated. Therefore, the proposed project would not expose people or structures to risks associated with wildland fires, and no impact would occur.

2.12 HYDROLOGY AND WATER QUALITY

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

2.12.1 Background and Setting

The proposed project is located adjacent to Angels Creek. Federal Emergency Management Agency (FEMA) flood insurance rate maps were reviewed for the project's proximity to a 100-year floodplain. The proposed project is on FEMA panel 06009CO558E, effective December 17, 2010. Portions of the project area are located within a 100-year floodplain (Zone A and Zone AE).

Regulatory Framework Relating to Hydrology and Water Quality

The SWRCB manages and administers water quality in California. Water quality in the project area is governed by the CCVRWQCB (Region 5) and is outlined in the Water Quality Control Plan for the Central Valley Basin Plan, which is discussed below (CVRWQCB 2018).

2.12.2 Analysis

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than significant impact with mitigation. Stormwater runoff has the potential to be altered during project construction. Potential impacts would be minimized by following the National Pollution Discharge Elimination System (NPDES) program standards. The NPDES stormwater program for the proposed project is administered by the CVRWQCB, which regulates such discharges to reduce non-point source pollutants associated with runoff relative to construction activities. Compliance with the NPDES stormwater program would ensure that the proposed project would not violate any water quality standards or waste discharge requirements. Therefore, impacts would be less than significant with implementation of **Mitigation Measure HYD-1**.

Mitigation Measure HYD-1: Obtain NPDES General Construction Permit

Prior to the commencement of project construction, the City shall obtain coverage under the State's National Pollutant Discharge Elimination System (NPDES) General Construction Permit, as issued by the CVRWQCB. The City shall be responsible for ensuring that construction activities comply with the conditions in this permit, including the development of a Stormwater Pollution Prevention Plan (SWPPP), implementation of best management practices identified in the SWPPP, and monitoring to ensure that effects on water quality are minimized.

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

No impact. No use of groundwater is required or proposed, and the proposed project would not interfere with groundwater recharge. Therefore, the proposed project would have no impact on groundwater supplies.

- 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 off-site?

Less than significant impact with mitigation. The proposed project would replace an existing sewer line adjacent to Angels Creek. Construction activities could lead to erosion on-site, however, **Mitigation Measure HYD-2** would be implemented to reduce potential impacts to less than significant.

Mitigation Measure HYD-2: Erosion Control Plan

An Erosion Control Plan shall be submitted to the City for approval and implemented prior to any construction activities occurring between October 15 and May 15 or within 48 hours of a likely qualifying rain event, whichever occurs first. A likely rain/precipitation event is any weather pattern that is forecasted to have a 30% or greater chance of producing precipitation in the project area. The discharger shall obtain likely precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location

at <http://www.srh.noaa.gov/forecast>). A qualifying rain event is one that produces 0.5 inch or more of precipitation within a 48 hour or greater period between rain events. In the absence of such an approved and implemented plan, all construction shall cease on or before October 15, except that necessary to implement erosion control measures.

All soils disturbed by grading shall be reseeded, hydromulched, or otherwise stabilized as soon as possible and before the rainy season begins (by October 15 of the construction year), and emergency erosion control measures shall be used as reasonably requested by the City.

- (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off site?
- (iii) Create or contribute runoff water which would exceed the capacity of existing or planner stormwater drainage systems or provide substantial additional sources of polluted runoff?
- (iv) Impede or redirect flood flows?

Less than significant impact. The proposed project would replace an existing sewer line that is primarily subterranean. A new 10-inch pipeline would be installed between manholes 45 and 44-A1 and would cross China Gulch. Although the pipeline crossing China Gulch would be installed above ground and above the ordinary high water mark, the pipeline could be submerged during a major storm event. However, the size and scale of the proposed pipe crossing would not significantly impede or redirect flood flows during a major storm event. Therefore, the proposed project would not significantly change existing site conditions and would not result in flooding on- or off-site, create or contribute to new runoff, or significantly impede or redirect flood flows. Therefore, impacts would be less than significant for questions c(ii), c(iii), or c(iv).

- d) In flood hazards, tsunamis, or seiche zones, risk release of pollutants due to project inundation?

Less than significant impact. The proposed project is not located in a tsunami or seiche zone but is located in a FEMA special flood hazard area as it is located adjacent to Angels Creek. However, most of the existing sewer line is subterranean, and areas of the sewer line that are above ground and subject to inundation would be designed to withstand floodwaters to reduce the risk of pipe rupture and release of pollutants into Angels Creek. During project construction, oil, gasoline, diesel fuels, and other materials may be used. If the project area were to be inundated during construction, these substances could pose a risk to the environment and to human health. However, these substances would be stored outside of the FEMA special flood hazard area in accordance with Mitigation Measure BIO-1, and the routine transport, use, and disposal of hazardous materials are subject to local, state, and federal regulations to minimize risk and exposure. Therefore, impacts would be less than significant.

- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No impact. Calaveras County is located within the jurisdiction of the CVRWQCB (Region 5). The CVRWQCB developed a Water Quality Control Plan for the Sacramento and San Joaquin River Basins, which defines the river basins and establishes beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives. The proposed project would not conflict with or obstruct the implementation of this plan and would therefore have no impact.

2.13 LAND USE AND PLANNING

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

2.13.1 Background and Setting

According to the City's 2020 General Plan land use map, the proposed project would pass through land designated for Single Family Residential, Right-of-Way, Parks and Recreation, Public, Historic Commercial, and Community Commercial. One parcel located within the County and owned by the City carries a Calaveras County General Plan land use designation of rural residential (City 2011, County 2019). According to the City's Zoning Map, the proposed project would pass through land zoned for Single-Family Residential, Multi-Family Residential, Industrial, Recreation, Public Service, Right-of-Way, and Historic Commercial. The parcel that is located within the County and owned by the City carries a Calaveras County zoning designation of Unclassified.

2.13.2 Analysis

- a) Physically divide an established community?

No impact. The proposed project would replace an existing, primarily subterranean sewer line, and no division of an established community would occur. Therefore, the project would have no impact.

- 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?

No impact. The existing sewer line runs primarily subterranean, and physical impacts to the land during project construction would be short-term and temporary. Therefore, the proposed project would not conflict with any land use plan, policy, or regulation adopted, and no impact would occur.

2.14 MINERAL RESOURCES

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

2.14.1 Background and Setting

Since the identification of mineral resources in Calaveras County in 1962, the State of California has undertaken more intensive classification efforts in some counties. State classification of mineral resources is intended to assist counties in managing important mineral resources within their jurisdiction. To date, only the San Andreas Quadrangle has been evaluated in detail in Calaveras County. The CGS anticipates that additional evaluations and classifications of mineral resource values within the county, including the Angels Camp Sphere of Influence, will occur in the coming years; however, a review of the CGS list of available surveys shows no new mineral classification maps have been released for Calaveras County since adoption of the Angels Camp 2020 General Plan in 2009. In the interim, Angels Camp applies the Calaveras County mineral resource classifications surrounding the City's sphere of influence to evaluate potential impacts on mineral resources.

2.14.2 Analysis

- 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?

No Impact. Pursuant to Angels Camp General Plan 2020, the project area is designated as "unclassified" with respect to mineral resources (City 2009). The project area is not adjacent to any designated mineral resource, and the proposed project would replace and repair an existing utility line in place. Therefore, there would be no loss of availability of a known mineral resource of value (locally, regionally, or by residents of the state), and no impact to mineral resources would occur for questions a) and b).

2.15 NOISE

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

2.15.1 Background and Setting

Noise Terminology and Metrics

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ} , with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night noise level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL or L_{DN} are always based on dBA. The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.0000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this wide range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 mPa. Because decibels are logarithmic units, SPL cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1 dBA changes in sound levels, when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dBA increase is generally perceived as a distinctly noticeable increase, and a 10-dBA increase is generally perceived as a doubling of loudness.

Groundborne Vibration Terminology and Metrics

Groundborne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of groundborne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints. Generally, a PPV of less than 0.08 in/sec does not produce perceptible vibration. At 0.10 PPV in/sec, continuous vibrations may begin to annoy people, and it is the level at which there is a risk of architectural damage (e.g., cracking of plaster) to historical buildings and other vibration-sensitive structures. A level of 0.30 PPV in/sec is commonly used as a threshold for risk of architectural damage to standard dwellings (Caltrans 2013).

Regulatory Framework

The City’s General Plan Noise Element contains land use compatibility outdoor noise exposure standards. For new land uses near the project area, the following standards would be normally acceptable (City 2009):

- Residential low density, single-family, duplex, mobile homes: less than 60 CNEL or L_{DN} .
- Residential multi-family: less than 65 CNEL or L_{DN} .
- Transient lodging, motels, hotels: less than 65 CNEL or L_{DN} .
- Playgrounds, public parks: less than 65 CNEL or L_{DN} .
- Office buildings, commercial and professional business: less than 70 CNEL or L_{DN} .

The City’s General Plan Implementation Program 5.A.d, *Adopt Construction/Maintenance Activity Noise Management Standards*, recommends adopting construction noise management standards following the guidelines of General Plan Appendix 5B (City 2009).

The City’s Municipal Code contains prohibitions against the creation of public nuisances, including Chapter 2.60, section 2.60.010 U: Maintenance, or use of premises which, by reason of noise, dirt, odor or other effects caused by the use of said premises diminish the livability, enjoyment, use or property values of neighboring properties.

Existing Noise and Vibration Setting

The existing sewer line transects low density residential and commercial areas within the City. Major noise sources in the area include traffic noise from SR 49 and Vallecito Road. Other noise sources

include traffic on local streets and general noise associated with residences and commercial businesses including heating, ventilation, and air conditioning (HVAC) systems; landscape maintenance equipment; and pets.

2.15.2 Analysis

- 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?

Less than significant impact with mitigation.

Construction

Construction of the project would generate noise from the use of heavy construction equipment for site-preparation, demolition, and grading including the use of two excavators, two backhoes, two mini-excavators, two pumps, two haul trucks, and one water truck. In addition, in areas where roads are disturbed, pavement repair would be required using a paving machine, paving equipment and a roller. Construction activities would occur within 25 feet of residences in multiple locations along the existing sewer line. Project construction noise was analyzed using the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM), which utilizes estimates of sound levels from standard construction equipment based on measurements and surveys conducted on a project site in Boston, Massachusetts (FHWA 2008). The RCNM output report is included as Appendix B, *RCNM Results*, to this IS.

Construction equipment would be used sporadically throughout the project area. Multiple pieces of construction equipment would rarely be used simultaneously in close proximity to each other. A conservative scenario was modeled consisting of the simultaneous use of an excavator, pump and backhoe operating for one or more hours approximately 25 feet from the nearest residential property. Other project construction activities, including paving, would be expected to use less intensive equipment or fewer number of equipment simultaneously. The resulting construction noise at the nearest residences would be approximately 87 dBA L_{EQ} (1 hour). The City has not adopted a numerical standard for maximum allowable temporary construction noise. However, the City General Plan Policy 5.A.1 requires development of a uniform standard for mitigating temporary noise impacts associated with new development. Although temporary and sporadic, project construction noise could adversely affect nearby residences, particularly at night, and would be a potentially significant impact. The City's General Plan Appendix 5B contains sample noise management guidelines for the mitigation of construction noise impacts from development projects, including recommendations for limiting construction hours (City 2009). **Mitigation Measure NOI-1** would require implementation of the applicable construction noise management measures described in the General Plan Appendix 5B. With implementation of **Mitigation Measure NOI-1**, project construction activities would not result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project. Construction noise impacts would be less than significant with mitigation incorporated.

Operation

Long-term operation of the project would not result in new or changed sources of noise in the community and would not result in the generation of a substantial permanent increase in ambient noise

levels in excess of the standards established in the General Plan Noise Element. There would be no impact from long-term operational noise.

Mitigation Measure NOI-1: Construction Noise Reduction Measures

The City shall incorporate the following construction noise reduction measures into all project construction activities:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers;
- Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible;
- Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers;
- During construction, stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors; and
- With the exception nighttime activity required to avoid excessive disruption of traffic for work within a public right of way, construction activities shall be limited to the hours between 7:00 a.m. and sunset Monday through Friday and the hours between 8:00 a.m. and sunset on Saturdays. No construction activities shall occur on Sundays or City recognized holidays.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact with mitigation. During construction, the largest potential source of vibration during project construction would be a vibratory roller, primarily used to achieve soil, aggregate and asphalt compaction. Vibratory rollers could be used in roadway pavement repair within 25 feet of nearby residences. A large vibratory roller would produce vibrations of 0.210 in/sec PPV at a distance of 25 feet (Caltrans 2013). This would exceed the 0.1 in/sec PPV vibration criteria for potential architectural damage to older structures annoyance of residents. At 50 feet a large vibratory roller would produce vibration of approximately 0.1 in/sec PPV.¹ Vibration impacts would therefore be significant if a vibratory roller is used within 50 feet of a potentially historic structure. **Mitigation Measure NOI-2** would require vibratory rollers to be used in static mode when operating within 50 feet of any potentially historic structure or occupied residence. With implementation of **Mitigation Measure NOI-2**, project construction activities using a large vibratory roller would not result in excessive groundborne vibration or groundborne noise levels that would damage structures on or near the project

¹ Equipment PPV = Reference PPV * (25/D)ⁿ (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the typical attenuation rate through the ground); formula from Caltrans 2013.

area or result in vibration-related annoyance to building occupants. Construction vibration impacts would be less than significant with mitigation incorporated.

A portion of the project sewer passes through the foundation of a potentially historical structure near manhole 31. In this segment, the project design specifies a CIPP liner to be installed within the existing pipe rather than sewer line replacement. Installation of a CIPP liner would not require vibration-generating equipment and would therefore not result in groundborne vibrations that could damage the potentially historic structure.

Once operational, the project would not be a source of significant groundborne vibrations or groundborne noise. There would be no impact from long-term operational groundborne vibrations or groundborne noise.

Mitigation Measure NOI-2: Limit Vibration-Generating Construction Equipment

Vibration-generating construction equipment shall not generate vibration levels that exceed 0.1 in/sec PPV at historic structures or occupied residences. This shall be demonstrated by ensuring that construction plans and/or contracts specify that large vibratory rollers are to be set back from historic structures or any occupied residence by 50 feet or be used in static mode only (no vibrations) when operating within 50 feet of historic structures or occupied residences. If vibration-generating equipment other than large vibratory rollers are used during construction, project construction plans and/or contracts shall include specifications that demonstrate that vibration limits do not exceed 0.1 in/sec PPV at historic structures or occupied residences.

- c) Expose people residing or working in the project area to excessive noise levels from airports or private airstrips?

No impact. The closest public airport or private airstrip to the project area is the Columbia Airport, approximately 7 miles southeast of the project area (Calaveras County's primary airport is located 7.75± miles from the project area near San Andreas). Per the Tuolumne County Airport Land Use Compatibility Plan, the project area is not within the Columbia Airport Influence Area or the 55 dBA CNEL airport noise contour (Tuolumne County 2003). Therefore, the project would not expose people residing or working in the project area to excessive noise levels from airport operations and there would be no impact.

2.16 POPULATION AND HOUSING

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

2.16.1 Background and Setting

The City of Angels Camp is the only incorporated community in Calaveras County, and the total population in the City is approximately 4,121 persons (California Department of Finance 2018).

2.16.2 Analysis

- 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)?

No impact. The proposed project would improve wastewater delivery to allow the City's existing sewer treatment plant to realize its existing design capacity in accordance with General Plan 2020 land use and growth projections. No increase in sewer plant capacity that might accommodate unplanned population growth will occur. Therefore, no impact would occur.

- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No impact. The proposed project would not involve any demolition or decommissioning of housing or displace any people or housing. Therefore, no impact would occur.

2.17 PUBLIC SERVICES

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| 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: | | | | |
| a) Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

2.17.1 Background and Setting

The City provides public services to local businesses and residents including fire, police, education, park, and other public services. Public schools in the City limits include: Mark Twain Elementary School and Bret Harte Union High School. CalFire provides additional fire support to the City, and the Calaveras County Sheriff's Department provides additional police protection.

2.17.2 Analysis

- a) Fire protection?
- b) Police protection?
- c) Schools?
- d) Parks?
- e) Other public facilities?

No impact. The proposed project would not increase the City's population or demand for public services during project construction or operation. Therefore, the proposed project would have no impact on public services.

2.18 RECREATION

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|-------------------------------------|-------------------------------------|
| Would the project: | | | | |
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

2.18.1 Background and Setting

The City's location in the Sierra Nevada Foothills provides abundant access to outdoor recreational opportunities. The City is located approximately 11 miles west of the Stanislaus National Forest and 4 miles north of New Melones Lake. There are three parks and one golf course within the City. The project area and general surrounding area consists primarily of residential land uses with some commercial, industrial, and public designated land. The sewer line to be replaced runs beneath Tryon Park, one of the three parks within City limits.

2.18.2 Analysis

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

Less than significant impact. The proposed project would not increase population within the City. The project would result in the temporary closure of Tryon Park during construction activities. Tryon Park is currently undergoing renovations and provides only minimal picnicking facilities at this time. However, park closure during construction could temporarily increase the use of the two other parks in the City. However, the park closure would be short-term and temporary, and the impact on the other two parks would be minimal, resulting in a less than significant impact.

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

No impact. The proposed project would not include the development or expansion of recreational facilities. Therefore, the proposed project would have no impact.

2.19 TRANSPORTATION

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| Would the project: | | | | |
| a) Conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) For a transportation project, would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(2)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2.19.1 Background and Setting

The proposed project includes upsizing and/or replacing approximately 5,446 linear feet of an existing, deteriorating sewer line. The southern terminus of the proposed project is located east of Angels Creek at manhole 9, which is south of SR 49. The existing sewer line continues northeast, passing through agricultural grazing land east of Angels Creek, until approximately manhole 21. From manhole 21 to the northern terminus of the East Trunk segment (manhole 34), the pipeline is located in close proximity to Angels Creek and passes through the backyards of a few residential properties along the east bank of the creek. The existing sewer line crosses SR 49 and Vallecito Road, continues northbound along Vallecito Road, and passes through Tryon Park along Booster Way. The sewer line continues northwest along Booster Way and crosses Angels Creek and an unnamed tributary to Angels Creek (locally referred to as China Gulch) at Booster Way Bridge to manhole 45.

Construction of the proposed project would require access to manholes in the Caltrans ROW for SR 49 and would require the issuance of an Encroachment Permit from Caltrans. The proposed project would receive all applicable permits prior to commencing construction activities.

2.19.2 Analysis

- a) Conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lands and pedestrian paths?

Less than significant impact with mitigation. The existing sewer line runs underneath portions of SR 49, Vallecito Road, and Booster Way. The proposed project would avoid impacts to SR 49 (i.e., through pipe bursting and CIPP), however, construction activities within or adjacent to the ROW of Vallecito Road and Booster Way could conflict with the City's circulation system during temporary road closures and

detours. **Mitigation Measure TRA-1** would require the preparation of a Traffic Control Plan to ensure continued circulation on all impacted roadways. With the implementation of **Mitigation Measure TRA-1**, the proposed project would have a less than significant impact.

Mitigation Measure TRA-1: Traffic Control Plan

A Traffic Control Plan shall be developed for the proposed project to manage traffic during temporary lane closures. The plan shall be submitted to the Angels Camp Department of Public Works and Police and Fire Departments for review and approval prior to the commencement of construction activities.

- b) For a land use project, would the project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)(1)?

No impact. The proposed project is an infrastructure improvement project and would not involve the development of land, change in land use, or increase vehicle miles traveled during operation of the upgraded sewer line. Therefore, the proposed project would have no impact.

- c) For a transportation project, would the project conflict with or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)(2)?

No impact. The proposed project is not a transportation project. Therefore, the proposed project would have no impact.

- d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No impact. The proposed project does not propose new roadways or reconfiguration of existing roadways. The project would replace an existing sewer line. Therefore, the proposed project would not increase hazards due to a geometric design feature or incompatible use and would have no impact.

- e) Result in inadequate emergency access?

Less than significant impact with mitigation. Construction of the proposed project could temporarily alter emergency access on Vallecito Road and Booster Way. During construction, circulation through these roadways would be maintained through the implementation of the Traffic Control Plan that would be prepared in compliance with Mitigation Measure TRA-1. Operation of the proposed project would have no impact on emergency access. Therefore, the proposed project would have a less than significant impact with implementation of Mitigation Measure TRA-1.

2.20 TRIBAL CULTURAL RESOURCES

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

2.20.1 Background and Setting

Effective July 1, 2015, AB 52 amended CEQA to mandate consultation with California Native American tribes during the CEQA process to determine whether a proposed project may have a significant impact on a tribal cultural resource, and that this consideration be made separately from cultural and paleontological resources. Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies carry out consultation with tribes at the commencement of the CEQA process to identify tribal cultural resources. Furthermore, because a significant effect on a tribal cultural resource is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures. By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and tribal governments, public agencies, and project proponents would have information available to identify and address potential adverse impacts to tribal cultural resources.

The purpose of consultation is to identify Tribal Cultural Resources (TCR) that may be significantly impacted by the proposed project and to allow the City to avoid or mitigate significant impacts prior to project approval and implementation. Section 21074(a) of the PRC defines TCRs, for the purpose of CEQA, as: Sites, features, places, cultural landscapes (geographically defined in terms of the size and

scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

- a) Included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
- b) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
- c) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria A and B also meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as a Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators and can only be identified by a culturally-affiliated tribe, which has been determined under State law to be the subject matter expert for TCRs.

Native American Consultation

Formal invitations to participate in AB 52 consultation on the proposed project was sent by the City to three tribal representatives on June 12, 2019. The representatives included:

- Regina Cuellar, Shingle Springs Band of Miwok Indians
- Debra Grimes, Calaveras Band of Mi-Wuk Indians
- Lawrence Wilson, California Valley Miwok Tribe AKA Sheep Ranch Rancheria of Me-Wuk Indians of California

Daniel Fonseca, Cultural Resource Director of the Shingle Springs Band of Miwok Indians, provided a written response on June 21, 2019. Mr. Fonseca stated that the Tribe is not aware of any known cultural resources within the project area. He added that the Tribe would like to have continued consultation through updates as the project progresses and would like to receive any completed record searches or survey reports associated with the project. Mr. Fonseca also requested that the Tribe be consulted if new information or human remains are found during project implementation.

Debra Grimes, Tribal Cultural Resource Specialist of the Calaveras Band of Mi-Wuk Indians, responded via email on July 10, 2019. Ms. Grimes stated that she would provide a letter and request a site visit of the project area. The City reached out to Ms. Grimes via email to schedule a site visit of the project area. As of January 20, 2020, no follow up letter or email response regarding a site visit was received from the Calaveras Band of Mi-Wuk Indians.

The tribes did not provide any information about TCRs in the project area to the City, thereby concluding AB 52 consultation. AB 52 consultation correspondence between the City and the tribes is presented in Appendix D.

2.20.2 Analysis

- a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?
 - 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?

Less than significant with mitigation. Although no evidence has been provided by the Tribes that TCRs are present in the project area and the thresholds under PRC Section 21074(a)(1) have not been met, the City acknowledges that TCRs may be present within the project area, and, the proposed project could cause a significant impact to unknown TCRs within the project footprint. Accordingly, implementation of **Mitigation Measures TCR-1 and TCR-2** (in addition to **Mitigation Measures CUL-1 through CUL-3**) is required. With the incorporation of these mitigation measures to address unanticipated discoveries to TCRs, the proposed project's potential impacts to unknown TCRs would be less than significant.

Mitigation Measure TCR-1: Accommodate BPPT field visit/monitoring opportunities.

A minimum of 30 days prior to beginning ground disturbing activities, the City shall invite, via e-mail and phone call, members of the Calaveras and Sheep Ranch local Native American Tribes to inspect the project location and identify potentially sensitive cultural areas along the route that may necessitate on-site monitoring by tribal representatives. If tribal representatives do not respond, choose not to perform a field visit prior to initiation of ground disturbance, or fail to attend pre-arranged meetings, the project may begin. If on-site monitoring is requested by tribal representatives in response to the preceding notification and prior to ground disturbance, the City will notify representatives of the project schedule in advance of commencing ground disturbance so that they may be present to monitor sensitive areas. Compensation by the City for tribal monitoring is neither offered nor implied, and the City must be indemnified of any tribal representatives present on the project site during soil disturbing activities. It is anticipated that potential monitoring will involve only trenching and excavation activities but will exclude those elements of CIPP and pipe bursting activities not involving excavation or trenching.

Mitigation Measure TCR-2: Avoid and minimize impacts to previously unknown Tribal Cultural Resources.

If potential Tribal Cultural Resources or human remains are discovered by Native American representatives or monitors (see MM TCR-1), qualified cultural resources specialists or other project personnel during trenching or excavation, then work shall cease in the immediate vicinity of the find (based on the apparent distribution of cultural resources), whether or not a Native American monitor from an interested Native American tribe is present. The City shall

immediately notify the project's qualified archaeologist and a representative of the local Mi-Wuk tribe to consult on the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations and actions taken (or not taken) will be documented in the project record. If the discovery includes human remains, the procedures in Mitigation Measure CUL-3 shall be implemented.

2.21 UTILITIES AND SERVICE SYSTEMS

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

2.21.1 Background and Setting

The proposed project includes upsizing and/or replacing a total of approximately 5,446 linear feet of an existing, deteriorating sewer line. Project construction would generate waste from the demolition of the existing clay pipe. No solid waste would be generated during project operation.

The City provides water, sewer, and storm water drainage services to residents and businesses.

Gas and electric services are provided by Pacific Gas & Electric (PG&E), UWPA, Campora Propane Services, and J.S. West Propane.

Cal-Waste contracts with the City for solid waste pick-up. Cal-Waste provides curbside pickup of household garbage and recycling for residents in the City. Cal-Waste also provides recycling services for businesses, including pick-up of recyclables onsite.

2.21.2 Analysis

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

No impact. The proposed project includes upsizing and/or replacing an existing, deteriorating sewer line in nearly the identical location, and would not require or result in the relocation or construction of new or expanded utility facilities. Therefore, the proposed project would have no impact.

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

Less than significant impact. Operation of the proposed project would have zero demand for water. Water may be used during project construction for dust suppression; however, the water use during project construction would be short-term and minimal, and impacts would be less than significant.

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

No impact. The proposed project would upsize and/or replace an existing, deteriorating sewer line and would not induce a demand for additional wastewater treatment. The proposed project will improve system delivery to the existing wastewater treatment plant and would result in no net increase in water or wastewater connections. Additionally, temporary disruptions to wastewater services during project construction are not anticipated. The sewer line would be replaced or repaired in short segments, and the construction contractor would block the "upstream" and "downstream" manholes at the replacement locations and by-pass the replacement area utilizing a pumping system. Therefore, no impacts related to water or wastewater service or treatment area are anticipated, and no mitigation would be necessary.

- d) Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure?
- e) Negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?
- f) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than significant impact. Project construction would generate waste from the demolition of the existing sewer line, but no solid waste would be generated during project operation. The Rock Creek Solid Waste Facility is located approximately 22 miles west of the project area and accepts construction and demolition debris. The facility has a remaining capacity of 6,624,226 cubic yards, and the anticipated cease operation date for the landfill is approximately September 2035 (CalRecycle 2019). Therefore, the Rock Creek Solid Waste Facility has sufficient remaining capacity to accommodate the construction and demolition debris that would be generated from project construction. The proposed project would not generate solid waste in excess demand of State or local standards, negatively impact the provision of solid waste services, or conflict with federal, state, and local management and reduction statutes. Therefore, impacts would be less than significant for questions d), e), and f).

2.22 WILDFIRE

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

2.22.1 Background and Setting

The majority of the sewer line to be replaced is located within a Local Responsibility Area (LRA) for fire protection, and from approximately manhole 15A to manhole 19, the proposed project is within a Very High Fire Hazard Severity Zone (VHFHSZ). The southernmost extent of the sewer line (approximately manhole 9 to manhole 15A) is located in a State Responsibility Area (SRA) that is also designated a VHFHSZ (CAL FIRE 2019). The sewer line runs through vegetated areas adjacent to Angels Creek, and elevations along the existing sewer line range from 1,328 feet amsl to 1,420 feet amsl with up to 5 percent slopes.

Local Regulations

Section 7 (Public Facilities and Services) of the City's 2020 General Plan addresses fire services within the City. This section describes the fire services that are provided to the City along with details on the emergency response equipment and funding for fire protection services (City 2009).

2.22.2 Analysis

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than significant impact with mitigation. As discussed in Section 2.17, Transportation, construction of the proposed project could temporarily alter emergency access on Vallecito Road and Booster Way.

During construction, circulation through these roadways would be maintained through the implementation of the Traffic Control Plan that would be prepared in compliance with Mitigation Measure TRA-1. Operation of the proposed project would have no impact on an emergency response or evacuation plan. Therefore, the proposed project would have a less than significant impact with implementation of Mitigation Measure TRA-1.

- 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?

No impact. The proposed project would not exacerbate wildfire risks as the project involves the replacement of an existing, primarily subterranean sewer line. Therefore, the proposed project would have no impact.

- 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?

No impact. The proposed project includes upsizing and/or replacing a total of approximately 5,446 linear feet of an existing, deteriorating sewer line. During construction, the proposed project would require vegetation removal and trenching at various locations for the areas of the sewer line that are planned to be repaired using the remove-and-replace and pipe bursting methods. Removal of vegetation and trenching during construction and operation of the primarily subterranean sewer line would not exacerbate fire risk. Therefore, there would be no impact.

- 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?

No impact. The proposed project is an infrastructure improvement project and would not expose people or structures to flooding or landslides. Additionally, existing site conditions would not be altered in any way that could expose people or structures to significant risks. Therefore, the proposed project would have no impact.

2.23 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2.23.1 Background and Setting

2.23.2 Analysis

- 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?

Less than significant impact with mitigation. As detailed in this IS, the proposed project would not have a significant impact on the environment and would not result in any of the impacts requiring a mandatory finding of significance provided that the mitigation measures identified herein are properly implemented and maintained as described in the Biological, Cultural, Geology and Soils, and Tribal Cultural Resources sections of this IS. The mitigation monitoring and reporting plan and its identified mitigation measures as identified herein applicable to Biological, Cultural, Geology and Soils, and Tribal Cultural Resources, if properly implemented and maintained, would reduce the identified potential impacts to those resources to a level of less-than-significant.

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

Less than significant impact. The proposed project is an infrastructure improvement project, and impacts would be short-term and temporary during project construction as there would be no long-term, operational impacts associated with the project. Therefore, the proposed project would not have any cumulatively considerable impacts, and impacts would be less than significant.

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

Less than significant impact with mitigation. As described herein, the proposed project would not result in any substantial adverse effects on human beings either directly or indirectly except for temporary noise increases during project construction. Mitigation Measure NOI-1, which identifies construction noise reduction measures, would reduce potential impacts associated with temporary noise increases to a level of less-than-significant.

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4.0 PREPARERS

The following people contributed to the preparation of this report:

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Clarus Backes, Senior Archaeologist

Stephen Stringer, Senior Biologist

Patrick Martin, Biologist

Martin Rolph, Air Quality/Noise Specialist

Appendix A

Project Site Plans

CITY ENGINEER APPROVAL

CONSULTANT PROJECT MANAGER

REGISTRATION No.

LICENSE Exp. DATE

DATE SIGNED

APPROVED AS TO IMPACT ON CITY FACILITIES AND CONFORMANCE WITH APPLICABLE CITY STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED.

CITY OF ANGELS

DEPARTMENT OF PUBLIC WORKS

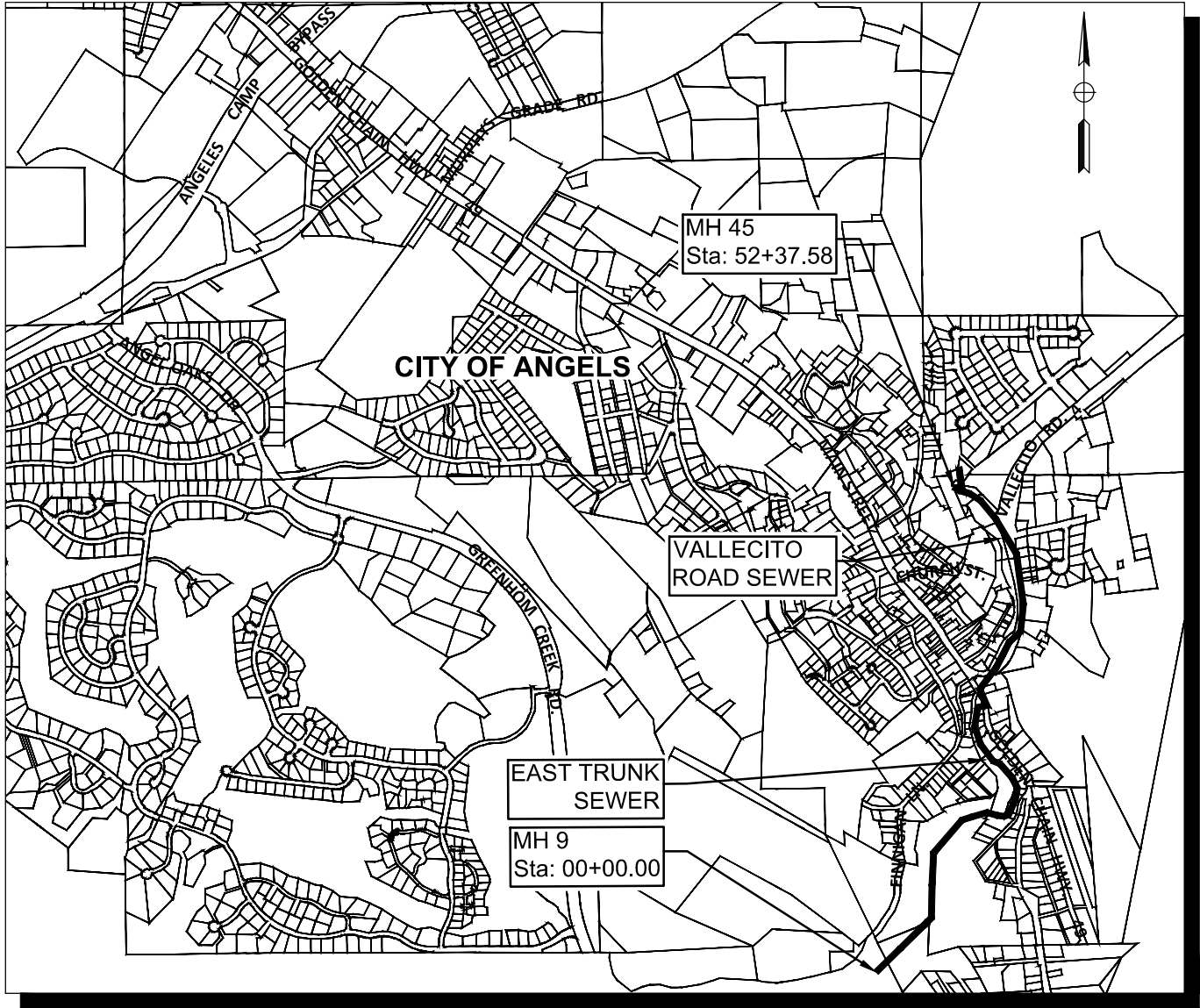
PROJECT PLANS FOR

EAST TRUNK SEWER PHASE 1/

VALLECITO ROAD SEWER PHASE 1

REPLACEMENT PROJECT

TO BE SUPPLEMENTED BY THE CITY OF ANGELS 2010 IMPROVEMENT STANDARDS



SCALE: 1" = 700'

SEPTEMBER 2019

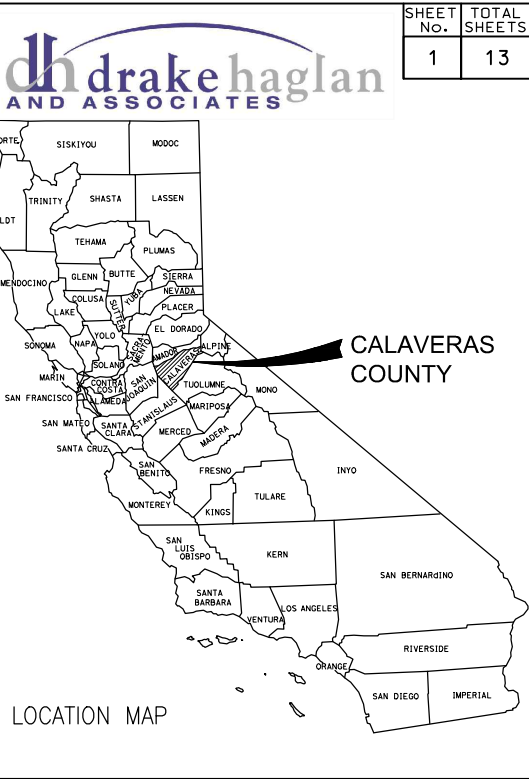
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO CONTRACTORS"

PRELIMINARY

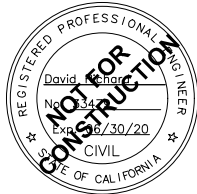
TITLE SHEET

DRAKE HAGLAN & ASSOCIATES
903 W CENTER STREET
MANTECA, CA 95337

CITY OF ANGELS
DEPARTMENT OF PUBLIC WORKS
2990 CENTENNIAL Rd
ANGELS CAMP, CA 95222



| SHEET No. | TOTAL SHEETS |
|-----------|--------------|
| 1 | 13 |



G-1

RELATIVE BORDER SCALE
IS IN INCHES



USERNAME = zoli
DGN FILE = ETVR-R-G1.dwg

UNIT 0000 PROJECT NUMBER & PHASE 0000000001

LAST REVISION DATE PLOTTED = Sep 23, 2019
00-00-00 TIME PLOTTED = 2:44 pm

[illegible]

| | | | | | | |
|---|----------------------------|-----------------------------|------------|--------------|----------|--|
| CITY OF ANGELS - DEPARTMENT OF PUBLIC WORKS | CONSULTANT PROJECT MANAGER | CALCULATED-- DESIGNED BY | Z. ALI | REVISED BY | Z. ALI | |
| EAST TRUNK SEWER PHASE 1--VALLECITO ROAD SEWER PHASE 1 REPLACEMENT PROJECT | D. RICHARD | CHECKED BY | D. RICHARD | DATE REVISED | 09/23/19 | |

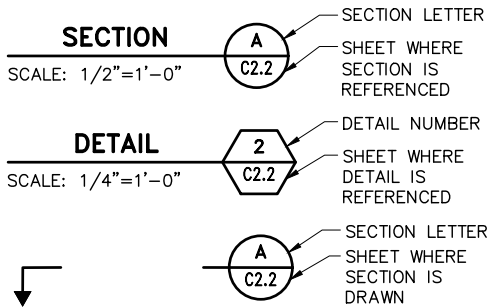
PIPING SYSTEM DESIGNATIONS

| | |
|---------|---------------------------|
| BP | BYPASS |
| DR | DRAIN |
| ELEC, E | ELECTRICAL |
| SD | STORM DRAIN |
| SS | SANITARY SEWER |
| SSFM | SANITARY SEWER FORCE MAIN |
| WTR, W | POTABLE WATER |

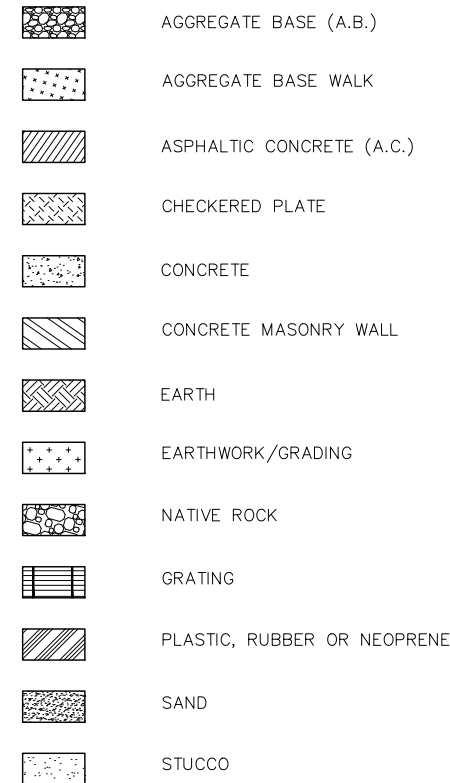
DRAWING LEGEND

| | |
|---|---------|
| G | GENERAL |
| C | CIVIL |

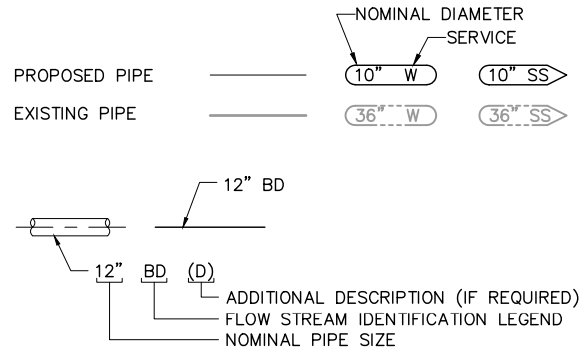
SECTION/DETAIL SYMBOLS



MATERIAL DESIGNATIONS



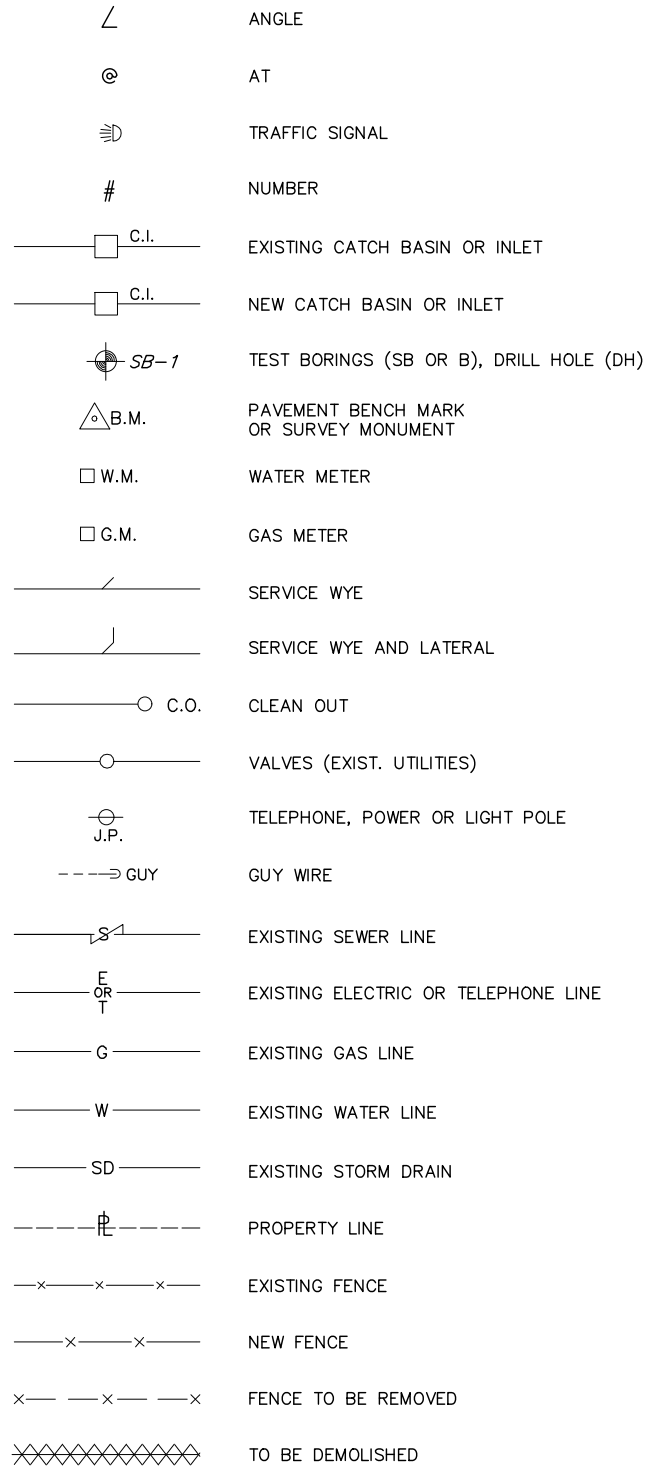
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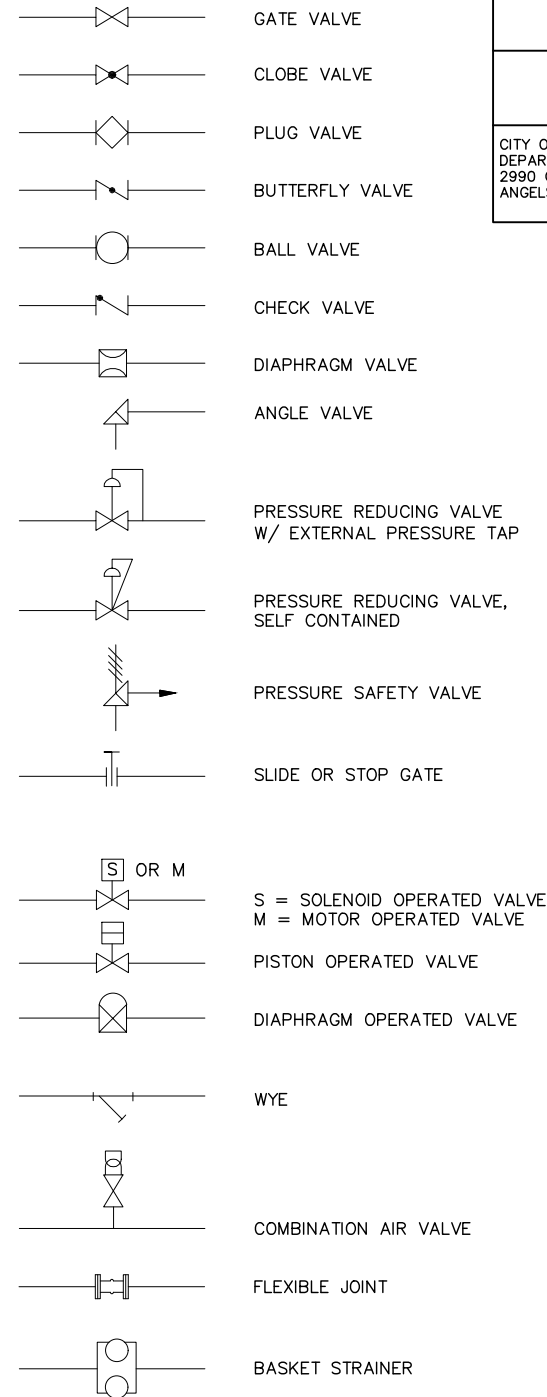
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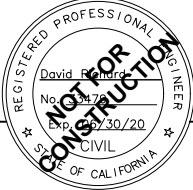
FLOW STREAM IDENTIFICATION LEGEND SHALL BE USED FOR PIPING SCHEDULE SELECTION. ADDITIONAL DESCRIPTION IS USED ONLY TO DESCRIBE THE PROCESS FUNCTION OF THE PIPE. ADDITIONAL DESCRIPTIONS ARE FROM THE STANDARD ABBREVIATIONS DRAWING.

GENERAL SYMBOLS



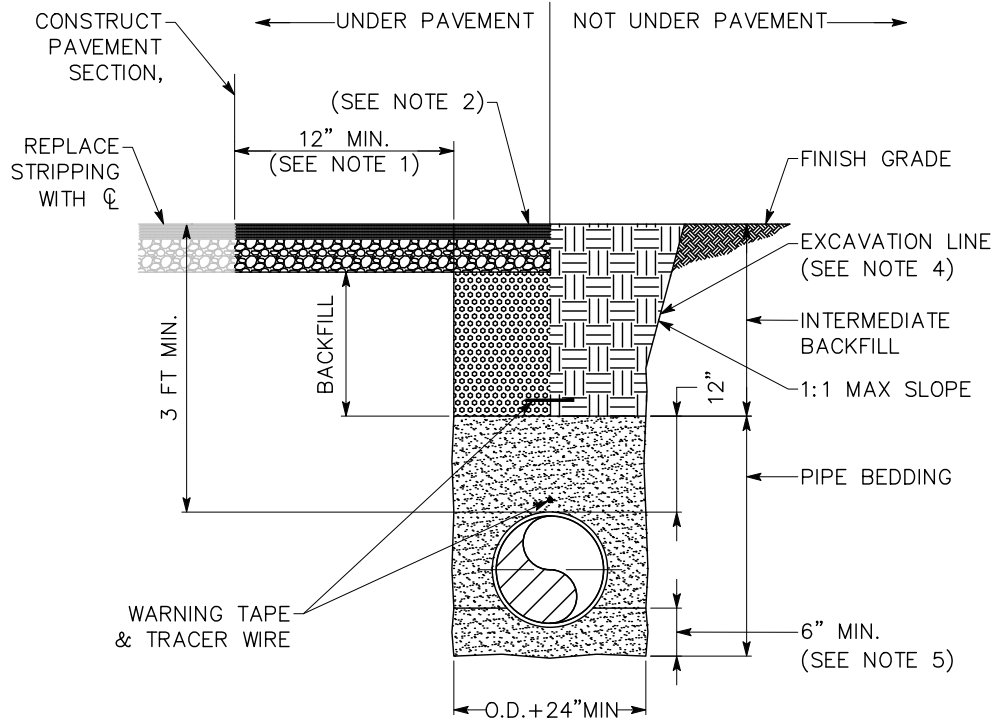
VALVE SYMBOLS



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|---|---|---|-----------|--------------|---|----|
| SHEET No. | TOTAL SHEETS | | | | | |
| 3 | 13 | | | | | |
|  | | | | | | |
| CITY OF ANGELS DEPARTMENT OF PUBLIC WORKS 2990 CENTENNIAL ROAD ANGELS CAMP, CA 95222 | DRAKE HAGLAN & ASSOCIATES 903 W CENTER STREET MANTECA, CA 95337 | | | | | |
| <div style="height: 500px; position: relative;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; pointer-events: none;"> <p>VALVE</p> <p>TAP</p> <p>VALVE,</p> <p>VALVE</p> <p>VALVE</p> <p>VALVE</p> </div> </div> | | | | | | |
| G-3 | | DATE PLOTTED => Sep 23, 2019 TIME PLOTTED => 2:30 pm | | | | |

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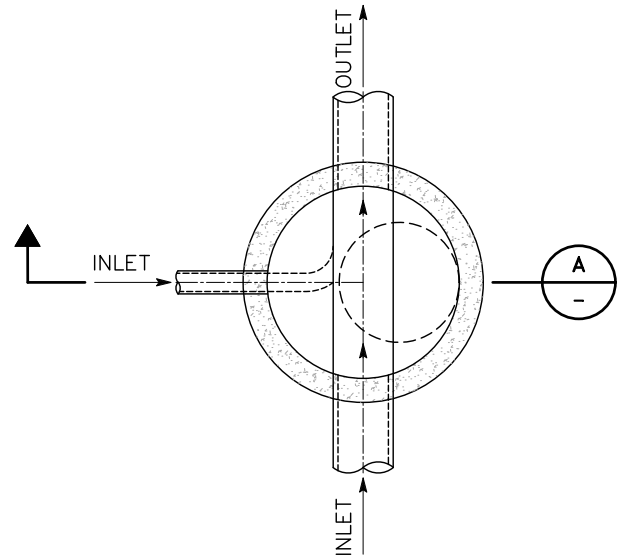
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| CITY OF ANGELS – DEPARTMENT OF PUBLIC WORKS | | CONSULTANT PROJECT MANAGER | | Z. ALI | REVISD BY | Z. ALI | DATE REVISED | 09/23/19 |
| EAST TRUNK SEWER PHASE 1–VALLECITO ROAD SEWER PHASE 1 REPLACEMENT PROJECT | | D. RICHARD | | | | | | |
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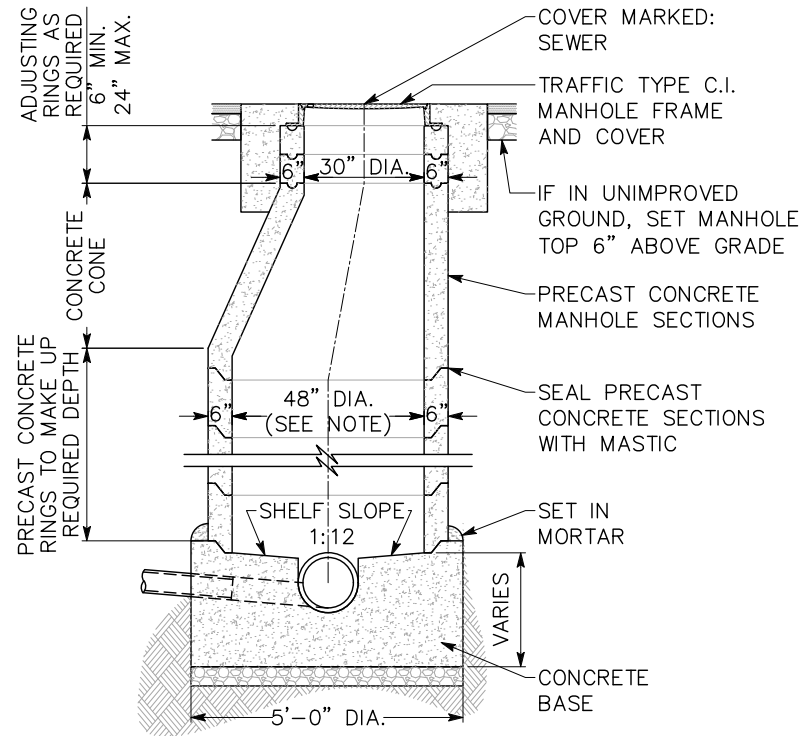
TRENCH DETAIL 1
SCALE: 1"=1'-0"

NOTES:

- EXISTING ASPHALT CONCRETE (AC) MUST BE SAWCUT. SPRAY JOINT WITH ASPHALT EMULSION SS-1.
- IF DISTANCE BETWEEN EDGE OF TRENCH TO GUTTER LIP OR EDGE OF PAVEMENT IS 3 FT OR LESS, THEN REMOVE ALL AC UP TO GUTTER LIP OR EP AND REPAVE.
- TEMPORARY CUTBACK SHALL BE PLACED IMMEDIATELY AFTER BACKFILL AND SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL PERMANENT PAVING IS INSTALLED. PERMANENT PATCH TO BE PLACED NOT EARLIER THAN 14 DAYS AND NO LATER THAN 30 DAYS FOLLOWING BACKFILL OPERATION. PRIOR TO PERMANENT PATCH, EXISTING AC SHALL BE SAWCUT TO A NEAT EDGE AND SHALL BE TACKED PRIOR TO RE-PAVING.
- TRENCHES 5 FEET OR MORE IN DEPTH MUST BE GUARDED BY A SHORING SYSTEM, SLOPING THE GROUND OR OTHER EQUIVALENT MEANS. MAX SLOPE: 1(H) : 1(V) SLOPE ONLY ALLOWED OUTSIDE PAVED AREA.
- WHEN DIRECTED BY THE ENGINEER, PLACE DRAIN ROCK AT 95% COMPACTION BELOW BEDDING MATERIAL FOR A FIRM AND STABLE BASE.
- COMPACTION OF BEDDING AND BACKFILL SHALL BE BY MECHANICAL MEANS ONLY. PONDING AND JETTING ARE PROHIBITED.



STANDARD SANITARY SEWER MANHOLE (SSMH) WITH ECCENTRIC CONE DETAIL 2
SCALE: 1"=2'-0"



SECTION A
SCALE: 1"=2'-0"

NOTES:


- IN MANHOLE WHERE MAIN PIPELINE TURN THROUGH 90° ANGLE, USE LONG RADIUS 90° CHANNEL SECTION.

| SHEET No. | TOTAL SHEETS |
|-----------|--------------|
| 5 | 13 |

CITY OF ANGELS
DEPARTMENT OF PUBLIC WORKS
2990 CENTENNIAL ROAD
ANGELS CAMP, CA 95222

DRAKE HAGLAN & ASSOCIATES
903 W CENTER STREET
MANTECA, CA 95337

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| CITY OF ANGELS -- DEPARTMENT OF PUBLIC WORKS | CONSULTANT PROJECT MANAGER | | CALCULATED-- DESIGNED BY | Z. ALI | REVISD BY | Z. ALI | |
| | D. RICHARD | | | | | | |
| | D. RICHARD | | | | | | |
| EAST TRUNK SEWER PHASE 1--VALLECITO ROAD | | | CHECKED BY | D. RICHARD | DATE REVISED | 09/23/19 | |
| SEWER PHASE 1 REPLACEMENT PROJECT | | | | | | | |



SHEET No.6TOTAL SHEETS13

REGISTERED PROFESSIONAL ENGINEER

David Richard

No. 54320

Exp. 06/30/20

CIVIL

STATE OF CALIFORNIA

NOT FOR CONSTRUCTION

CITY OF ANGELS
DEPARTMENT OF PUBLIC WORKS
2990 CENTENNIAL ROAD
ANGELS CAMP, CA 95222

DRAKE HAGLAN & ASSOCIATES
903 W CENTER STREET
MANTECA, CA 95337




CONSTRUCTION STAGING AND LAYDOWN AREAS, TEMPORARY ACCESS ROUTE

SCALE: 1" = 40'

NOTES:

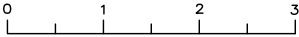
1. CONTRACTOR'S WORK AREAS LIMITED TO PUBLIC RIGHT OF WAY (ROW) AND TEMPORARY CONSTRUCTION EASEMENT ONLY. CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FOR WORK WITHIN PUBLIC ROW.
2. CONTRACTOR WORK AREAS FOR CIPP AND PIPE BURSTING OPERATIONS ARE LIMITED AS SHOWN ON DRAWING G-7.
3. TEMPORARY CONSTRUCTION EASEMENT WIDTH VARIES FROM 25-50 FT FOR SEWER REPLACEMENT WORK, SEE PLAN AND PROFILE DRAWINGS.
4. SEWER BYPASSING REQUIRED PRIOR TO INITIATING ALL CONSTRUCTION WORK, SEE DRAWING G-7.

LEGEND:

 PROPOSED STAGING AREAS AND ACCESS ROAD

USERNAME ==>zali
DGN FILE ==> ETVR-R-G6.dwg

RELATIVE BORDER SCALE
IS IN INCHES



PRELIMINARY

UNIT 0000

CONSTRUCTION STAGING AND LAYDOWN
AREAS--CONSTRUCTION SEQUENCING

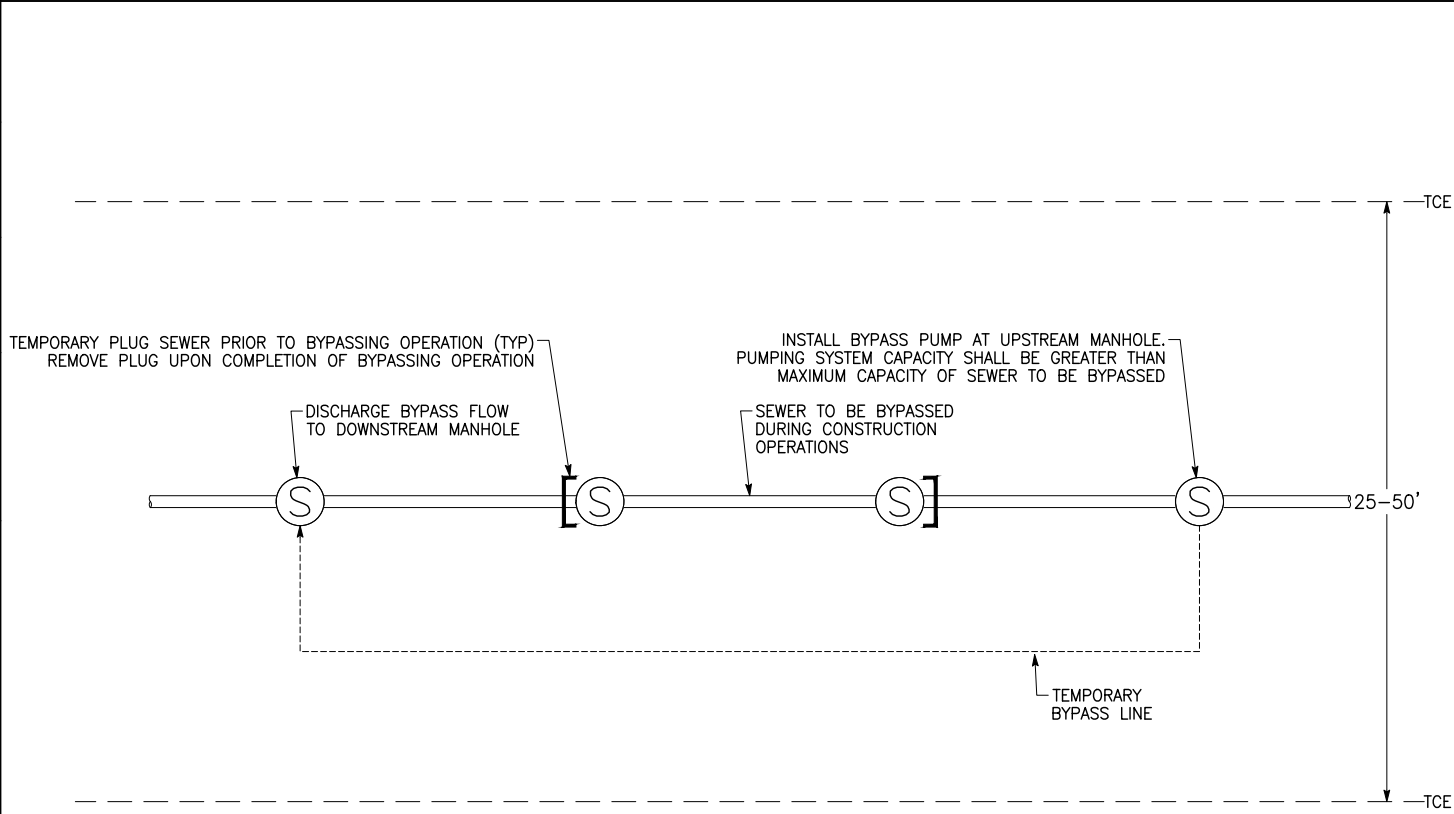
PROJECT NUMBER & PHASE

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G-6

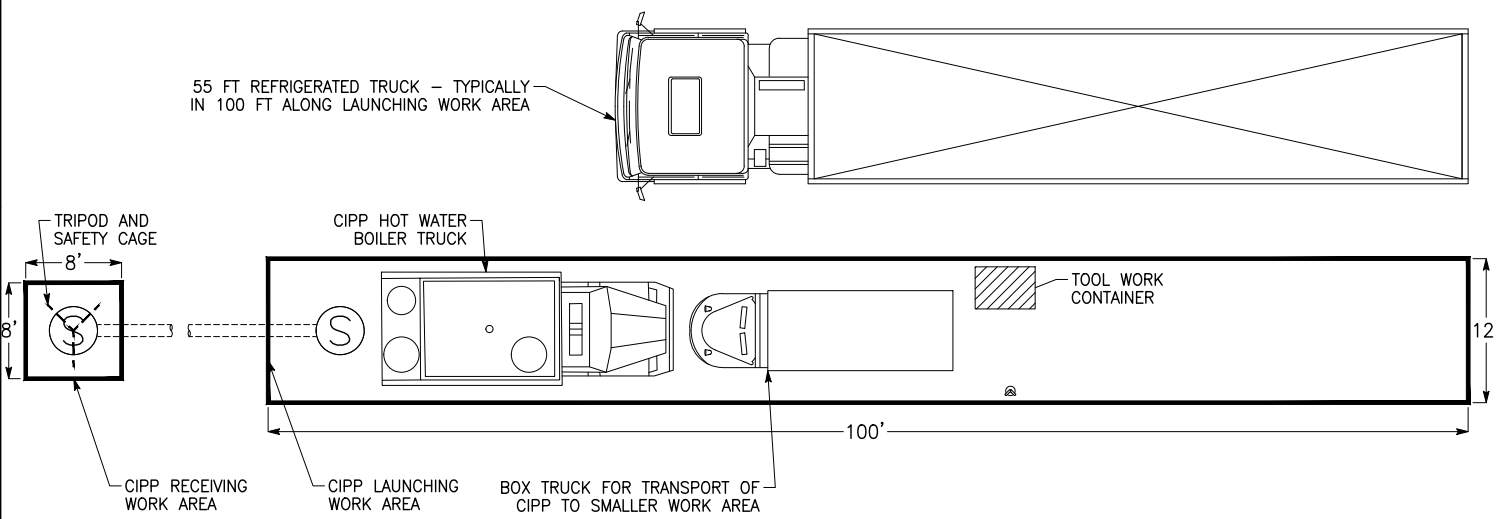
DATE PLOTTED ==> Sep 23, 2019
TIME PLOTTED ==> 2:31 pm

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| CITY OF ANGELS – DEPARTMENT OF PUBLIC WORKS | CONSULTANT PROJECT MANAGER | | CALCULATED– DESIGNED BY | Z. ALI | REVISD BY | Z. ALI | | |
| | D. RICHARD | | | | | | | |
| EAST TRUNK SEWER PHASE 1–VALLECITO ROAD SEWER PHASE 1 REPLACEMENT PROJECT | | | CHECKED BY | D. RICHARD | DATE REVISED | 09/23/19 | | |



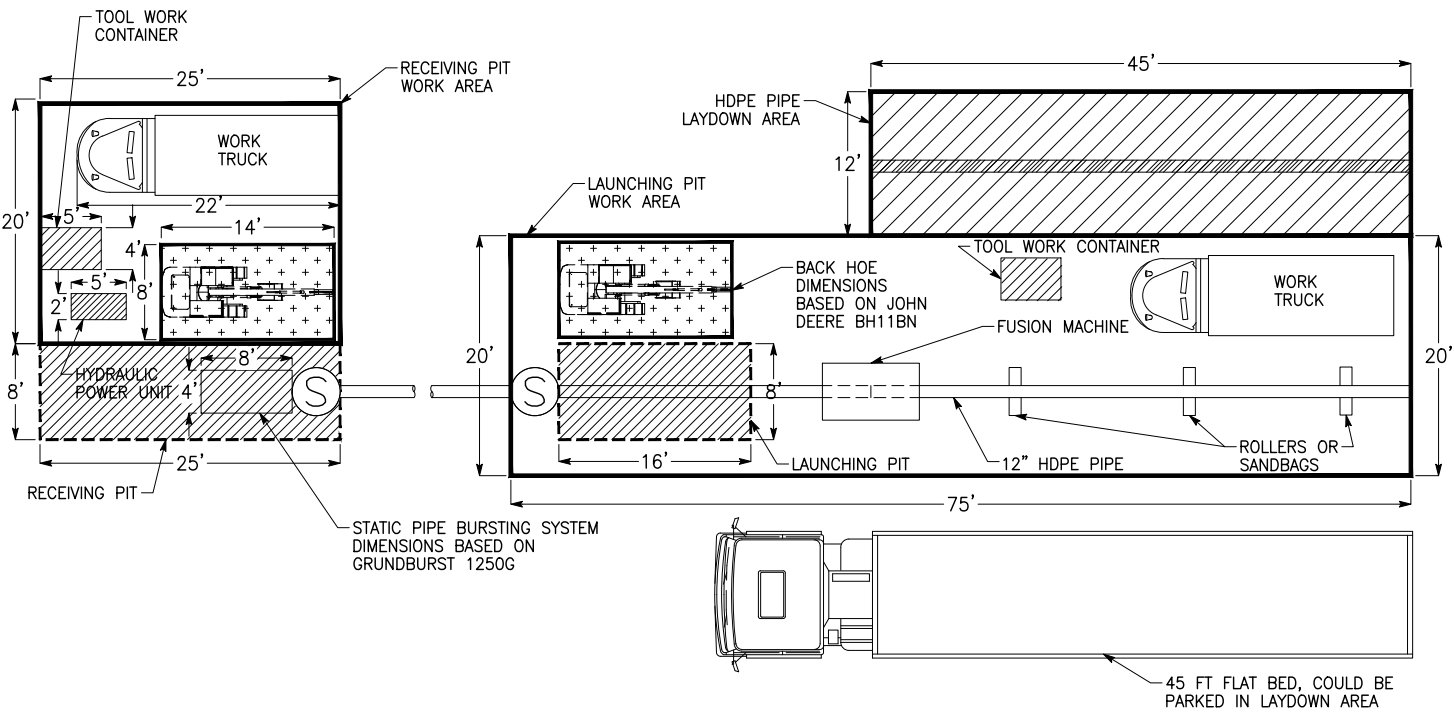
SEWER BYPASSING REQUIREMENTS

SCALE: 1"=8'-0"



CURED IN PLACE CONSTRUCTION AREA LIMITATIONS

SCALE: 1"=8'-0"



PIPE BURSTING CONSTRUCTION AREA LIMITATIONS

SCALE: 1"=8'-0"

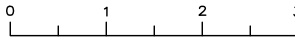


PRELIMINARY

CONSTRUCTION STAGING AND LAYDOWN
AREAS--CONSTRUCTION SEQUENCING

USERNAME ==>zali
DGN FILE ==> ETVR--R--G7.dwg

RELATIVE BORDER SCALE
IS IN INCHES

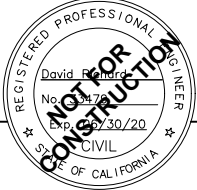


UNIT 0000

PROJECT NUMBER & PHASE

00000000001

drake haglan
AND ASSOCIATES



CITY OF ANGELS
DEPARTMENT OF PUBLIC WORKS
2990 CENTENNIAL ROAD
ANGELS CAMP, CA 95222

DRAKE HAGLAN & ASSOCIATES
903 W CENTER STREET
MANTECA, CA 95337

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| SHEET No. | TOTAL SHEETS |
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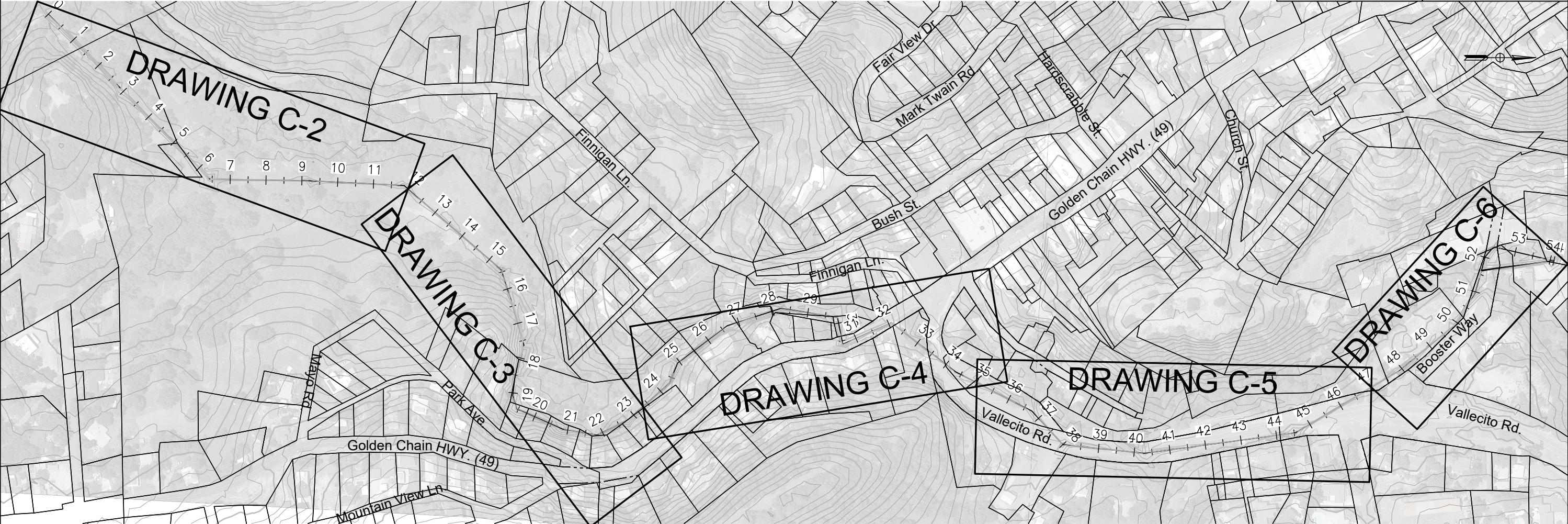
DATE PLOTTED ==> Sep 23, 2019
TIME PLOTTED ==> 2:31 pm

G-7

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| CITY OF ANGELS – DEPARTMENT OF PUBLIC WORKS | CONSULTANT PROJECT MANAGER | | CALCULATED— DESIGNED BY | Z. ALI | REVISED BY | Z. ALI | |
| EAST TRUNK SEWER PHASE 1—VALLECITO ROAD SEWER PHASE 1 REPLACEMENT PROJECT | D. RICHARD | | | | | | |
| | | | CHECKED BY | D. RICHARD | DATE REVISED | 09/23/19 | |



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| CITY OF ANGELS DEPARTMENT OF PUBLIC WORKS 2990 CENTENNIAL ROAD ANGELS CAMP, CA 95222 | DRAKE HAGLAN & ASSOCIATES 903 W CENTER STREET MANTECA, CA 95337 |
|---|---|



INDEX MAP

SCALE: 1" = 40'

SEWER REPLACEMENT SCHEDULE

| SEWER IMPROVEMENTS | LIMITS OF REACH |
|---------------------|-------------------------|
| REMOVE AND REPLACE | MH9 – MH29; MH43 – MH45 |
| CURED IN PLACE PIPE | MH29 – MH36 |
| PIPE BURSTING | MH36 – MH43 |

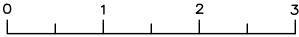
PRELIMINARY

GENERAL LAYOUT (INDEX MAP)

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| UNIT 0000 | PROJECT NUMBER & PHASE | 00000000001 |
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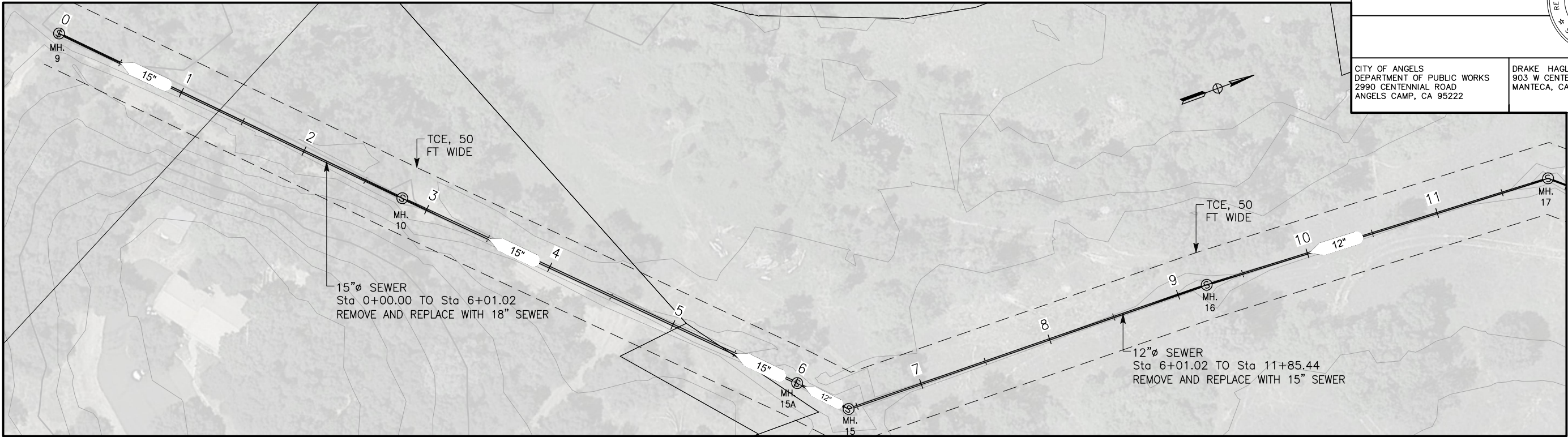
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DGN FILE ==> ETVR-R-C1-6.dwg

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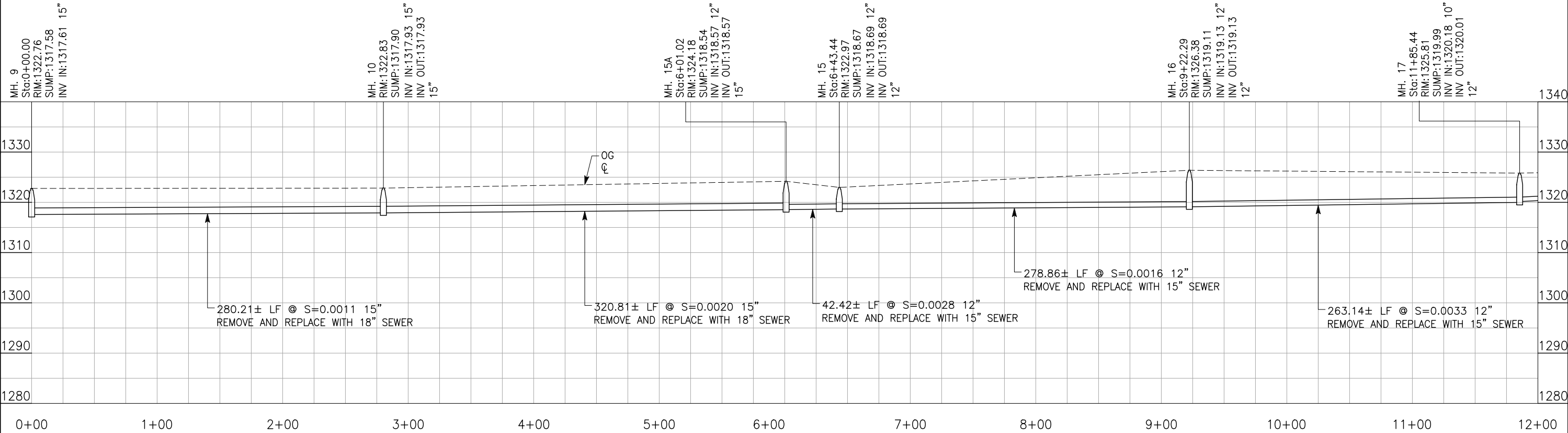


C-1

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| CITY OF ANGELS - DEPARTMENT OF PUBLIC WORKS | CONSULTANT PROJECT MANAGER | | CALCULATED-- DESIGNED BY | Z. ALI | REVISED BY | Z. ALI | |
| EAST TRUNK SEWER PHASE 1--VALLECITO ROAD SEWER PHASE 1 REPLACEMENT PROJECT | D. RICHARD | | | | | | |
| | | | CHECKED BY | D. RICHARD | DATE REVISED | 09/23/19 | |



PLAN
SCALE: 1" = 40'



PROFILE
HORIZ SCALE: 1" = 40'
VERT SCALE: 1" = 10'

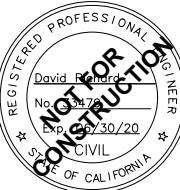
PRELIMINARY

EAST TRUNK SEWER, MH 9 TO MH 17,
PLAN AND PROFILE

C-2
LAST REVISION
00-00-00

DATE PLOTTED => Sep 23, 2019
TIME PLOTTED => 2:31 pm

drake haglan
AND ASSOCIATES



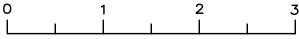
CITY OF ANGELS
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2990 CENTENNIAL ROAD
ANGELS CAMP, CA 95222

DRAKE HAGLAN & ASSOCIATES
903 W CENTER STREET
MANTECA, CA 95337

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| SHEET No. | TOTAL SHEETS |
| 9 | 13 |

USERNAME ==>zali
DGN FILE ==> ETVR-R-C1-6.dwg

RELATIVE BORDER SCALE
IS IN INCHES

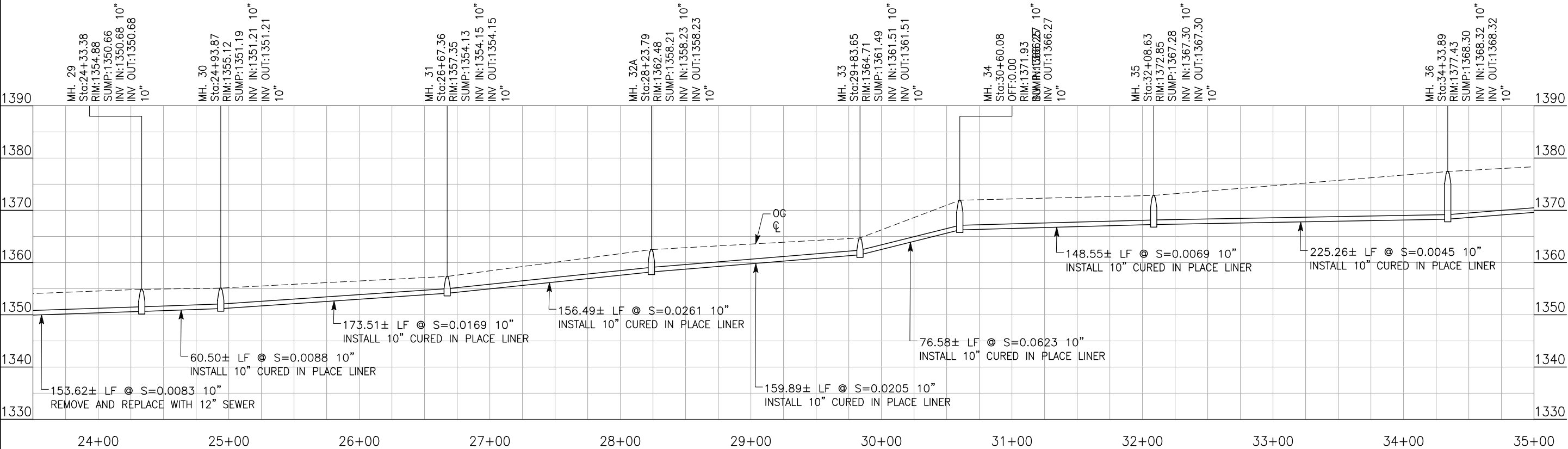
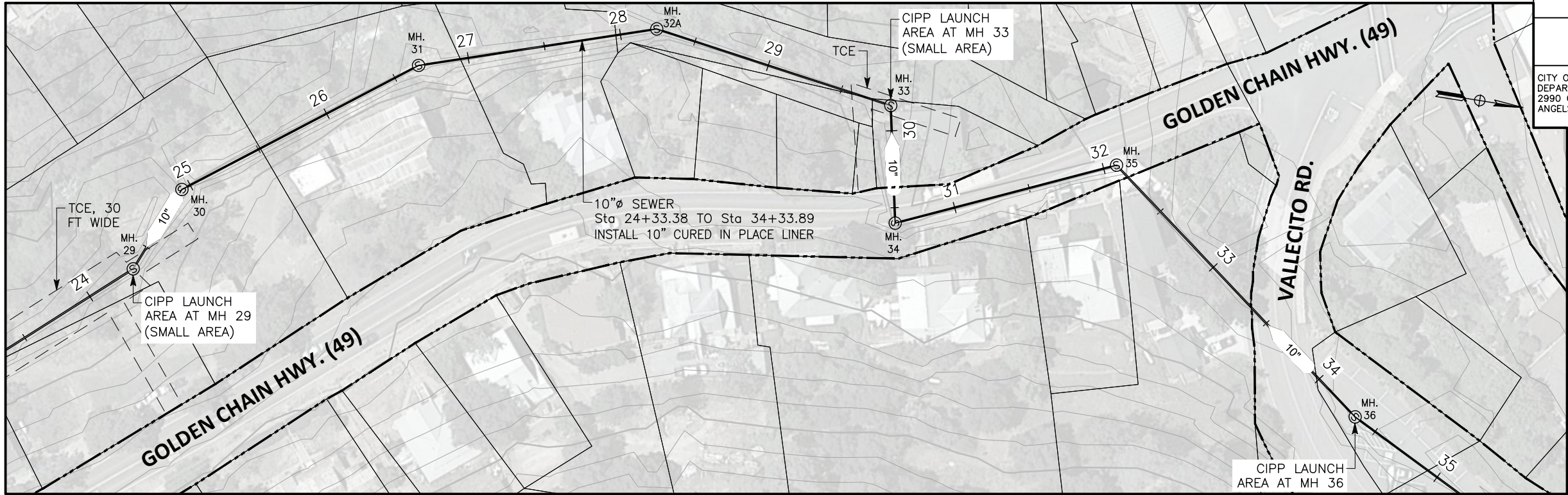


UNIT 0000

PROJECT NUMBER & PHASE

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| CITY OF ANGELS - DEPARTMENT OF PUBLIC WORKS | CONSULTANT PROJECT MANAGER | CALCULATED-- DESIGNED BY | Z. ALI | REVISED BY | Z. ALI | |
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| EAST TRUNK SEWER PHASE 1--VALLECITO ROAD | D. RICHARD | CHECKED BY | D. RICHARD | DATE REVISED | 09/23/19 | |
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| SEWER PHASE 1 REPLACEMENT PROJECT | | | | | | |
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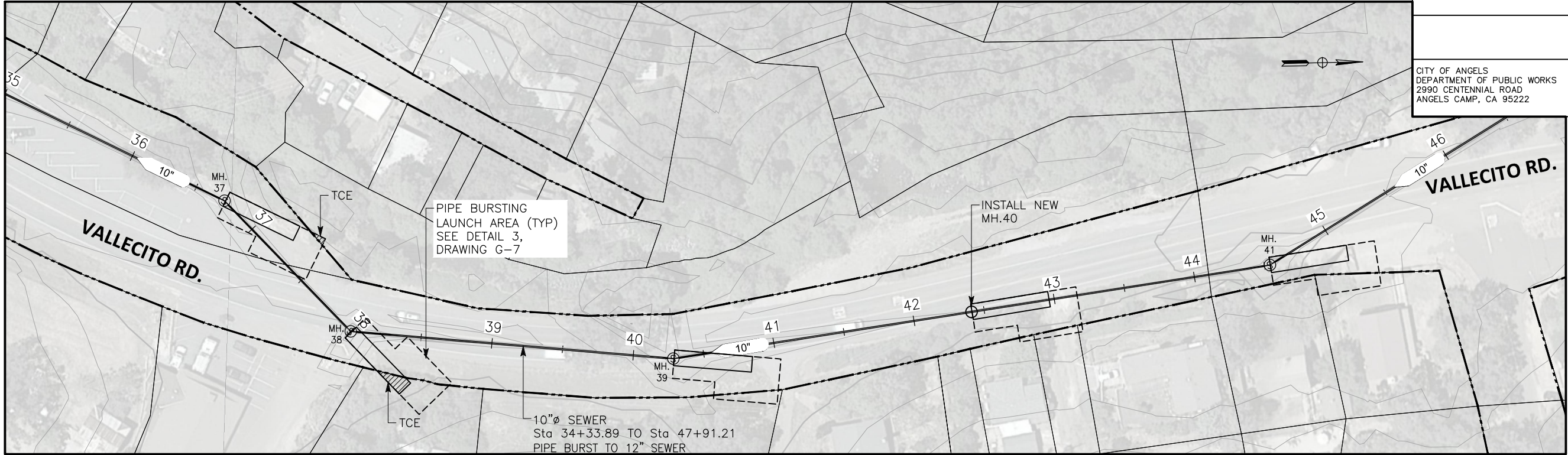
CITY OF ANGELS
DEPARTMENT OF PUBLIC WORKS
2990 CENTENNIAL ROAD
ANGELS CAMP, CA 95222

DRAKE HAGLAN & ASSOCIATES
903 W CENTER STREET
MANTECA, CA 95337

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| CITY OF ANGELS - DEPARTMENT OF PUBLIC WORKS | EAST TRUNK SEWER PHASE 1-VALLECITO ROAD SEWER PHASE 1 REPLACEMENT PROJECT | CONSULTANT PROJECT MANAGER D. RICHARD | CALCULATED- DESIGNED BY CHECKED BY | Z. ALI D. RICHARD | REVISED BY DATE REVISED | Z. ALI 09/23/19 | | |
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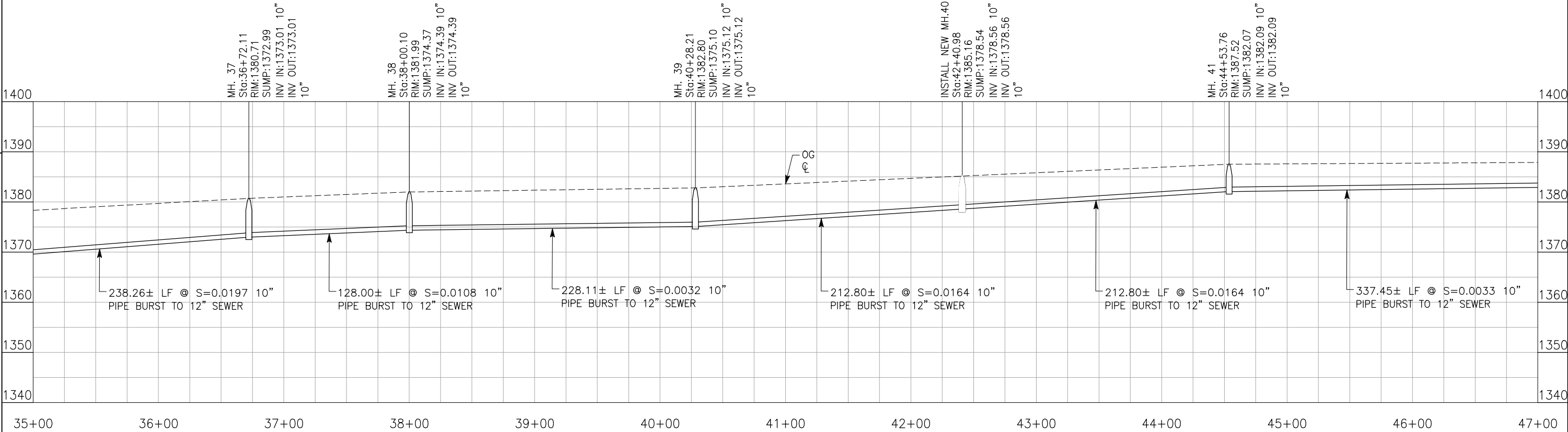
NOTES:

1. MAINTAIN ONE LANE OF TRAFFIC AT ALL TIME ON VALLECITO ROAD.



PLAN

SCALE: 1" = 40'



PROFILE

HORIZ SCALE: 1" = 40'
VERT SCALE: 1" = 10'

PRELIMINARY

VALLECITO ROAD SEWER, MH 37 TO MH 41,
PLAN AND PROFILE

USERNAME ==>zali
DGN FILE ==> ETVR-R-C1-6.dwg

RELATIVE BORDER SCALE
IS IN INCHES



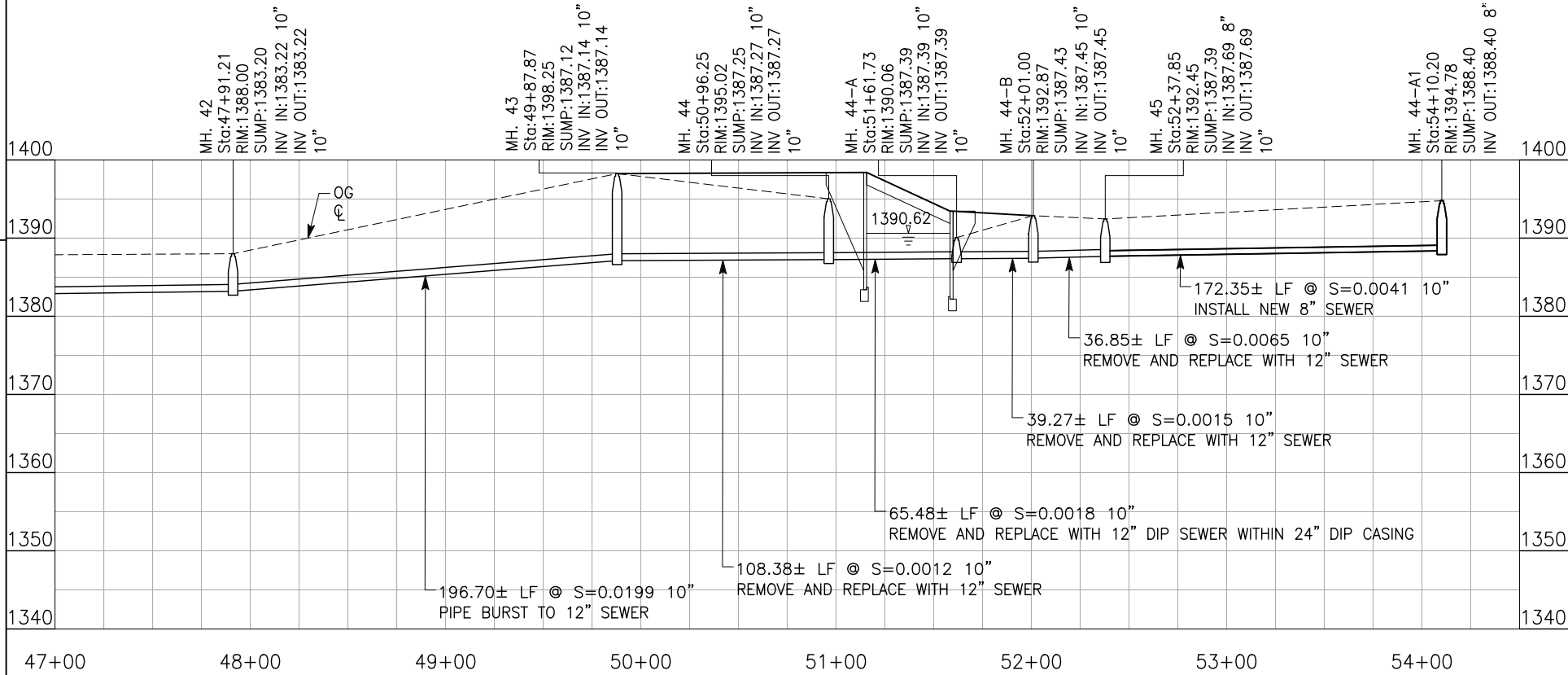
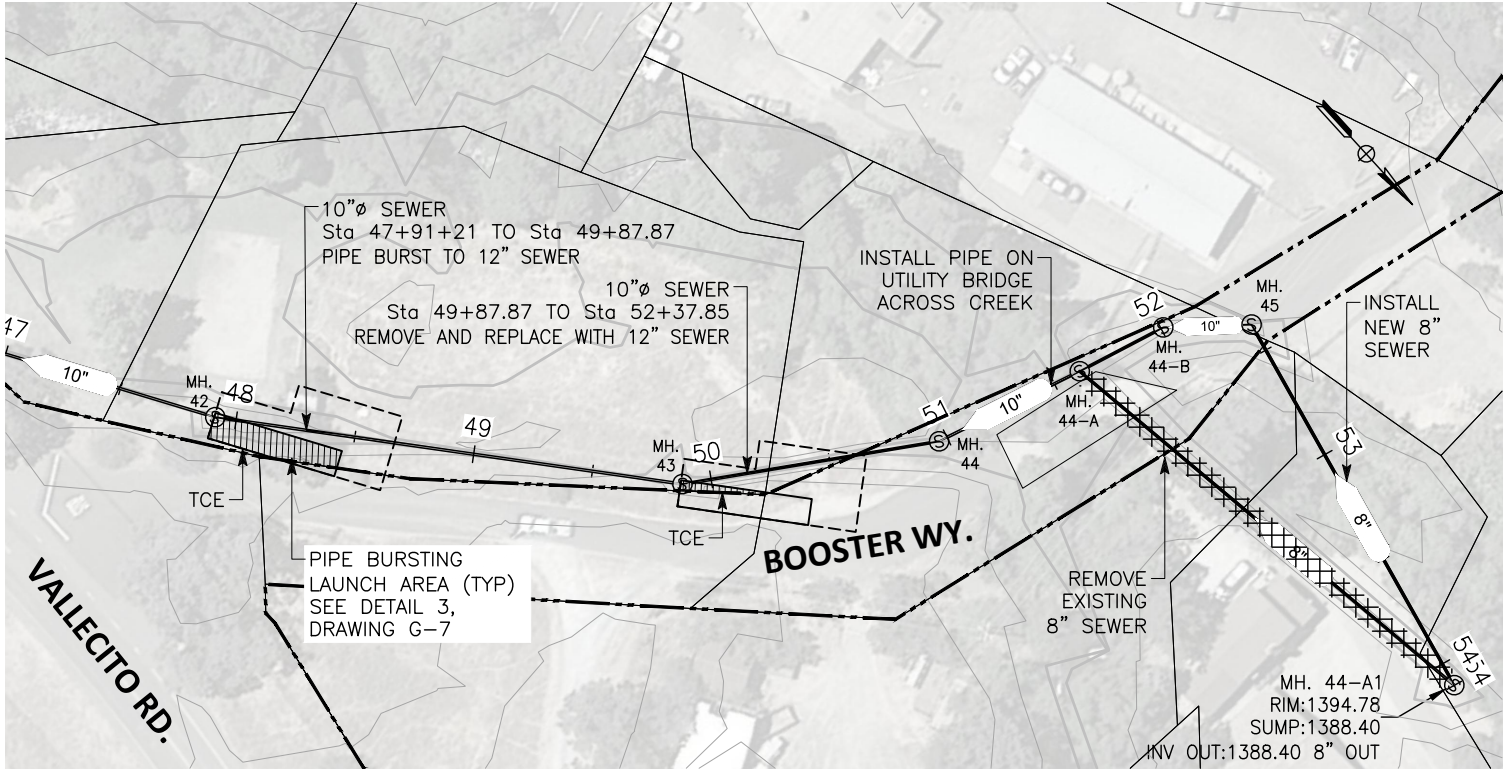
UNIT 0000

PROJECT NUMBER & PHASE

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DATE PLOTTED ==> Sep 23, 2019
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| CITY OF ANGELS - DEPARTMENT OF PUBLIC WORKS | CONSULTANT PROJECT MANAGER | | CALCULATED-- DESIGNED BY | Z. ALI | REVISED BY | Z. ALI |
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| EAST TRUNK SEWER PHASE 1--VALLECITO ROAD | D. RICHARD | | CHECKED BY | D. RICHARD | DATE | 09/23/19 |
| SEWER PHASE 1 REPLACEMENT PROJECT | | | | | | |



CITY OF ANGELS
DEPARTMENT OF PUBLIC WORKS
2990 CENTENNIAL ROAD
ANGELS CAMP, CA 95222

DRAKE HAGLAN & ASSOCIATES
903 W CENTER STREET
MANTECA, CA 95337

PRELIMINARY

VALLECITO ROAD SEWER, MH 42 TO MH 45,
PLAN AND PROFILE

C-6

Appendix B

Air Quality and Greenhouse Gas Emissions Impact Assessment

December 13, 2019

Ms. Amy Augustine, AICP – City Planner
City of Angels
584 South Main Street
Angels Camps, CA 95222

Subject: Air Quality and Greenhouse Gas Emissions Impact Assessment for the Construction and Operation of the Proposed Phase 1 Sewer Line Replacement Project, Angels Camp, CA

Dear Ms. Augustine:

HELIX Environmental Planning, Inc. (HELIX) has assessed air quality and greenhouse gas (GHG) emissions associated with the construction and operation of the proposed Phase 1 Sewer Line Replacement Project (project). The analysis has been prepared to support environmental review under the California Environmental Quality Act (CEQA). In addition, the analysis also includes a General Conformity analysis in accordance with the U.S. Environmental Protection Agency (USEPA) regulations established to meet the mandates of the Federal Clean Air Act (CAA).

PROJECT DESCRIPTION

The proposed project includes upsizing and/or replacing a total of approximately 5,446 linear feet of an existing, deteriorating sewer line. The sewer line to be upsized and/or replaced is described below as two separate segments: (1) the East Trunk segment which encompasses the southern portion of the proposed project and (2) the Vallecito Road segment which encompasses the northern portion of the proposed project. An aerial view of the proposed project segments and surrounding area is depicted on Figure 3 below.

Construction methods to upsize and/or replace the existing sewer line include the following:

- Remove and replace. The traditional dig-up-and-replace method would require excavating a long, deep trench or trenches to remove the old pipe and install new pipe in its place;
- Pipe bursting. A pipe replacement method involving bursting the existing pipe through brittle fracture and pulling a new pipe of the same or larger size through the old fractured pipe from within;
- Cured-in-place pipe (CIPP) liner. A trenchless pipe rehabilitation method that involves inserting and running a felt lining into a pre-existing pipe that is the subject of repair. Resin within the liner is then exposed to a curing element to make it attach to the inner walls of the pipe, and once fully cured, the lining acts as a new pipeline;

- New pipe installation.

Pipe sizes along the existing sewer line vary between 10 and 15 inches, and the proposed project would upsize the sewer line at various locations to a maximum 18-inch pipe to increase flow capacity. The proposed project would replace most of the existing clay pipes with polyvinyl chloride (PVC) standard dimension ratio (SDR) 35 pipes. See Figure 4 for the proposed project design and construction methods for the project.

East Trunk Segment

The East Trunk segment extends from manhole 9 at the southern terminus of the proposed project to manhole 34 at the northern terminus of the East Trunk segment and would be upsized at various locations throughout the segment. The proposed project would remove and replace the existing sewer line from manhole 9 to manhole 15A and would be upsized from the existing 15-inch pipe to a new 18-inch pipe. From manhole 15A to manhole 17, the existing 12-inch pipeline would be removed and replaced with a new 15-inch pipeline, and from manhole 17 to manhole 29, the existing 10-inch pipeline would be removed and replaced with a new 12-inch pipeline. From manhole 29 to the northern terminus of the East Trunk segment at manhole 34, the existing 10-inch pipeline would not be upsized but a CIPP liner would be inserted to reinforce the existing pipe.

Vallecito Road Segment

The Vallecito Road segment extends from manhole 34 at the southern terminus of the Vallecito Road segment to manhole 44-A1 at the northern terminus of the proposed project and would be upsized at various locations throughout the segment. A CIPP liner would be inserted into the existing 10-inch pipeline from manhole 34 to manhole 36 to reinforce the existing pipe. From manhole 36 to manhole 43, the existing 10-inch pipeline would be upsized to a 12-inch pipeline via pipe bursting, and the existing 10-inch pipeline from manhole 43 to manhole 45 would be removed and replaced with a new 12-inch pipeline. The existing 8-inch sewer line connection from manhole 44-A to manhole 44-A1 would be permanently removed, and a new 10-inch pipeline would be installed to connect manhole 45 to manhole 44-A1 at the northern terminus of the proposed project.

Construction Staging Areas and Equipment

The total size of the proposed staging areas combined is approximately 2.02 acres, and potential impacts from the proposed staging areas have been evaluated as part of this environmental analysis. The locations of the proposed staging areas are depicted on Figure 3.

Anticipated equipment to be used includes: two excavators, two haul trucks, two backhoes, two mini excavators, and two pumps.

Construction Schedule

The City plans to initiate project construction in April 2021 and is anticipated to take 6 months to complete. Temporary disruptions to the sewer line service during project construction are not anticipated. The sewer line would be replaced or repaired in short segments, and the construction

contractor would block the “upstream” and “downstream” manholes at the replacement locations and by-pass the replacement area utilizing a pumping system.

SITE DESCRIPTION

The southern terminus of the proposed project is within the East Trunk segment and is located east of Angels Creek at manhole 9. The existing sewer line continues northeast, passing through agricultural grazing land east of Angels Creek, until approximately manhole 21. From manhole 21 to the northern terminus of the East Trunk segment (manhole 34), the pipeline is located in close proximity to Angels Creek and passes through the backyards of a few residential properties along the east bank of the creek.

The southern terminus of the Vallecito Road segment begins at manhole 34 along State Route (SR) 49. The existing sewer line continues north, curves northbound along Vallecito Road, and passes through Tryon Park along Booster Way. The sewer line continues northwest along Booster Way and crosses Angels Creek and an unnamed tributary to Angels Creek (locally referred to as China Gulch) at Booster Way Bridge to manhole 45. A new 10-inch pipeline would be installed from manhole 45 to manhole 44-A1, which is just west of China Gulch in a rural residential area and would be the northern terminus of the Vallecito Road segment and the proposed project.

BEST MANAGEMENT PRACTICES

The Calavera County Air Pollution Control District (CCAPCD) requires the submittal of a Dust Control Plan to the District for approval prior to any surface disturbance larger than one acre, including clearing of vegetation. The CCAPCD recommend all of the following Best Management Practices (BMPs) be included in the Dust Control Plan (CCAPCD 2014):

1. The applicant shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of project development and construction.
2. All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.
3. All areas with vehicle traffic shall be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.
4. All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads.
5. All land clearing, grading, earth moving, or excavation activities on a project shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 mph.
6. All inactive portions of the development site shall be covered, seeded, or watered until a suitable cover is established. Alternatively, the applicant may apply County-approved non-toxic soil stabilizers (according to manufacturer’s specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours) in accordance with the local grading ordinance.
7. All material transported off-site shall be either sufficiently watered or securely covered to prevent public nuisance, and there must be a minimum of six (6) inches of freeboard in the bed of the transport vehicle.
8. Paved streets adjacent to the project shall be swept or washed at the end of each day, or more frequently if necessary, to remove excessive or visibly raised accumulations of dirt and/or mud which may have resulted from activities at the project site.

9. Prior to final occupancy, the applicant shall re-establish ground cover on the site through seeding and watering in accordance with the local grading ordinance.

AIR QUALITY ANALYSIS

SETTING

The project site is located in the Calaveras County portion of the Mountain Counties Air Basin (MCAB), which encompasses Amador, Calaveras, Mariposa, Nevada, Plumas, Sierra, and Tuolumne Counties, as well as portions of El Dorado and Placer Counties. The CCAPCD is responsible for implementing emissions standards and other requirements of federal and state laws in the Calaveras County portion of the MCAB. Attainment plans for meeting the federal air quality standards are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the USEPA, the federal agency that administers the Federal Clean Air Act of 1970, as amended in 1990.

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The USEPA has established national ambient air quality standards (NAAQS) for several air pollution constituents. As permitted by the Clean Air Act, California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air constituents.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for the ambient air quality standards. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once. The air quality attainment status of the Calaveras County portion of MCAB is shown in Table 1, *Calaveras County Attainment Status*.

Table 1
CALAVERAS COUNTY – ATTAINMENT STATUS

| POLLUTANT | STATE OF CALIFORNIA ATTAINMENT STATUS | FEDERAL ATTAINMENT STATUS |
|---|--|------------------------------|
| Ozone | Nonattainment | Nonattainment (marginal) |
| Coarse Particulate Matter (PM ₁₀) | Nonattainment | Unclassified |
| Fine Particulate Matter (PM _{2.5}) | Unclassified | Attainment/Unclassified |
| Carbon Monoxide | Unclassified | Attainment/Unclassified |
| Nitrogen Dioxide | Attainment | Attainment/Unclassified |
| Lead | Attainment | Attainment/Unclassified |
| Sulfur Dioxide | Attainment | Attainment/Unclassified |
| Sulfates | Attainment | No Federal Standard |
| Hydrogen Sulfide | Unclassified | No Federal Standard |
| Visibility Reducing Particles | Unclassified | No Federal Standard |

Source: CARB 2018; USEPA 2019

The Calaveras County portion of the MCAB is currently in nonattainment for federal and state ozone (O₃) standards and nonattainment for state Coarse Particulate Matter (PM₁₀) standards. Calaveras County has been designated attainment or unclassified (insufficient data to determine status) for all other criteria pollutants.

Ground-level ozone is not emitted directly into the environment but is generated from complex chemical reactions between Reactive Organic Gases (ROGs; also known as VOCs)¹, or non-methane hydrocarbons, and Oxides of Nitrogen (NO_x) that occur in the presence of sunlight. PM₁₀ is generated from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. In addition, PM₁₀ can also be formed through chemical and photochemical reactions in the atmosphere. Anthropogenic ROG, NO_x, and PM₁₀ sources in the County include motor vehicles and other transportation sources, residential wood burning for heating, and open burning of vegetation related to agriculture and wildfire fuel management. However, Calaveras County is mostly rural and sparsely populated, and sources of ROG, NO_x, and PM₁₀ within the County are limited. The County's nonattainment status for ozone and PM₁₀ is primarily due to the transport of pollutants from population centers and intense agriculture activity in California's central valley to the west.

SIGNIFICANCE CRITERIA

CEQA

While the final determination of whether or not a project has a significant effect is within the purview of the lead agency pursuant to CEQA Guidelines Section 15064(b), the CCAPCD has developed thresholds of significance which lead agencies within their jurisdiction can use to evaluate the air pollutant emissions impacts of land use projects recommends that its air pollution thresholds be used to determine the significance of project emissions. These criteria pollutant and precursor thresholds and other assessment recommendations are contained in CCAPCD's *Guideline for Assessing and Mitigating Air Quality Impacts of Land Use Projects* and are discussed under the checklist questions below (CCAPCD 2014). The following potential air quality impacts are based on Appendix G of the State CEQA Guidelines, a significant impact is identified if the project would result in any of the following:

- a) *Conflict with or obstruct implementation of the applicable air quality 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?*

GENERAL CONFORMITY

Because the project may seek Federal funding, General Conformity Regulations may be applicable. The General Conformity Rule of the CAA (40 CFR §§ 51.850-860 and 40 CFR §§ 93.150-160) establishes de minimis levels, which are emissions levels established by the USEPA for criteria air pollutant emissions caused by federally sponsored, approved, or funded activities in areas that do not meet the NAAQS

¹ CARB defines and uses the term ROGs while the USEPA defines and uses the term Volatile Organic Compounds (VOCs). The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

thresholds. The de minimis level established for each pollutant varies by the severity of nonattainment and sets an emission level above which further analysis is required to demonstrate that the proposed activities would not cause or contribute to a violation of a NAAQS for a nonattainment pollutant.

As discussed above, Calaveras is currently classified as a marginal nonattainment area for the national 8-hour ozone standard. For a marginal nonattainment area for ozone the, de minimis levels for the precursors NO_x and VOCs are 100 tons per year.

PROJECT ANALYSIS

CEQA

a) Conflict with or obstruct implementation of the applicable air quality plan?

The CAA requires states in violation of a NAAQS to prepare a SIP containing strategies and control measures to attain the NAAQS. CARB is responsible for creating and periodically updating the SIP for California to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them, including the Calaveras County portion of the MCAB. The USEPA reviews SIPs to determine if they conform to the mandates of the CAA amendments and would achieve air quality goals when implemented.

As discussed in criterion b), below the project's estimated construction emissions would be well below the thresholds established by the CCAPCD. Long-term operation of the project would not result in any increase in emissions compared to existing conditions. Therefore, the project would not conflict with or obstruct implementation of the SIP and the impact would be **less than significant**.

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?

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, the potential for a project's individual emissions to contribute to existing cumulatively significant adverse air quality impacts is evaluated.

CONSTRUCTION EMISSIONS

Project construction is anticipated to start in April 2021 and require approximately 6 months to complete. Per the City, construction of the project would require the use of 2 excavators, 2 backhoes, 2 mini-excavators, 2 pumps, 2 haul trucks, and a water truck. Construction emissions were estimated using the Road Construction Emissions Model (RCEM), Version 9.0.0. The RCEM is a spreadsheet-based model developed by the Sacramento Metropolitan Air Quality Management District (SMAQMD) to evaluate the criteria air pollutant emissions of linear construction projects such as construction of a new roadway, road widening, roadway overpass, levee, or pipeline (SMAQMD 2018a). Model default values were utilized where specific project information was not available. In cases where RCEM default data was not available, including crew size estimates and worker commute distances, the methodology and default data for Calaveras County was taken from the California Emission Estimator Model (CalEEMod), a statewide land use emissions computer model developed by the California Air Resources Board (CARB; 2017a). The RCEM output is included as Attachment A to this letter.

The project's estimated construction emissions are shown below in Table 2, *Project Construction Criteria Pollutant and Precursor Emissions*. The emissions estimates assume: an export of approximately 50 cubic yards per day of vegetation and soil during grubbing and clearing, an export of approximately 25 cubic yards per day of soil, concrete and old sewer pipe during grading/excavation; and an import of approximately 18 cubic yards of aggregate (e.g., sand) per day during sewer line installation. Emissions estimates also assume the implementation of the BMPs, described above.

Table 2
PROJECT CONSTRUCTION CRITERIA POLLUTANT AND PRECURSOR EMISSIONS

| Activity | Emissions (pounds per day) | | | | | |
|--------------------------------|----------------------------|-------------|-----------------|------------------|-------------------|-----------------|
| | ROG | CO | NO _x | PM ₁₀ | PM _{2.5} | SO _x |
| Grubbing/Land Clearing | 0.4 | 4.0 | 4.4 | 1.8 | 0.5 | <0.1 |
| Grading/Excavation | 1.7 | 16.6 | 15.7 | 2.5 | 1.2 | <0.1 |
| Drainage/Utilities/Sub-Grade | 1.7 | 16.6 | 15.7 | 2.5 | 1.2 | <0.1 |
| Paving | 0.7 | 7.3 | 6.7 | 0.4 | 0.4 | <0.1 |
| Maximum Daily Emissions | 1.7 | 16.6 | 15.7 | 2.5 | 1.2 | <0.1 |
| CCAPCD Threshold | 150 | None | 150 | 150 | None | None |
| <i>Threshold exceeded?</i> | <i>No</i> | <i>No</i> | <i>No</i> | <i>No</i> | <i>No</i> | <i>No</i> |

Source: RCEM version 9.0.0; Thresholds – CCAPCD 2014.

As shown in Table 2, the project's construction emissions related to the criteria pollutants for which Calaveras County is designated nonattainment (ROG, NO_x, and PM₁₀) would not exceed the CCAPCD thresholds. Therefore, the project's construction emissions of criteria pollutants and precursors would be less than cumulatively considerable.

OPERATIONAL EMISSIONS

Long-term operation of the project would result in emissions of pollutants from the occasional use of equipment for maintenance. However, the replacement of existing, deteriorating clay sewer line with PVC pipes would be expected to reduce future maintenance requirements and any associated emissions compared to the existing maintenance activities. Therefore, the project's operational emissions of criteria pollutants and precursors would be less than cumulatively considerable.

IMPACT SUMMARY

The project would not 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 during either construction or operation. The impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

DIESEL PARTICULATE MATTER

Construction of the project would result in emissions of diesel particulate matter (DPM) from the use of construction equipment. In 1998, the CARB identified DPM as a toxic air contaminant (TAC) based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. The amount to which the receptors could be exposed, which is a function of

concentration and duration of exposure, is the primary factor used to determine health risk. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities.

The project may require the use of diesel-powered equipment near residences adjacent to the existing sewer line. The total construction period is anticipated to last approximately six months. Due to the linear nature of sewer line construction, the use of heavy diesel-powered equipment during construction near any individual residence would be limited to a few days before progressing on. Due to the variable and sporadic nature of construction activity and the anticipated short construction schedule in any one area, DPM emissions from the project's construction activity would not expose sensitive receptors to substantial pollutant concentrations.

ASBESTOS

Some of the concrete (placed before 1979 when the use of asbestos was phased out) encountered during project construction could contain asbestos, a known carcinogen. Breaking or crushing asbestos bearing concrete could result in the release of respirable asbestos. All concrete encountered during the project construction would be tested for asbestos content. If feasible, asbestos bearing concrete would be abandoned in-place. Federal and state regulations prohibit emissions of asbestos from demolition or construction activities. If removal of asbestos bearing concrete is required, following the identification of friable asbestos, federal and state Occupational and Safety Health Administration (OSHA) regulations require that asbestos-trained and certified abatement personnel perform asbestos abatement and that all asbestos-containing materials removed must be hauled to a licensed receiving facility and disposed of under proper manifest by a transportation company certified to handle asbestos. These regulations specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers and require notice to federal and/or local government agencies, including the CCAPCD, prior to beginning demolition or that could disturb asbestos-containing materials.

Naturally occurring asbestos (NOA) most commonly occurs in ultramafic rock (i.e., igneous and metamorphic rock with low silica content) that has undergone partial or complete alteration to serpentine rock (or serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, is associated with ultramafic rock, particularly near geologic faults. NOA is known to occur in certain areas of Calaveras County; however, based on the Calaveras County General Plan Safety Element, NOA in the County mainly occurs in an ultramafic rock band running from New Melones Reservoir to Pardee Reservoir, east of Copperopolis and Valley Springs, along the fault lines that run through that region, approximately 1 mile west of the project site (County 2016). Therefore, the project site is not located in an area where NOA is expected to be present. In addition, project construction would be subject to Section 93105(d) of the CARB regulation 2002-07-29, *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*, which is incorporated by reference in the CCAPCD Rule 906, *Asbestos Airborne Toxic Control Measure - Asbestos-Containing Serpentine*.

IMPACT SUMMARY

The project would not expose sensitive receptors to substantial pollutant concentrations, including DPM and asbestos, and the impact would be **less than significant**.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Heavy diesel equipment could generate odors during construction activities. The generation of odors during the construction period would be temporary and would tend to be dispersed within a short distance from the active work area. In addition, the replacement of the sewer line could result in some odors from residual raw sewage in the old pipes as they are removed. However, due to the linear nature of a sewer line project, these potential odor emissions would only be located near any individual residence for a few days before work progresses. Once operational, the project would not result in any increase in odors compared to existing conditions. Therefore, due to the short duration of construction activity near any individual residence, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and the impact would be **less than significant**.

GENERAL CONFORMITY

The annual mass emissions of the precursors VOC and NO_x from project construction activities compared to the *de minimis* levels for General Conformity pursuant to the CAA 40 CFR §§ 93.150-160 are shown in Table 3, *Construction Criteria Pollutant and Precursor Emissions General Conformity*.

Table 3
CONSTRUCTION CRITERIA POLLUTANT AND PRECURSOR
EMISSIONS GENERAL CONFORMITY

| Year | Emissions (tons per year) | |
|----------------------------|---------------------------|-----------------|
| | VOC | NO _x |
| 2020 | 0.10 | 0.91 |
| De Minimis Level | 100 | 100 |
| <i>Threshold exceeded?</i> | <i>No</i> | <i>No</i> |

Source: CalEEMod version 2016.3.2; Thresholds USEPA 40 CFR 93 § 153

As shown in Table 3, emissions generated during construction of the project would not exceed the federal *de minimis* levels for VOC or NO_x. No adverse impacts would occur, and no further conformity analysis is required.

GREENHOUSE GAS ANALYSIS

SETTING

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). AB 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states that:

Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to help avert these potential consequences, AB 32 established a State goal of reducing GHG emissions to 1990 levels by the year 2020, which is a reduction of approximately 16 percent from forecasted emission levels, with further reductions to follow. In addition, AB 32 required CARB develop the Climate Change Scoping Plan (Scoping Plan) to help the state achieve the targeted GHG reductions. In 2015, Executive Order (EO) B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. As a follow-up to AB 32 and in response to EO-B-30-15, Senate Bill (SB) 32 was passed by the California legislature in 2016 to codify the EO's California GHG emission reduction target of 40 percent below 1990 levels by 2030. The most recent update to the Scoping Plan was adopted in December 2017 and establishes a proposed framework for California to meet the EO-B-30-15 reduction target (CARB 2017b).

SIGNIFICANCE CRITERIA

Given the relatively small levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

- a) *Generate GHG 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 GHGs?*

There are no established federal, state, or local quantitative thresholds applicable to the project to determine the quantity of GHG emissions that may have a significant effect on the environment. CARB, the SMAQMD, and various cities and agencies have proposed, or adopted on an interim basis, thresholds of significance that require the implementation of GHG emission reduction measures. For the proposed project, the most appropriate screening threshold for determining GHG emissions is the SMAQMD Land Development and Construction Projects GHG Thresholds (SMAQMD 2018b); therefore, a significant impact would occur if the proposed project's construction or operation would exceed the SMAQMD screening threshold of 1,100 metric tons (MT) of carbon dioxide equivalents (CO₂e) per year.

PROJECT ANALYSIS

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

CONSTRUCTION

Construction GHG emission sources include construction equipment exhaust, on-road hauling trucks exhaust, vendor vehicle exhaust, and worker commuting vehicle exhaust. GHG emissions were modeled using the same methodology and assumptions as described in the Air Quality analysis, above.

The estimated construction GHG emissions for the project are shown in Table 4, *Annual GHG Emissions from Project Construction*. To be conservative, all construction emissions are assumed to occur in one calendar year (2020). As shown in Table 4, The project's construction emissions of 155 Metric Tons (MT) of CO₂e would be well below the SMAQMD construction screening threshold of 1,100 MT CO₂e. Therefore, the project's construction period GHG emissions would be less than cumulatively considerable.

Table 4
ANNUAL GHG EMISSIONS FROM PROJECT CONSTRUCTION

| CONSTRUCTION YEAR | EMISSIONS (MT CO ₂ e) |
|----------------------------|-------------------------------------|
| 2020 | 155 |
| SMAQMD Threshold | 1,100 |
| <i>Threshold Exceeded?</i> | <i>No</i> |

Source: RCEM version 9.0.0; Thresholds – SMAQMD 2018b.
MT CO₂e = Metric tons of carbon dioxide equivalents.

OPERATION

Wastewater treatment facilities can be a source of GHGs during decomposition of solids in wastewater (primarily CH₄ and CO₂) and following nitrogen removal processes (primarily N₂O). There would be no anticipated change in net GHG emissions from wastewater treatment in the City resulting from the proposed sewer line replacement and upgrade.

Long-term operation of the project would result in GHG from the occasional use of equipment for maintenance. However, the replacement of existing, deteriorating clay sewer line with PVC pipes would be expected to reduce future maintenance requirements and any associated emissions compared to the existing maintenance activities. Therefore, the project's operational GHG emissions would be less than cumulatively considerable.

IMPACT SUMMARY

The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment during either construction or operation. The impact would be **less than significant**.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed in criteria a), above, the project would not exceed the screening GHG emissions threshold during construction and long-term operation of the project would not result in an increase in GHG emissions compared to existing conditions. In addition, many long-term GHG reduction plans, including the CARB Scoping Plan, estimate future GHG emissions and corresponding reduction targets based on local and statewide growth estimates. The project would not contribute to any future growth in population or employment in the City or State. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The impact would be **less than significant**.

SUMMARY

As described above, construction emissions of criteria pollutants and precursors, with the incorporation of the BMPs above, would be below CCAPCD thresholds and would result in a **less than significant** impact and no mitigation measures are required in regard to air quality. The project construction emissions would also be below the USEPA *de minimis* levels for General Conformity under the CAA. Construction GHG emissions would also be below SMAQMD thresholds and would be **less than significant**. The project would not result in any long-term increases of criteria pollutant or GHGs compared to existing conditions.

Sincerely,

Martin Rolph
Air Quality Specialist

Victor Ortiz
Senior Air Quality Specialist

ATTACHMENTS

Attachment A: RCEM Output

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Attachment A

RCEM Output

Road Construction Emissions Model, Version 9.0.0

| Daily Emission Estimates for -> CIA-01 Sewer Line | | | | | | | | | | | | | | | |
|--|--|---|-----------------|-----------------------|-------------------------|---------------------------|---------------------------------|--------------------------|----------------------------|----------------------------------|------------------|------------------|------------------|------------------|-----------------|
| 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) |
| Grubbing/Land Clearing | | 0.36 | 3.95 | 4.41 | 1.75 | 0.25 | 1.50 | 0.52 | 0.21 | 0.31 | 0.01 | 1,237.01 | 0.15 | 0.12 | 1,275.60 |
| Grading/Excavation | | 1.69 | 16.55 | 15.71 | 2.47 | 0.97 | 1.50 | 1.20 | 0.89 | 0.31 | 0.03 | 2,840.93 | 0.58 | 0.09 | 2,880.98 |
| Drainage/Utilities/Sub-Grade | | 1.69 | 16.55 | 15.71 | 2.47 | 0.97 | 1.50 | 1.20 | 0.89 | 0.31 | 0.03 | 2,840.93 | 0.58 | 0.09 | 2,880.98 |
| Paving | | 0.66 | 7.30 | 6.65 | 0.39 | 0.39 | 0.00 | 0.35 | 0.35 | 0.00 | 0.01 | 1,218.35 | 0.32 | 0.04 | 1,237.25 |
| Maximum (pounds/day) | | 1.69 | 16.55 | 15.71 | 2.47 | 0.97 | 1.50 | 1.20 | 0.89 | 0.31 | 0.03 | 2,840.93 | 0.58 | 0.12 | 2,880.98 |
| Total (tons/construction project) | | 0.10 | 0.96 | 0.91 | 0.15 | 0.06 | 0.09 | 0.07 | 0.05 | 0.02 | 0.00 | 167.99 | 0.03 | 0.01 | 170.51 |
| Notes: Project Start Year -> 2020 | | | | | | | | | | | | | | | |
| Project Length (months) -> 6 | | | | | | | | | | | | | | | |
| Total Project Area (acres) -> 4 | | | | | | | | | | | | | | | |
| 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 | | 50 | 0 | 160 | 0 | 110 | 16 | | | | | | | | |
| Grading/Excavation | | 25 | 0 | 80 | 0 | 220 | 16 | | | | | | | | |
| Drainage/Utilities/Sub-Grade | | 18 | 0 | 80 | 0 | 220 | 16 | | | | | | | | |
| Paving | | 0 | 6 | 0 | 40 | 110 | 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 -> CIA-01 Sewer Line | | | | | | | | | | | | | | | |
| Project Phases | | 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) |
| (Tons for all except CO2e. Metric tonnes for CO2e) | | | | | | | | | | | | | | | |
| Grubbing/Land Clearing | | 0.00 | 0.03 | 0.03 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 8.16 | 0.00 | 0.00 | 7.64 |
| Grading/Excavation | | 0.05 | 0.49 | 0.47 | 0.07 | 0.03 | 0.04 | 0.04 | 0.03 | 0.01 | 0.00 | 84.38 | 0.02 | 0.00 | 77.62 |
| Drainage/Utilities/Sub-Grade | | 0.04 | 0.40 | 0.38 | 0.06 | 0.02 | 0.04 | 0.03 | 0.02 | 0.01 | 0.00 | 68.75 | 0.01 | 0.00 | 63.25 |
| Paving | | 0.00 | 0.04 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.70 | 0.00 | 0.00 | 6.17 |
| Maximum (tons/phase) | | 0.05 | 0.49 | 0.47 | 0.07 | 0.03 | 0.04 | 0.04 | 0.03 | 0.01 | 0.00 | 84.38 | 0.02 | 0.00 | 77.62 |
| Total (tons/construction project) | | 0.10 | 0.96 | 0.91 | 0.15 | 0.06 | 0.09 | 0.07 | 0.05 | 0.02 | 0.00 | 167.99 | 0.03 | 0.01 | 154.68 |
| 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 C

Biological Resources Technical Report

Phase 1 Sewer Line Replacement

Biological Resources Technical Report

Prepared for:

City of Angels

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1 INTRODUCTION

Under contract with the City of Angels Camp (City), HELIX Environmental Planning, Inc. (HELIX) prepared this Biological Resources Technical Report (BTR) in support of considering the project under the California Environmental Quality Act (CEQA). The purpose of the report is to provide the City, responsible agencies, and the public with information regarding the biological resources present in the project site and an assessment of potential project impacts to those resources as well as a description of proposed mitigation measures to reduce any such impacts to below a level of significance.

1.1 PROJECT BACKGROUND

The proposed project includes upsizing and/or replacing approximately 5,446 linear feet of deteriorating sewer line. The sewer line to be replaced begins on an unnamed dirt road approximately 400 feet northeast of the intersection of Booster Way and Bret Harte Drive and ends on a dirt driveway approximately 1,400 feet southeast of the intersection of Gold Cliff Road and Finnigan Lane. The sewer line to be replaced is mostly subterranean aside from two creek crossings at Angels Creek and China Gulch and a few areas where the line runs above or flush with the ground in these two riparian areas. The sewer line to be replaced would cross rural residential properties, public rights of way, Tryon Park, a small portion of the historic downtown area, and dry grazing lands (City of Angels 2011).

The purpose of the proposed project is to provide to existing businesses and residents in the City a safe, responsive, and reliable wastewater collection and treatment system, while allowing for new development to occur and preventing surcharges in the sewer line that could threaten water quality.

2 DESCRIPTION OF THE PROPOSED PROJECT

2.1 PROJECT LOCATION

The proposed project is located in the City of Angels Camp in Calaveras County, in the central Sierra Nevada foothills (**Figure 1 in Attachment A**). The project site is in Sections 33 and 34, T3N, R13E and Section 03, T2N, R13E Mount Diablo Baseline and Meridian, Calaveras County, CA. and is on the “Angels Camp, CA. U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad; **Figure 2 in Attachment A**).

2.2 EXISTING LAND USE

According to the City’s 2020 General Plan land use map, the proposed project would pass through land designated for Single Family Residential, Right-of-Way, Parks and Recreation, Public, Historic Commercial, Community Commercial, and some lands with an unidentified general plan designation (City of Angels 2011). According to the City’s Zoning Map, the proposed project would pass through land zoned for Single Family Residential, Multi-Family Residential, Industrial, Recreation, Public Service, Right of Way, Historic Commercial, and unidentified zoning.

Land uses surrounding the project site observed during the survey included residential properties, state highways, public parking, park and horse pasture (**Figure 3 in Attachment A**). The regional setting of the project site is residential in the old town areas of the small City that is located in the transition zone of the foothills of the Sierra Nevada to the floor of the Central Valley.

2.3 PROJECT DESCRIPTION

The proposed project includes upsizing and/or replacing approximately 5,446 linear feet of deteriorating sewer line. The sewer line to be upsized and/or replaced is described below as two separate segments: (1) the East Trunk segment which encompasses the southern portion of the proposed project and (2) the Vallecito Road segment which encompasses the northern portion of the proposed project. An aerial view of the proposed project segments and surrounding area is depicted on **Figure 3 in Attachment A** and discussed below. See **Figure 4 in Attachment A** for the proposed project design and construction methods for the project.

Construction methods to upsize and/or replace the existing sewer line include the following:

- Remove and replace. The traditional dig-up-and-replace method would require excavating a long, deep trench or trenches to remove the old pipe and install new pipe in its place, except in portions that are above ground;
- Pipe bursting. A pipe replacement method involving bursting the existing pipe through brittle fracture and pulling a new pipe of the same or larger size through the old fractured pipe from within;
- Cured-in-place pipe (CIPP) liner. A trenchless pipe rehabilitation method that involves inserting and running a felt lining into a pre-existing pipe that is the subject of repair. Resin within the liner is then exposed to a curing element to make it attach to the inner walls of the pipe, and once fully cured, the lining acts as a new pipeline;
- New pipe installation.

Pipe sizes along the existing sewer line vary between 10 and 15 inches, and the proposed project would upsize the sewer line at various locations to a maximum of 18-inches to increase flow capacity. The proposed project would replace most of the existing clay pipes with polyvinyl chloride (PVC) standard dimension ratio (SDR) 35 pipes.

East Trunk Segment

The East Trunk segment extends from manhole 9 at the southern terminus of the proposed project to manhole 34 at the northern terminus of the East Trunk segment and would be upsized at various locations throughout the segment. The proposed project would remove and replace the existing sewer line from manhole 9 to manhole 15A and would be upsized from the existing 15-inch pipe to a new 18-inch pipe. From manhole 15A to manhole 17, the existing 12-inch pipeline would be removed and replaced with a new 15-inch pipeline, and from manhole 17 to manhole 29, the existing 10-inch pipeline would be removed and replaced with a new 12-inch pipeline. From manhole 29 to the northern terminus of the East Trunk segment at manhole 34, the existing 10-inch pipeline would not be upsized but a CIPP liner would be inserted to reinforce the existing pipe.

Vallecito Road Segment

The Vallecito Road segment extends from manhole 34 at the southern terminus of the Vallecito Road segment to manhole 44-A1 at the northern terminus of the proposed project and would be upsized at various locations throughout the segment. A CIPP liner would be inserted into the existing 10-inch pipeline from manhole 34 to manhole 36 to reinforce the existing pipe. From manhole 36 to manhole 43, the existing 10-inch pipeline would be upsized to a 12-inch pipeline via pipe bursting, and the existing 10-inch pipeline from manhole 43 to manhole 45 would be removed and replaced with a new 12-inch pipeline. The existing 8-inch sewer line connection from manhole 44-A to manhole 44-A1 would be permanently removed, and a new 10-inch pipeline would be installed to connect manhole 45 to manhole 44-A1 at the northern terminus of the proposed project.

Construction Staging Areas and Equipment

The total size of the proposed staging areas is approximately 2.02 acres, and potential impacts at the proposed staging areas have been evaluated as part of this environmental analysis. The locations of the proposed staging areas are depicted on Figure 3 in Attachment A.

Anticipated equipment to be used includes two excavators, two haul trucks, two backhoes, two mini excavators, and two pumps.

Construction Schedule

The City plans to initiate construction in September 2020 and it is anticipated to take 6 months to complete. Temporary disruptions to the sewer line service during project construction are not anticipated. The sewer line would be replaced or repaired in short segments, and the construction contractor would block the “upstream” and “downstream” manholes at the replacement locations and temporarily by-pass the replacement area utilizing a pumping system.

3 REGULATORY SETTING

Policies, regulations, and plans pertaining to the protection of biological resources on the project site are summarized in the following sections.

3.1 FEDERAL REQUIREMENTS

3.1.1 Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) enforces the provisions stipulated within the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 *et seq.*). Species identified as federally threatened or endangered (50 CFR 17.11, and 17.12) are protected from take, defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed species may be present in the project site and determine whether the proposed project will jeopardize the continued existence of or result in the destruction or adverse modification of critical habitat of such species (16 USC 1536 (a)[3], [4]). Other federal agencies

designate species of concern (species that have the potential to become listed), which are evaluated during environmental review under the National Environmental Protection Act (NEPA) or California Environmental Quality Act (CEQA) although they are not otherwise protected under FESA.

3.2 STATE REQUIREMENTS

3.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050 to 2097) is similar to the FESA. The California Fish and Wildlife Commission is responsible for maintaining lists of threatened and endangered species under CESA. CESA prohibits the take of listed and candidate (petitioned to be listed) species. “Take” under California law means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill (California Fish and Game Code, Section 86). The California Department of Fish and Wildlife (CDFW) can authorize take of a state-listed species under Section 2081 of the California Fish and Game Code if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, funding is ensured to implement and monitor mitigation measures, and CDFW determines that issuance would not jeopardize the continued existence of the species. A CESA permit must be obtained if a project will result in the “take” of listed species, either during construction or over the life of the project. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

3.2.2 California Code of Regulations Title 14 and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 §670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by CDFW to include in the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as “fully protected animals.” These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. CDFW is unable to authorize incidental take of fully protected species unless any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

3.2.3 California Environmental Quality Act

Under the California Environmental Quality Act of 1970 (CEQA; Public Resources Code Section 21000 *et seq.*), lead agencies analyze whether projects would have a substantial adverse effect on a candidate, sensitive, or special-status species (Public Resources Code Section 21001(c)). These “special-status” species generally include those listed under FESA and CESA, and species that are not currently protected by statute or regulation, but would be considered rare, threatened, or endangered under the criteria included CEQA Guidelines Section 15380. Therefore, species that are considered rare are addressed under CEQA regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species

according to rarity; plants ranked as 1A, 1B, 2A and 2B are generally considered special-status species under CEQA.¹

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (*i.e.*, candidate species) would occur.

3.2.4 California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900-1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use (other than changing from one agricultural use to another), which allows CDFW to salvage listed plants that would otherwise be destroyed.

3.2.5 Nesting Birds

California Fish and Game Code Subsections 3503 and 3800 prohibit the possession, take, or needless destruction of birds, their nests, and eggs, and the salvage of dead nongame birds. California Fish and Game Code Subsection 3503.5 protects all birds in the orders of Falconiformes and Strigiformes (birds of prey).

3.2.6 California Food and Agriculture Code Section 403

This section directs the California Department of Food and Agriculture (CDFA) to prevent the introduction and spread of injurious pests including noxious weeds.

CDFA Code Section 7271 designates the CDFA as the lead department in noxious weed management responsible for implementing state laws concerning noxious weeds. Representing a statewide program, noxious weed management laws and regulations are enforced locally in cooperation with the County Agricultural Commissioner.

Under state law, noxious weeds include any species of plant that is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate, which the director, by regulation, designates to be a noxious weed (CDFA Code Section 5004).

3.3 LOCAL PLANS AND POLICIES

Chapter 17.64 of the City of Angels Camp Municipal Code, known as the Oak and Heritage Tree Ordinance, provides for the protection of oak trees and heritage trees in the City. The ordinance

¹ The California Rare Plant Rank system can be found online at < <http://www.cnps.org/cnps/rareplants/ranking.php>>

requires that an oak tree or heritage tree removal permit be obtained from the director prior to the removal of any oak tree or heritage tree located wholly or partially within the City on any undeveloped property. Removal means the physical removal of the tree from the ground or the willful injury, trimming, disfiguring, or other harmful action which leads directly to physical removal or creates such a condition that makes disease likely or results in a significant risk of injury to persons or property. The ordinance defines "Oak tree" as an oak tree with a trunk diameter at breast height (TDBH) of nine inches or more and of a species identified in the guidelines, which is of good or fair quality in terms of health, vigor of growth, and conformity to generally accepted horticultural standards of shape for its species. "Heritage tree" means any tree with TDBH of twenty-four inches or more; which is of good or fair quality in terms of health, vigor of growth, and conformity to generally accepted horticultural standards of shape for its species; and which includes the following species:

| Common Name | Scientific Name |
|--------------------|--|
| Madrone | <i>Arbutus menziesii</i> |
| Manzanita | <i>Arctostaphylos manzanita</i> (value as a mature specimen) |
| Ponderosa Pine | <i>Pinus ponderosa</i> |
| Incense Cedar | <i>Calocedrus decurrens</i> |
| CA Buckeye | <i>Aesculus californica</i> |
| Western Redbud | <i>Cercis occidentalis</i> |
| Arroyo Willow | <i>Salix lasiolepis</i> |

3.4 JURISDICTIONAL WATERS

3.4.1 Federal Requirements

Any person, firm, or agency planning to alter or work in "waters of the U.S.," including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

Waters of the U.S. include navigable waters, tidal waters, interstate waters, tributaries to such waters, and wetlands. Wetlands are defined under the CFR Part 328.3 as those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

Clean Water Act (33 USC 1251-1376). The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other

provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there is no practicable alternative that would have less adverse impacts.

3.4.2 State Requirements

3.4.2.1 Porter-Cologne Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the State Water Resources Control Board (SWRCB) and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

3.4.2.2 California Fish and Game Code Section 1602 – Lake and Streambed Alteration Program

Diversions or obstructions of the natural flow of, or substantial changes or use of material from the bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW, pursuant to Section 1602 of the California Fish and Game Code. The CDFW requires notification prior to commencement of any such activities, and a Streambed Alteration Agreement (SAA) pursuant to Fish and Game Code Sections 1601-1603, if the activity may substantially adversely affect an existing fish and wildlife resource.

4 METHODS

Studies conducted in conjunction with the preparation of this BTR included a desktop evaluation and background research to identify sensitive biological communities and/or special-status species with the potential to occur on or in the vicinity of the project site, as well as biological field surveys to document baseline conditions and special-status species and/or their habitats on the site. These methods are described in the following sections.

4.1 DATABASE AND LITERATURE REVIEW

The most current available lists of special-status species known to occur and/or having the potential to occur in the project region were reviewed to determine their potential to occur on the project site or otherwise be affected by project-related activities.

For the purposes of this analysis, special-status species are defined as those species meeting one or more of the following criteria:

- Listed as Threatened or Endangered under the Federal Endangered Species Act (ESA);
- Listed as Threatened or Endangered under the California Endangered Species Act (CESA);
- Under review for listing under ESA or CESA (Candidate);
- “Fully Protected” under California Fish and Game Code Section 3511, 4700, 5050, or 5515;
- Included on the list of Species of Special Concern (SSC) by the California Department of Fish and Wildlife;
- Included on the Watch List of species that may qualify as SSC by the California Department of Fish and Wildlife, or;
- Having a California Rare Plant Rank (CRPR) of 1A (presumed extinct in California and rare elsewhere), 1B (rare in California and elsewhere), 2A (presumed extinct in California but more common elsewhere), 2B (rare in California but more common elsewhere), or 3 (more information needed).

The following lists were reviewed and are included in **Attachment B**:

- The Sacramento Fish and Wildlife Office list of threatened and endangered species that may occur in the project site and/or may be affected by the project (USFWS 2019a).
- The California Native Plant Society (CNPS) list of special-status plants documented in the “Salt Spring Valley, CA”, “Angels Camp, CA”, “Columbia, CA”, “San Andreas, CA”, “Sonora, CA”, “Calaveritas, CA”, and “New Melones Dam, CA” 7.5-minute quads (CNPS 2019).
- The California Natural Diversity Database (CNDDB; CDFW 2019) list of special-status species documented in the “Salt Spring Valley, CA”, “Angels Camp, CA”, “Columbia, CA”, “San Andreas, CA”, “Sonora, CA”, “Calaveritas, CA”, and “New Melones Dam, CA” 7.5-minute quads.

Attachment C presents the general habitat requirements, status, the potential for the species to occur, and rationale for each species evaluated. Species determined to have no potential to occur in the project site or be otherwise affected by activities in the site were excluded from further evaluation. Species having the potential to occur in the project site and/or be affected by site activities are evaluated in detail in **Section 6** of this BTR.

The USFWS National Wetlands Inventory (USFWS 2019b) was reviewed to determine the presence of previously mapped wetlands and waters in the project area.

4.2 BIOLOGICAL SURVEYS

Biological surveys conducted at the project site by HELIX biologists include a biological reconnaissance survey (habitat mapping, botanical and wildlife inventories), focused surveys for special-status plant species, and jurisdictional delineation fieldwork. A list of plant and animal species observed during the biological surveys is included in **Attachment D**.

4.2.1 General Biological Reconnaissance

HELIX biologists conducted a biological reconnaissance survey of the project site on April 18, 2019. The biological reconnaissance survey included habitat mapping, a bloom season botanical survey, and wildlife inventories. Representative photos of the site are provided in **Attachment E**.

4.2.2 Focused Surveys

HELIX biologists conducted focused botanical surveys of the project site on April 18, 2019. The survey was timed to capture the blooming periods of the special-status plant species in the region. Surveys were conducted on foot and achieved 100 percent visual coverage of the project site.

4.3 INVASIVE SPECIES

Plant species observed in the project site were compared to the list of invasive plants in California maintained by the California Invasive Plant Council (Cal-IPC; Cal-IPC 2006) and the list of noxious weeds maintained by the CDFA (CDFA 2010). Several invasive and noxious weed species listed by Cal-IPC and CDFA occur in the project site, as would be expected due its highly disturbed nature. Invasive and noxious weeds are identified on the plant species observed list in **Attachment D**.

CDFA List “C” species warrant state-endorsed holding action and eradication only when found in a nursery; actions to retard spread outside of nurseries is conducted at the discretion of the commissioner; and warrant rejection only when found in a crop seed for planting or at the discretion of the commissioner. In addition, the Cal-IPC categorizes plants as “high, moderate, or limited,” reflecting the level of each species’ negative ecological impact in California. Each plant on the list received an overall rating of high, moderate, or limited based on the following evaluation criteria:

- High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- Moderate – These species have substantial and apparent, but generally not severe, ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- Limited – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

5 RESULTS: ENVIRONMENTAL SETTING

5.1 EXISTING LAND USE

The project site is situated in an urban area that is characterized by residential and commercial development in a hilly landscape of valley oak woodland and riparian habitats near State Route 49 in the historical gold mining town of Angels Camp. The project site is bounded on all sides by residential and commercial properties. The area is in the “mother lode country” of the western Sierra Nevada and it has a history of disturbance dating to the 1850’s; Angels Camp is a historic mining community. The project site is developed and occurs mostly along established paved roads, except near the southern end which is located in an undeveloped area dominated by oak woodland and nonnative annual grasses which is used to graze livestock.

5.2 CLIMATE

The climate of the project site is Mediterranean, characterized by wet, cool winters and dry, hot summers. The average annual rainfall for the project site is 30.36 inches. The average monthly rainfall in the area for April is 2.68 inches. The area received above average rainfall in the months of February (12.95 inches) and March (5.55 inches as of March 11, 2019) leading up to the survey event and the annual rainfall at the time of the surveys was 34.83 inches or about 115% of normal (NRCS 2019a).

5.3 TOPOGRAPHY

The project site is in the transition between the western foothills of the Sierra Nevada and the floor of the Central Valley. The project area is located along Angels Creek and is located on gentle slopes along the creek. Elevation of the site is approximately 1,375 feet above mean sea level.

5.4 SOILS

Soil types in the project site and vicinity were obtained from the online NRCS soil survey on March 8, 2019. The project site is mapped by NRCS four soil units which are listed below (NRCS 2019b). The mapped soil types in the project site are described in detail below as modified from the online NRCS soil unit descriptions (NRCS 2010). A soil map is included as **Figures 5-6** in **Attachment A**.

7074 – Loafcreek-Bonanza complex, 3 to 15 percent slopes

The Loafcreek-Bonanza complex is comprised of 58 percent Loafcreek and similar soils, 25 percent Bonanza and similar soils and 17 percent minor components. The Loafcreek-Bonanza complex is characterized by well drained soils derived from metavolcanics, and typically occurs on the side slope of hills at elevations of 840 to 1,890 feet amsl. The typical depth to a restrictive layer is 20 to 49 inches, and the depth to the water table is more than 80 inches.

A typical profile of this soil is gravelly loam from a depth of 0 to 17 inches, gravelly clay loam from a depth of 17 to 24 inches and bedrock from a depth of 24 to 79 inches. The frequency of flooding in this soil type is classified as “none” and the frequency of ponding is classified as “none.” Loafcreek-Bonanza complex is not listed as a hydric soil in the national hydric soils list (NRCS 2019b).

7086 – Loafcreek-Gopheridge complex, 15 to 30 percent slopes

The Loafcreek-Gopheridge complex is comprised of 50 percent Loafcreek and similar soils, 25 percent Gopheridge and similar soils and 25 percent minor components. The Loafcreek-Gopheridge complex is characterized by well drained soils derived from metavolcanics, and typically occurs on the side slope of hills at elevations of 850 to 2,300 feet amsl. The typical depth to a restrictive layer is 20 to 49 inches, and the depth to the water table is more than 80 inches.

A typical profile of this soil is loam from a depth of 0 to 20 inches and bedrock from a depth of 20 to 79 inches. The frequency of flooding in this soil type is classified as “none” and the frequency of ponding is classified as “none.” Loafcreek-Gopheridge complex is not listed as a hydric soil in the national hydric soils list (NRCS 2019b).

8110 – Cumulic Humixerepts-Riverwash complex, 0 to 8 percent slopes

The Cumulic Humixerepts-Riverwash complex is comprised of 50 percent Cumulic Humixerepts and similar soils, 30 percent minor components and 20 percent riverwash. The Cumulic Humixerepts-Riverwash complex is characterized by well drained soils derived from mixed alluvium, and typically occurs on the tread of flood-plain steps at elevations of 850 to 3,610 feet amsl. The typical depth to a restrictive layer is more than 80 inches, and the depth to the water table is more than 80 inches.

A typical profile of this soil is loam from a depth of 0 to 10 inches, cobbly sandy loam from a depth of 10 to 25 inches, and extremely cobbly sandy loam from a depth of 25 to 39 inches. The frequency of flooding in this soil type is classified as “occasional” and the frequency of ponding is classified as “none.” This soil is listed as a hydric soil on the national hydric soils list (NRCS 2019b).

9015 – Urban land-Loafcreek-Dunstone complex, 3 to 15 percent slopes

The Urban land-Loafcreek-Dunstone complex is comprised of 50 percent urban land, 30 percent Loafcreek and similar soils, 18 percent Dunstone and similar soils and four percent minor components. The Urban land-Loafcreek-Dunstone complex is characterized by well drained soils derived from metavolcanics, and typically occurs on hills at elevations of 620 to 1,540 feet amsl. The typical depth to a restrictive layer is from 20 to 49 inches, and the depth to the water table is more than 80 inches.

A typical profile of this soil is loam from a depth of 0 to 7 inches, clay loam from a depth of 7 to 15 inches, very paragravelly clay loam from a depth of 15 to 26 inches and bedrock from a depth of 26 to 79 inches. The frequency of flooding in this soil type is classified as “none” and the frequency of ponding is classified as “none.” This soil is listed as a hydric soil on the national hydric soils list (NRCS 2019b).

5.5 HYDROLOGY

The project area is in the Angels Creek Hydrologic Unit (HUC12: 180400100604). The project area receives water from direct precipitation, runoff from the surrounding roads and paved surfaces and flows from the unnamed intermittent stream. Angels Creek is perennial and flows year-round.

Precipitation and urban runoff are the only apparent sources of water for the project site. Because of the hilly topographic relief and flow indicators along the streams, any water entering the project site is expected to continue downslope and flow into Angels Creek and its tributary, China Gulch.

The USFWS National Wetlands Inventory (NWI) online database was reviewed to determine if there are any wetlands or other waters of the U.S. mapped by the USFWS in the project site or vicinity (**Figures 7-8 in Attachment A**). Mapped features in the project site include a freshwater emergent wetland, freshwater forested/shrub wetland, freshwater pond, and riverine. The riverine and freshwater forested/shrub wetland is Angels Creek while the freshwater emergent wetland is China Gulch. Part of the riverine habitat mapped in the northern portion of the project site is part of an enclosed water pipeline. Freshwater pond mapped by NWI is an abandoned public park with a volleyball court and an old swimming pool that may appear to be ponds from aerial imagery, and freshwater pond was not observed in the field.

5.6 GENERAL BIOLOGICAL RESOURCES

5.6.1 Habitats/Land Cover

Biological habitats and land covers present in the project site include developed, valley oak woodland, valley foothill riparian, ruderal/disturbed, annual grassland, and riverine (**Figures 9-10 in Attachment A**). All these habitats with the exception of riverine include an herbaceous understory dominated by non-native species. Habitat nomenclature is generally derived from *A Guide to Wildlife Habitats of California*, (Mayer and Laudenslayer *al.* 1988). Plant names are from *The Jepson Manual, Second Edition* (Baldwin *et al.* 2012).

5.6.1.1 Developed

Developed land includes areas in which structures or landscaping prevent the growth of native or naturalized vegetation. Developed areas include pavement, hardscape, irrigated landscaping, and permanently staged materials or debris. Developed lands in the project site total 1.78 acres and include a park, paved roads and buildings.

5.6.1.2 Valley Oak Woodland

Valley oak woodland is an open to continuous, deciduous woodland dominated by valley oak (*Quercus lobata*). A wide variety of other trees including interior live oak (*Quercus wislizeni*), California black walnut (*Juglans hindsii*), California buckeye (*Aesculus californicus*), and willows (*Salix* spp.) also occur in this community and within the project site. This community grows in deep, rich soils on floodplains and valley floors. Riparian stands are typically on the highest terraces in the floodplain. Shrubs are sparse to common, depending on the canopy cover, and the herbaceous layer is usually grassy (Sawyer *et al.* 2009). This community includes both the Valley Oak Woodland and Great Valley Oak Riparian Forest communities described in Holland (1986). In the southern portion of the project area, although the alignment crosses through valley oak woodland, the understory is predominantly ruderal herbaceous species and the existing alignment is vegetated primarily with non-native weedy grasses and forbs. Valley oak woodland totals 1.58 acres in the project site.

5.6.1.3 Valley Foothill Riparian

Valley foothill riparian habitats are widespread and common throughout California, especially along seasonally or temporarily flowing streams (Sawyer *et al.* 2009). Within the project site this community is characterized by a tree and shrub layer of valley oak as the dominant canopy cover. The subcanopy consists of white alder (*Alnus rhombifolia*), Fremont cottonwood (*Populus fremontii*), narrowleaf willow

(*Salix exigua*) and red willow (*Salix laevigata*). White alder is the dominant subcanopy tree which is situated along the banks of Angels Creek. The shrubby understory consists primarily of Himalayan blackberry (*Rubus armeniacus*) or ornamental vegetation near residential properties. The herbaceous understory is dominated by non-native grasses and forbs as described below in Section 5.6.1.5 for annual grassland. Valley foothill riparian totals 0.56 acre in the project site.

5.6.1.4 Ruderal/Disturbed

Ruderal and disturbed areas have been subject to past or on-going human disturbance but retain a soil substrate. If vegetated, there is no recognizable plant community, and the species assemblage depends on local colonization potential. Ruderal and disturbed areas include weedy open areas where the natural vegetation has been removed. Ruderal and disturbed areas are not described in treatments of plant communities.

Ruderal areas are present in the northern portion of the project area along Vallecito Road and Booster Way (**Figure 9 in Attachment A**). Vegetation in these areas is dominated by annual grasses and forbs such as wild oats (*Avena fatua*), Bermuda grass (*Cynodon dactylon*), soft brome (*Bromus hordeaceus*), yellow star thistle (*Centurea solstitialis*), Indian sweetclover (*Melilotus indicus*), rose clover (*Trifolium hirtum*), common mullein (*Verbascum thapsus*), tree of heaven (*Ailanthus altissimum*), and Himalayan blackberry. Ruderal/disturbed areas total 0.40 acre in the project site.

5.6.1.5 Annual Grassland

Annual grassland occurs in a small portion of the project site south of the State Route 4 and State Route 49 intersection and includes areas dominated by annual herbaceous vegetation grazed by livestock. This annual grassland community is situated as large openings between riparian habitat and valley oak woodland. Within the project site annual grassland is dominated by non-native grasses and forbs such as soft brome (*Bromus hordeaceus*), bulbous blue grass (*Poa bulbosa*), yellow-star thistle (*Centaurea solstitialis*) and ripgut brome (*Bromus diandrus*). Portions of the annual grassland that abut to the valley foothill riparian habitat along Angels Creek is more mesic and supports a mixture of upland annual grasses and wetland species such as field sedge (*Carex praegracilis*), smooth scouring rush (*Equisetum laevigatum*), and California mugwort (*Artemisia douglasiana*). Angels Creek likely floods occasionally during the winter and overtops the bank of the creek. However, evidence of flooding events, such as drift deposits or sediment deposits were not observed during the survey. Additionally, soils did not show redoximorphic features. Annual grassland habitat totals 1.43 acres in the project site.

5.6.1.6 Riverine

A total of 0.06 acre of riverine habitat is present in the project site consisting of Angels Creek and China Gulch. The incised channels of these streams are largely unvegetated except for patches of white alder, tall flatsedge (*Cyperus eragrostis*), sedge (*Carex densa*), and curly dock (*Rumex crispus*) growing along the banks. The streambed is predominately rock boulder with gravel and cobble. During the rainy season, the creeks experiences periods of high flow that scour the channel and prevent the formation of stable soils and plant communities. The creeks likely flow during the dry season and support some deep pools of 3 to 4 feet.

5.6.2 Wildlife

Wildlife observed in the project site include species common in residential areas, such as red-shouldered hawk (*Buteo lineatus*), raccoon (*Procyon lotor*), California scrub jay (*Aphelocoma californica*), turkey vulture (*Cathartes aura*), and Anna's hummingbird (*Calypte anna*). A few waterfowl and shorebirds were observed using the impoundment behind the diversion structure, including mallard (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), wood duck (*Aix sponsa*), and Canada goose (*Branta canadensis*).

5.7 SPECIAL-STATUS SPECIES

Based on species ranges and habitat affinities, a total of seven regionally-occurring special-status species have the potential to occur in the project site (**Table 1**). Those species are discussed in detail in **Section 6**. No special-status species were observed during biological surveys.

Table 1. Special-Status Species with the Potential to Occur in the Project site

| Scientific Name Common Name | Regulatory Status ¹ | Status in the Project site ² |
|--|--------------------------------|--|
| <i>Lavinia symmetricus</i> ssp. 1 San Joaquin roach | --/--/SSC | Not observed during surveys. Habitat is present for this species in Angels Creek and China Gulch. The nearest CNDDDB record for this species is 10 miles south in Woods Creek. |
| <i>Rana boylei</i> Foothill yellow-legged frog | --/CT/SSC | Not observed during surveys. Habitat is present for this species in the wetted portions of Angels Creek and China Gulch. The nearest CNDDDB record for this species is 3.4 miles east in Coyote Creek. A historical CNDDDB occurrence is located 5 miles upstream of the project site in Angels Creek. |
| <i>Rana draytonii</i> California red-legged frog | FT/--/SSC | Not observed during surveys. Habitat is present for this species in Angels Creek and China Gulch, although there are no extant CNDDDB records for this species within 10 miles of the project site. |
| <i>Actinemys marmorata</i> western pond turtle | --/--/SSC | Not observed during surveys. Habitat is present for this species in Angels Creek and China Gulch. No CNDDDB records within 10 miles of the project site. |
| <i>Elanus leucurus</i> white-tailed kite | --/--/FP | Not observed during surveys. No CNDDDB records within 10 miles of the project site. Potential nesting habitat present in oak woodland. |
| <i>Antrozous pallidus</i> pallid bat | --/--/SSC | Not observed during surveys. Habitat is present for this species in bridges, rock walls and buildings. One CNDDDB record for this species in the project site. |
| <i>Lasiurus blossevillii</i> western red bat | --/--/SSC | Not observed during surveys. Habitat is present for this species in trees in woodland and riparian habitat. |

¹Regulatory Status is ESA listing/CESA listing/Other state status. FT=Federal Threatened; ST=State Threatened; FP=Fully Protected; SSC=Species of Special Concern.

²Based on surveys described in Section 4.2 and CNDDDB reported occurrences.

6 RESULTS: EVALUATION OF BIOLOGICAL RESOURCES

6.1 SPECIAL-STATUS SPECIES

6.1.1 Special-status Plants

No special-status plant species were observed in the project site, despite a focused botanical survey conducted during the appropriate blooming season, and none are believed to occur in the project site. The project site does not provide potentially suitable habitat for most of the special-status plant species in the region, which are endemic to vernal pools or other wet habitats, serpentine soils, heavy clay soils, or rocky soils, which do not occur in the project site. Regionally-occurring special-status species that occur in woodland or grassland habitats that are present in the project site generally would not be expected to occur because the site is located in an urban area and within the project site and vicinity these habitats are disturbed and dominated by non-native species. Because habitat is lacking or very marginal for regionally-occurring special-status plant species and none were observed in the project site during a focused botanical survey conducted during the blooming season, special-status plants are considered absent from the project site. Therefore, the proposed project would not impact special-status plant species.

6.1.2 Special-status Fish

6.1.2.1 San Joaquin Roach

Federal status – none

State status – CDFW species of special concern

Other status – none

Species Description

San Joaquin roach are found in mid-elevation small streams but may also occur in main channels of larger rivers. This subspecies may occupy a wide-range of temperature and dissolved oxygen fluctuations from cold water to warm water habitats with dissolved oxygen as low as 1-2 parts per million (Moyle et al. 2015). This subspecies is particularly well adapted to life in intermittent streams that dry up and form pools. Populations may become dense and isolated (Moyle et al. 2015).

Survey History

San Joaquin roach was not observed during the biological surveys in 2019. There are no CNDDDB reported occurrences in the project site for this species, with the nearest reported occurrence located ten miles south of the project site in Woods Creek (CDFW 2019a).

Habitat Suitability

Angels Creek is a perennial stream that is within the current range of this species. Angels Creek and pools throughout Angels Creek provide suitable aquatic habitat for San Joaquin roach. China Gulch may also provide habitat for San Joaquin Roach.

Potential for Adverse Effects

Segments of the existing pipe that will be removed and replaced across Angels Creek and the removal of old pipe and new installation across China Gulch would not result in any disturbance within these waterways. The existing and proposed sewer pipe across Angels Creek and China Gulch is above ground and spans the creek and/or creek banks (see Photo 1 in Attachment E); new pipe will also be above ground. Construction activities associated with removal, replacement, and installation of pipe in those areas will be conducted from disturbed areas along the top of the creek banks away from the wetted portions of the channels.

Because there will be no direct impacts to aquatic habitats within Angels Creek or China Gulch, no direct adverse effects to San Joaquin roach would occur. In the absence of the proposed mitigation measures to prevent impacts to water quality, pollutants or debris could enter the waterways and result in deleterious effects to San Joaquin roach if it was present. With the implementation of BMPs and other mitigation measures, no indirect effects on water quality or San Joaquin roach would occur.

With the implementation of the general mitigation measures to protect special-status species and aquatic habitats contained in Section 7.1, the proposed project would not impact San Joaquin roach.

6.1.3 Special-status Amphibians

6.1.3.1 Foothill Yellow-legged Frog (FYLF)

Federal status – none

State status – Candidate for listing as threatened and a CDFW Species of Special Concern

Species Description

The FYLF range extends from the Transverse Mountains in southern California, north to the Oregon border along the Coast Ranges in California (Zeiner et al. 2000). The range of FYLF in the Sierra Nevada exists from the Cascade crest and along the western side of the Sierra Nevada to Kern County. Isolated records of the FYLF are known from San Joaquin County and Los Angeles County. The elevational range of FYLF extends from sea level up to 6,370 feet above mean sea level (Zeiner et al. 2000).

Several range wide reviews have been conducted detailing the current state of the FYLF population across its range and its steady decline. All studies (Sweet 1983, Jennings and Hayes 1994, Jennings 1996, Borisenko and Hayes 1999 and Lind 2005) reached similar conclusions regarding a contraction of the FYLF range by approximately 51% and by up to 2/3 in the Sierra Nevada. Currently there are approximately 4,000 museum specimens from 500 localities across the California geographic range of FYLF from as far back as 1850 (Hayes et al. 2016). Large numbers of FYLF were still be collected until the 1970s, and a notable decline was first described in a southern California study in 1983 (Sweet 1983). Studies in the Sierra Nevada also concluded that FYLF occupancy of past known localities also declined significantly (Lind 2005) and FYLF may be extirpated south of Madera County (Jennings and Hayes 1994).

The FYLF aquatic habitat consists of streams flowing through a variety of vegetation communities, such as valley foothill hardwood, riparian, hardwood-conifer, chaparral, wet meadow, ponderosa pine and mixed pine (Hayes et al. 2016). FYLF prefer stream habitat with some shading, greater than 20 percent, but seem to be absent from streams with a canopy closure of 90 percent or more (Hayes et al. 2016). The most important characteristics to FYLF habitat include the stream order, minimum temperatures, frequency of precipitation, stream gradient, and elevation (Hayes et al. 2016). Breeding and rearing habitat is generally located in gently flowing, low-gradient streams with variable substrates dominated by cobble and boulders (Hayes et al. 2016). In larger streams, breeding sites are usually in depositional areas at the tail end of pools or near tributary confluences (Hayes et al. 2016). In smaller streams egg masses are placed in similar locations amongst cobble in depositional areas near pools (Hayes et al. 2016). Egg masses are typically attached to leeward sides of boulders or cobbles to avoid exposure to high velocity flows (Hayes et al. 2016). Tadpoles tend to also occupy similar sites as the egg masses, which are typically more protected from scouring events (Hayes et al. 2016). The presence of sediment may reduce refugia for tadpoles and increase the likelihood they will be washed downstream during periods of high flow (Hayes et al. 2016).

Breeding typically starts in spring after high velocity flows begin to subside and air and water temperatures begin to increase (Hayes et al. 2016). FYLF typically lay eggs as early as March, but as late as June at higher elevations in the Sierra Nevada (Hayes et al. 2016). Eggs typically hatch after one to three weeks, which is dependent upon the temperature, with cooler temperatures decreasing the hatching time. Larvae metamorphose in 3 to 4 months and cooler water also delays larval metamorphosis. Growth rates and timing of development are dependent on location, which varies with temperature and flow velocities (Hayes et al. 2016).

FYLF are active all year in warmer locations and may hibernate in colder areas. During periods of inactivity, FYLF seek cover under rocks in streams or within a few meters of water. Significant migrations or other seasonal movements from breeding areas have not been reported. Unlike other species of frogs, the FYLF is rarely encountered far from permanent water, regardless of rainy weather. This species coexists with the Cascades frog and the red-legged frog in different microhabitats (CDFW 2015).

Survey History

FYLF or egg masses were not observed in the project site during the April 2019 survey conducted by HELIX. However, habitat is suitable in Angels Creek and China Gulch for this species. The nearest CNDDDB reported occurrence is located 3.4 miles east of the project site in Coyote Creek, which is a tributary to New Melones Reservoir in a different watershed. One historical record for this species is located over five miles upstream along Angels Creek near Murphy's where this species was documented in 1953.

Habitat Suitability

The channels of Angels Creek and China Gulch provide suitable habitat for FYLF in the project site and in areas adjacent to the project site. These waterways are rocky streams with rocky bottom, bank with cobbles, gravel and boulders with surrounding oak woodland and riparian vegetation providing instream shade. The canopy over the creeks is not so dense as to prohibit potential basking sites for this species. FYLF prefer slow moving sections of rocky streams to lay eggs and for tadpole rearing. This breeding habitat is abundant in Angels Creek and also present in China Gulch where it enters Angels Creek. Potential upland habitat or habitat to move between smaller tributary streams is not present since the area surrounding the project site is largely developed in a rural setting. The movement corridor for this

species would be limited to moving up and down Angels Creek and China Gulch within the stream channels.

Potential for Adverse Effects

FYLF has the potential to occur within Angels Creek and China Gulch in the project region and utilize these stream corridors for breeding and/or dispersal. If present in the project site, FYLF would be expected to be limited to the creek channels. As previously described, the species is closely associated with water, and only uses upland/terrestrial habitats during periods of inactivity, such as during hibernation. Due to the habitat conditions in the project site and the life history requirements of this species, FYLF movement would not be expected outside of the wetted portions of Angels Creek and China Gulch. Since construction would take place during the fall/winter months, which is the inactive season for FYLF, FYLF would be hibernating or otherwise seeking cover under rocks within or immediately adjacent to the stream channel if present in Angels Creek or China Gulch. FYLF would not be expected to be present in terrestrial habitat and would remain in the wetted portion of the creeks avoiding direct contact with workers, equipment, or materials.

Segments of the existing pipe that will be removed and replaced across Angels Creek and the removal of old pipe and new installation across China Gulch would not result in any disturbance within these waterways. The existing and proposed sewer pipe across Angels Creek and China Gulch is above ground and spans the creek and/or creek banks (see Photo 1 in Attachment E); new pipe will also be above ground. Construction activities associated with removal, replacement, and installation of pipe in those areas will be conducted from disturbed areas along the top of the creek banks away from the wetted portions of the channels.

Because there will be no impacts to aquatic habitats within Angels Creek or China Gulch and FYLF is not expected to occur outside of the stream channel, no direct adverse effects to FYLF would occur. With the implementation of BMPs and other mitigation measures, no indirect effects on water quality or potential habitat for FYLF would occur.

With the implementation of the recommended general mitigation measures for special-status species and aquatic habitats contained in Section 7.1, the proposed project would not impact FYLF.

6.1.3.2 California Red-legged Frog (CRLF)

Federal status – threatened

State status – CDFW Species of Special Concern

Species Description

The historic range of CRLF extends from Baja California, Mexico, north to the vicinity of Redding inland, and at least to Point Reyes, California coastally (Jennings and Hayes 1994). Today the species is known to occur in about 238 streams or drainages in 23 counties and is found primarily in wetlands and streams in the coastal drainages of Central California. Records of the species are known from Riverside County to Mendocino County along the Coast Range, from Calaveras County to Butte County in the Sierra Nevada, and in Baja California, Mexico. CRLF are still locally abundant within portions of the San Francisco Bay area (including Marin County) and the central coast. Within the remaining distribution of the species, only isolated populations have been documented in the Sierra Nevada, northern Coast, and northern Transverse ranges (USFWS 2010a). In the Sierra Nevada, CRLF historically occupied portions of the lower

elevations west of the crest from Shasta County south to Tulare County. Almost all known CRLF populations have been documented at elevations below 3,500 feet amsl with some historical sightings documented at elevations up to 5,200 feet amsl.

Within its range, CRLF occupies a distinct habitat of both aquatic and terrestrial components that consist of aquatic breeding and non-breeding areas embedded within a matrix of habitats used for dispersal, or refugia. Breeding and non-breeding aquatic habitat consists of low-gradient freshwater bodies, including ponds, marshes, sag ponds, dune ponds, stock ponds, lagoons, seeps, springs, and backwaters within streams and creeks. This species does not inhabit water bodies that exceed 70 degrees Fahrenheit if there are no cool, deep portions (USFWS 2002). Important characteristics of aquatic breeding habitat include still or slow moving fresh water (with salinities of less than 7.0 parts per thousand) deeper than 2.3 feet (0.7 meter) with dense, shrubby emergent or overhanging vegetation that provides egg deposition sites and cover for adult frogs (Jennings and Hayes 1994; USFWS 2002) and that persists for a minimum of 20 weeks following the breeding season to allow tadpoles to mature (USFWS 2010a). The breeding season typically occurs from November through April (USFWS 2002) and is likely influenced by local precipitation and ambient temperature. Females typically lay eggs between December and early April. Tadpoles typically metamorphose in 11 to 20 weeks, from July to September, but may overwinter in some sites. The largest populations of CRLF are associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) intermixed with cattails. Adults feed primarily on aquatic and terrestrial invertebrates, but may feed on tadpoles, smaller frogs, small mammals, and fish. Juvenile frogs are active diurnally and nocturnally, and adult frogs are largely nocturnal (USFWS 2002).

CRLF are generally found in or near water but may disperse into uplands during the wet season to migrate to breeding habitat or for foraging, or in response to receding water during the driest time of the year. Well-vegetated terrestrial areas within a riparian corridor may provide important sheltering habitat when temperatures are cold in the winter or when water is unavailable during dry periods. CRLF spend considerable time resting and foraging in riparian vegetation when it is present (USFWS 2002). The use of the adjacent riparian corridor during summer is most often associated with drying of creeks in mid- to late-summer (Rathbun in litt., 1994 in USFWS 1996). During dry periods, CRLF remain close to water and often disperse upstream or downstream from their breeding habitat to forage or seek aestivation sites if water is not available (USFWS 2002). This habitat may include shelter under boulders, rocks, logs, industrial debris, agricultural drains, water troughs, small mammal burrows, incised stream channels, or areas with moist leaf litter (Jennings and Hayes 1994; USFWS 2002). Most CRLF do not disperse farther than the nearest suitable cold-shelter or aestivation habitat. CRLF have been found up to 200 feet from water in adjacent dense riparian vegetation (USFWS 2010a).

During periods of wet weather, individuals may disperse through uplands to migrate between aquatic breeding sites and have been observed making straight-line point to point migrations rather than using stream corridors (USFWS 2002). Movements of up to two miles have been reported (Fellers 2005), but one mile represents a more typical dispersal distance for breeding migration. Most overland movements occur at night (USFWS 2002).

Survey History

CRLF was not observed in the project site during the April 2019 survey by HELIX, conducted by an experienced CRLF biologist with a Federal Recovery Permit for this species. CRLF could occur in Angels Creek and China Gulch since large pools are present and the project site is within the historical range of this species. However, there are no CNDDDB reported occurrences for this species within a 10-mile radius

of the project site. The nearest CNDDDB reported occurrence is a small population on private property located 17 miles north of the project site in Calaveras County (CNDDDB 2019). The project site is located in the historic range of the CRLF and populations in the Sierra Nevada foothills tend to be small and isolated (USFWS 2002). All records in the CNDDDB south of the only Calaveras County CNDDDB record are considered to be extirpated (CDFW 2019). Due to the proximity of Angels Creek to a developed and heavily trafficked area and the lack of reported occurrences of this species, the likelihood of CRLF occurring within the project site is very low.

Habitat Suitability

Angels Creek and China Gulch provide potentially suitable habitat for CRLF in the project site and in areas adjacent to the project site. These waterbodies are rocky streams with rocky bottom, bank with cobbles, gravel and boulders with surrounding oak woodland and riparian vegetation providing instream shade. The canopy over the creeks is not so dense as to prohibit potential basking sites for this species. CRLF prefer still water or slower deep-water habitat with emergent vegetation to lay eggs and for tadpole rearing. This breeding habitat is present in Angels Creek and China Gulch, however emergent vegetation is only limited to vegetation along the banks and is not present in the mainstream of the creek. CRLF is less tied to the aquatic habitat as FYLF and may move overland to other aquatic sites or refuge sites to avoid summer heat and the winter cold. However, potential upland habitat or habitat to move between upland habitat is not present since the area surrounding the project site is largely developed in a rural setting. The movement corridor for this species would be limited to moving up and down Angels Creek.

Potential for Adverse Effects

CRLF has the potential to occur within Angels Creek and China Gulch in the project region and utilize these stream corridors for breeding and/or dispersal. If present in the project site, CRLF would be expected to be limited to the creek channels. Due to the habitat conditions in the project site and adjacent areas, CRLF movement would not be expected outside of the channels of Angels Creek and China Gulch. Due to the lack of suitable terrestrial habitat in the project site for shelter during extremely dry or cold weather, CRLF would not be expected to be present within the segments of Angels Creek and China Gulch in the project site during the fall/winter months when construction would occur. If present, CRLF would remain close to water and would not be expected to be present in terrestrial habitat. CRLF would remain in the wetted portion of the creeks and would avoid direct contact with workers, equipment, or materials.

Segments of the existing pipe that will be removed and replaced across Angels Creek and the removal of old pipe and new installation across China Gulch would not result in any disturbance within these waterways. The existing and proposed sewer pipe across Angels Creek and China Gulch is above ground and spans the creek and/or creek banks (see Photo 1 in Attachment E); new pipe will also be above ground. Construction activities associated with removal, replacement, and installation of pipe in those areas will be conducted from disturbed areas along the top of the creek banks away from the wetted portions of the channels.

Because there will be no impacts to aquatic habitats within Angels Creek or China Gulch and CRLF is not expected to occur outside of the stream channel during the construction period, no direct adverse effects to CRLF would occur. With the implementation of BMPs and other mitigation measures, no indirect effects on water quality or potential habitat for CRLF would occur.

With the implementation of the recommended general mitigation measures for special-status species and aquatic habitats contained in Section 7.1, the proposed project would not impact CRLF.

6.1.4 Special-status Reptiles

6.1.4.1 Western Pond Turtle

Federal status – none

State status – Species of Special Concern

Species Description

Western pond turtles are most commonly found in permanent or nearly permanent wetlands, ponds, slow-moving streams, and irrigation ditches (Zeiner *et al.* 1988a). Adjacent upland areas are also used for basking and egg-laying. Turtles will lay eggs up to 0.25-mile from water, but typically go no more than 600 feet (Jennings and Hayes 1994). Special habitat features that improve turtle abundance, survival and reproductive success are rocks, logs, open mud banks, emergent aquatic vegetation and streamside vegetation. These features provide the turtles with basking sites and cover from predators (Stebbins 1972). Although pond turtles feed primarily on aquatic invertebrates (USFWS 1992), they also feed on plants, small fish and carrion.

Survey History

Western pond turtles were not observed in the project site during the April 2019 survey by HELIX. However, western pond turtles could occur in Angels Creek and China Gulch since large pools are present. There are no CNDDDB records for western pond turtle within a 10-mile radius (CNDDDB 2019).

Habitat Suitability

Angels Creek and China Gulch provide suitable aquatic habitat for western pond turtle. Western pond turtle could also occur outside of the banks of these streams within leaf litter or other refugia features like downed logs or debris. The uplands adjacent along Angels Creek and China Gulch are mostly developed, but there are limited areas within the uplands that provide suitable habitat for egg-laying.

Potential for Adverse Effects

Segments of the existing pipe that will be removed and replaced across Angels Creek and the removal of old pipe and new installation across China Gulch would not result in any disturbance within these waterways. The existing and proposed sewer pipe across Angels Creek and China Gulch is above ground and spans the creek and/or creek banks (see Photo 1 in Attachment E); new pipe will also be above ground. Construction activities associated with removal, replacement, and installation of pipe in those areas will be conducted from disturbed areas along the top of the creek banks away from the wetted portions of the channels. Therefore, impacts to western pond turtle would not occur within aquatic habitats. However, western pond turtle could be present within the adjacent uplands during construction.

In the absence of proposed mitigation measures, potential adverse effects of the proposed project on western pond turtle could include harm to individual western pond turtles as a result of contact with construction equipment and/or personnel and a temporary loss of habitat for egg-laying and refuge

habitat along Angels Creek in riparian and oak woodland habitat during construction. This would be a significant impact.

The recommended mitigation measures for western pond turtle contained in Section 7.2 would reduce impacts to this species to less than significant.

6.1.5 Special-status Birds

6.1.5.1 White-tailed Kite

Federal status – none

State status – CDFW fully protected

Species Description

White-tailed kite is a year-round resident in coastal and valley lowlands, where it inhabits herbaceous and open stages of most habitat types. Individuals forage in grasslands, farmlands, and wetlands, preying mostly on small diurnal mammals. Nests are built near the top of dense tree stands, usually near open foraging areas (Zeiner et al. 1988b).

Survey History

White-tailed kite was not observed in the project site during biological surveys in 2019. Habitat is present for nesting, however open areas for foraging were not observed in the project site for this species. No raptor nests were detected during the surveys conducted during the 2019. No nests or nesting pairs of white-tailed kites were observed in or adjacent to the project site, although suitable nest trees are abundant in the project site. There are no CNDDDB reported occurrence of white-tailed kite within 10 miles of the project site (CDFW 2019).

Habitat Suitability

Open areas in oak woodlands in and adjacent to the project site provide suitable foraging and nesting habitat for white-tailed kite. Nesting habitat is present in the woodland vegetation communities in the project site. The lands surrounding the project site consists primarily of a mix of rural residential land and cattle pastures or annual grasslands. Trees in or adjacent to the project site could provide nesting habitat for this species, although no nests or individuals were observed during surveys.

Potential for Adverse Effects

Nesting habitat is present in and/or adjacent to the project site, however, project construction has low potential to affect white-tailed kite nesting either directly or indirectly because construction would commence outside of the nesting season. White-tailed kite is a highly mobile bird species and individual birds foraging or otherwise occurring in the site could readily avoid construction areas or contact with construction equipment or personnel. Therefore, no impacts to individual kites is anticipated. If white-tailed kite were to nest in or adjacent to the project site during or prior to construction commencing in a portion of the project alignment, construction related activities could result in nest disturbance leading to abandonment of eggs or young. Potential impacts to nesting kites would be a significant impact.

The recommended mitigation measures for nesting birds contained in Section 7.3 would reduce impacts to white-tailed kite to less than significant.

6.1.6 Special-status Mammals

6.1.6.1 Pallid Bat

Federal status – none

State status – CDFW species of special concern

Species Description

Pallid bat occurs throughout California except for the high Sierra Nevada and the northern Coast Ranges. Habitats include grasslands, shrublands, woodlands, and forests from sea level to 6,000 feet. Most common in open, dry habitats with rocky areas for roosting; roosts also include cliffs, abandoned buildings, bird boxes, and under bridges (Bolster, ed. 1998).

Survey History

Pallid bat was not observed in the project site during biological surveys. The project site contains no known roost sites or known records of this species in the CNDDDB. However, oak woodland and riparian forest habitat in the project site provide roosting habitat for this species. Water in the perennial Auburn Ravine provides drinking water for this species. Forage, such as moths and beetles are likely abundant in the project site. There is one historical CNDDDB reported occurrence of pallid bat in the project site dated to 1895, which was a male specimen collected from the City of Angels and preserved in the Museum of Vertebrate Zoology (MVZ#: 30371) (CDFW 2019). The nearest current CNDDDB reported occurrences of pallid bat is located approximately 5 miles south of the project site near New Melones Reservoir. The record only states that pallid bat was detected in 1999 with no other details (CDFW 2019).

Habitat Suitability

The entire project site supports oak woodlands and riparian forest with openings that are potentially suitable foraging, roosting and breeding habitat for pallid bat. Rocky outcrops or rocky features are not present and roosting habitat is limited to crevices in rock walls, tree cavities and old buildings. Since roosting habitat is contiguous with the adjacent woodlands and grassland habitat, this species could roost on site. If this species is disturbed from project related noise, it may move away from the project site.

Potential for Adverse Effects

Pallid bat could use the project site for roosting, including maternity roosts. Because the pallid bat is a highly mobile animal that typically roosts in crevices of rocks, manmade structures and trees, there is a low potential for pallid bat to occupy the project site prior to commencement of the project or to occur in the project site while foraging, breeding or dispersing through the site during construction. This species is likely to occupy roosting habitat near the project site and foraging would occur during the evening when project activities will not occur. In the absence of proposed mitigation measures, the project would have a low potential for adverse effects on pallid bat roosting in or adjacent to the project site. Removal of trees large enough to provide roosting habitat for bats is not anticipated, however, suitable roosting habitat in trees and buildings occurs adjacent to the construction areas. If pallid bat

was present on or adjacent to the project site, construction related activities could lead to roost abandonment, which could expose the bats to increased risk of harm. This would be a significant impact.

Implementation of the recommended mitigation measures for roosting bats contained in Section 7.4 would reduce impacts to this species to less than significant.

6.1.6.2 Western Red Bat

Federal status – none

State status – species of special concern

Species Description

Roosts primarily in woodlands and forests and forages in open habitat such as croplands, grasslands and shrublands. This species is typically associated with water and/or riparian habitats or mosaics of open space and forests. Forages along edge habitats and usually found foraging or drinking with other bat species (CDFW 1990). This species has a poor urine concentrating ability and is typically associated with water. Primarily roosts solitarily in trees from 2–40 feet high in the trees, with females and young roosting higher in the trees than males. Young are typically born from May through July, and volant between 3 to 6 weeks after birth (CDFW 1990). Reproduction typically occurs individually, with each liter consisting of 1-5 young. Occasionally maternity colonies are found, but they are rare. Western red bat may also move their young between roost sites and are not tied specifically to a roost location (CDFW 1990).

Survey History

Western red bat was not observed in the project site during biological surveys. The project site contains no known roost sites or known records of this species in the CNDDDB. However, oak woodland and riparian forest habitat in the project site along Angels Creek provides roosting habitat for this species. Water in the perennial Angels Creek provides drinking water for this species. Forage, such as moths and beetles are likely abundant in the project site. The nearest CNDDDB reported occurrences of western red bat is located approximately 5 miles south of the project site near New Melones Reservoir. The record only states that western red bat was detected in 1999 (CDFW 2019).

Habitat Suitability

The project site supports oak woodlands and riparian forest that are potentially suitable foraging, roosting and breeding habitat for western red bat. This species could occur roosting in the trees either individually or in small colonies. Since riparian habitat is contiguous with the adjacent woodlands and riparian habitat, tree roosting habitat is plentiful in the area around the project site. If this species is disturbed from project related noise, it may move away from the project site.

Potential for Adverse Effects

Western red bat could use the project site for roosting, including maternity roosts. Because the western red bat is a highly mobile animal that typically roost in trees and move their young, there is a low potential for red bat to occupy the project site prior to commencement of the project or to occur in the project site while foraging, breeding or dispersing through the site during construction. In the absence of proposed mitigation measures, the project would have a low potential for adverse effects on western red bat. Removal of trees large enough to provide roosting habitat for bats is not anticipated, however,

suitable roosting habitat in trees occurs adjacent to the construction areas. If western red bat was present on or adjacent to the project site, construction related activities could lead to roost abandonment, which could expose the bats to increased risk of harm. This would be a significant impact.

Implementation of the recommended mitigation measures for roosting bats contained in Section 7.4 would reduce impacts to this species to less than significant.

6.1.7 Migratory Birds and Raptors

The project site provides nesting and foraging habitat for a variety of native birds common to the region, such as black phoebe (*Sayornis nigricans*), oak titmouse (*Baeolophus inornatus*), black headed grosbeak (*Pheucticus melanocephalus*), ash-throated flycatcher (*Myiarchus cinerascens*), acorn woodpecker (*Melanerpes formicivorus*), and red-shouldered hawk (*Buteo lineatus*). Trees in the project site provide nest sites for raptors and other nesting birds. Cavities in trees provide habitat for cavity nesting birds such as oak titmouse, ash-throated flycatcher and acorn woodpecker. Project activities are not expected to directly disturb trees or shrubs but could result in noise and other indirect disturbance that has potential to cause nest failure. In the absence of proposed mitigation, destruction or abandonment of nests, eggs, or nestlings by vegetation clearing or ground-disturbing activities during the avian breeding season (February - August) could occur and would be considered a violation of California Fish and Game Code. This would be a significant impact.

The recommended mitigation measures for nesting birds contained in Section 7.3 would reduce impacts to migratory birds and raptors to less than significant.

6.2 SENSITIVE NATURAL COMMUNITIES

Of the habitat types in the project site, valley oak woodland and valley foothill riparian are considered sensitive natural communities protected by the regulations and ordinances described in Chapter 3.

Approximately 0.56 acre of riparian habitat (valley foothill riparian) is located along the banks of Angels Creek and the unnamed tributary stream. This riparian habitat provides shade over Angels Creek for fish and stabilizes the banks of the stream, with complex root structures that also provide habitat for aquatic fish and wildlife. Riparian habitat is regulated by CDFW under the LSA program and is considered a sensitive natural community. No permanent impacts to riparian habitat would occur as a result of the proposed project. The existing pipeline is mostly above ground in riparian areas or located within ruderal herbaceous vegetation, so impacts would be limited to temporary disturbance to vegetation. Staging areas would be established in areas of developed or ruderal and herbaceous vegetation. Impacts to trees would be restricted to trimming limbs near existing access roads to allow passage of heavy equipment. No permanent impacts to riparian habitat are anticipated, however, segments of the pipeline cross through riparian habitat regulated by CDFW and a Lake and Streambed Alteration Agreement may be required.

With the implementation of the recommended mitigation measures for jurisdictional waters and wetlands contained in Section 7.5, impacts to riparian habitat would be reduced to less than significant.

Approximately 1.58 acres of valley oak woodland is present outside of the riparian corridor of Angels Creek. Valley oak woodland provides habitat for numerous wildlife species and is considered a sensitive natural community. Individual oak trees are protected by Chapter 17.64 of the City of Angels Camp

Municipal Code. The existing pipeline through the oak woodland is in ruderal herbaceous vegetation so impacts. Impacts to trees would be restricted to trimming limbs along the existing pipeline or near existing access roads to allow passage of heavy equipment. No permanent impacts to oak woodland or protected trees are anticipated and no mitigation is necessary.

6.3 JURISDICTIONAL WATERS AND WETLANDS

Approximately 0.06 acre of riverine habitat is present in the project site consisting of small segments of Angels Creek and China Gulch. These waterways are potential waters of the U.S. and waters of the State protected by Section 404 and 401 of the Clean Water Act and Section 1600 of the Fish and Game Code. No impacts to potential waters of the U.S. or waters of the State is anticipated as a result of the proposed project. However, a Lake and Streambed Alteration Agreement would be required from CDFW prior to installation of the new pipeline segment across China Gulch in the northern end of the project site and potentially for removal and replacement of other segments next to the creek.

With the implementation of the recommended mitigation measures for jurisdictional waters and wetlands contained in Section 7.5, impacts to jurisdictional waters and wetlands would be reduced to less than significant.

6.4 WILDLIFE NURSERIES AND MOVEMENT CORRIDORS

No terrestrial wildlife nurseries of significance were identified on the project site. Impacts to wildlife nurseries would be less than significant.

The project site is not included in any corridors mapped by the California Essential Habitat Connectivity project. A potential movement corridor for terrestrial wildlife occurs in riparian forest and woodland habitat along Angels Creek and China Gulch, which could provide habitat for common wildlife to move through the area. Angels Creek flows to New Melones Reservoir, which is an impoundment along the Stanislaus River, which is an inaccessible stream to anadromous fish. The project site and surrounding lands are predominantly developed and consist of urban residential homes, commercial buildings with some open space utilized for livestock grazing. Temporary impacts to wildlife movement through the riparian corridor and oak woodland could occur as a result of construction activities deterring wildlife use of the area. However, once construction of the project is complete, wildlife movement would be expected to resume like pre-project conditions. Therefore, no permanent impacts to wildlife movement corridors would occur.

6.5 LOCAL POLICIES

The removal of native oak trees of 9-inches or greater diameter and “Heritage Trees” from undeveloped land as part of the project would conflict with Chapter 17.64 of the City of Angels Camp Municipal Code, known as the Oak and Heritage Tree Ordinance. However, no removal of protected trees is anticipated to occur. If removal of protected trees was determined necessary, the project seeks to be consistent with local policies, including tree protection ordinances and would mitigate for impacts to native trees protected by the City in accordance with Chapter 17.64 of the City code.

With the implementation of the recommended mitigation measures for native oak trees and heritage trees contained in Section 7.6, impacts to trees would be reduced to less than significant.

6.6 HABITAT CONSERVATION PLANS

The project site is not within the boundaries of any adopted habitat conservation plan; therefore, the project would not conflict with the provisions of any adopted habitat conservation plan.

6.7 POTENTIAL FOR SPREAD OF INVASIVE SPECIES

Many plant species ranked as highly- or moderately-invasive by Cal-IPC are present in the project site (**Attachment D**) as would be expected due to its disturbed nature and location next to roads, residential properties, and other landscaped areas. These species predominantly occur in upland ruderal/disturbed habitats and the herbaceous understory of the valley oak woodland habitat. Most project activities would occur in existing disturbed areas and so would not result in a significant expansion of disturbed ground area susceptible to colonization by invasive species. However, there is a potential for further spread of invasive species as a result of the proposed project. This would be a significant impact.

With the implementation of the recommended mitigation measures for invasive species contained in Section 7.7, impacts from the spread of invasive species would be reduced to less than significant.

7 MITIGATION MEASURES

7.1 GENERAL AVOIDANCE MEASURES

The following general avoidance measures will be implemented to protect biological resources in and adjacent to the project site prior to and during construction:

- Before any construction activities begin, a CDFW-approved biologist shall conduct a worker awareness environmental training session for all construction personnel regarding special-status species with the potential to occur on the project site. At a minimum, the training shall include a description of the special-status species and their habitat, the avoidance and minimization measures that are being implemented to conserve special-status species, and the boundaries within which work may occur. Personnel will also be instructed on the penalties for not complying with avoidance and minimization measures. If new construction personnel are added to the project, then the contractor will ensure that the new personnel received the mandatory training before starting work.
- Pre-construction surveys for special-status species will be conducted by a qualified biologist within 24 hours prior to any construction activities resulting in disturbance of vegetation or ground disturbance within riverine (Angels Creek and China Gulch) and valley foothill riparian habitats.
- A qualified biological monitor will be present daily during construction activities within or adjacent to riverine and valley foothill riparian habitats including but not limited to equipment mobilization, site clearing, vegetation removal, and grading/ground disturbance to verify that no special-status species enter the project site during construction.
 - If special-status species are found during construction, then work will immediately stop, all special-status species will be allowed to move out of harm's way on its

own accord unless relocation is approved by CDFW and/or USFWS, and CDFW and/or USFWS will be contacted within 24 hours.

- The biological monitor shall monitor the special-status species to make sure it is not harmed and that it leaves the site on its own and does not return. Alternatively, the biological monitor shall relocate the species to a pre-approved location designated in a relocation plan, if approved by CDFW and/or USFWS.
- If FYLF or CRLF are observed within the work area, then work shall be halted and CDFW (FYLF and CRLF) or USFWS (CRLF only) shall be contacted for further guidance.
- Standard construction BMPs will be implemented throughout construction, in order to avoid and minimize adverse effects to the water quality within the project site. Appropriate erosion control measures will be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from the project site. The integrity and effectiveness of the BMPs will be inspected on a daily basis by the resident engineer. Corrective actions and repairs shall be carried out immediately.
- Construction activities and clearing within the project site will be confined to the minimal area necessary to facilitate construction activities. To ensure that construction equipment and personnel do not affect sensitive habitat outside of designated work areas, orange barrier fencing will be erected to clearly define the habitat to be avoided. This will delineate the ESA on the project. The integrity and effectiveness of ESA fencing and erosion control measures will be inspected daily. Corrective actions and repairs shall be carried out immediately for fence breaches and ineffective BMPs.
- Staging areas will be located on existing roadways or other disturbed areas identified in the project layout (plan) sheets where they will not affect sensitive resources.
- Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials should not be allowed to enter into streams or other waters. A plan for the emergency clean-up of any spills of fuel or other materials should be available when construction equipment is in use.
- No equipment will be operated in the wetted portion of Angels Creek, if feasible. If work in the wetted portion of Angels Creek is unavoidable, the stream flow will be diverted around the work area by use of a barrier/cofferdam. The flow will be diverted only once the construction of the diversion is completed.
- Equipment shall be re-fueled and serviced at designated construction staging areas. All construction material and fill will be stored and contained in a designated area that is located away from channel areas to prevent transport of materials into adjacent streams. The preferred distance is 100 feet from the wetted width of a stream. In addition, a silt fence will be installed to collect any discharge, and adequate materials should be available for spill clean-up and during storm events.
- Vehicles and equipment shall be driven only within designated areas.

- Construction vehicles and equipment will be maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Leaking vehicles and equipment shall be removed from the site.
- Building materials storage areas containing hazardous or potentially toxic materials such as herbicides and petroleum products will be located outside of the 100-year flood zone, have an impermeable membrane between the ground and the hazardous material, and will be bermed to prevent the discharge of pollutants to ground water and runoff water.
- All disturbed soils will undergo erosion control treatment prior to October 15 and/ or immediately after construction is terminated. Appropriate erosion control measures will be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from project sites. Erosion control blankets will be installed on any disturbed soils steeper than a 2:1 slope or steeper.
- All temporarily disturbed areas be restored to pre-construction contours and revegetated with an erosion control seed mix following completion of construction.
- No litter, debris, or sidecast shall be dumped or permitted to enter aquatic habitats. During project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- To prevent inadvertent entrapment of animals during construction, all excavated, steep walled holes or trenches more than one foot deep shall be covered at the close of each working day with plywood or other suitable material or provided with one or more escape ramps constructed of earth fill or wooden planks. At the beginning of each working day and before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist, or an on-site designee identified by the CDFW-approved biologist, will immediately place escape ramps or other appropriate structures to allow the animal to escape, or CDFW will be contacted for guidance and notified of the incident. All holes and trenches more than one foot deep shall be filled or securely covered prior to October 15.

7.2 MITIGATION FOR POTENTIAL EFFECTS ON WESTERN POND TURTLE

The following mitigation measures will be implemented to avoid impacts to western pond turtle:

- Preconstruction surveys for western pond turtles would be conducted in the project site approximately two weeks prior to the initiation of construction activities to ensure that western pond turtle are not actively using the project site. Preconstruction surveys would be conducted by a qualified biologist familiar with western pond turtle and their habitat. If western pond turtle is detected within the project site during surveys, CDFW will be notified regarding the presence of the western pond turtle. A plan will be developed in consultation with CDFW to relocate the turtles to the nearest suitable location, if necessary.

7.3 MITIGATION FOR POTENTIAL EFFECTS ON WHITE-TAILED KITE, AND OTHER NESTING MIGRATORY BIRDS AND RAPTORS

The following mitigation measures will be implemented to avoid impacts to white-tailed kite and other nesting migratory birds and raptors:

- If project (construction) ground-disturbing or vegetation clearing, and grubbing activities commence during the avian breeding season (February 1 – August 31) in a portion of the project alignment that has been inactive for more than 14 days, a qualified biologist shall conduct a pre-construction nesting bird survey no more than 14 days prior to initiation of project activities. The survey area shall include suitable raptor nesting habitat within 300 feet of the project boundary (inaccessible areas outside of the project site can be surveyed from the site or from public roads using binoculars or spotting scopes). Pre-construction surveys are not required in areas where project activities have been continuous since prior to February 1, as determined by a qualified biologist. Areas that have been inactive for more than 14 days during the avian breeding season must be re-surveyed prior to resumption of project activities. If no active nests are identified, no further mitigation is required. If active nests are identified, the following measure is required:
 - A suitable buffer (e.g. 300 feet for raptors; 100 feet for other nesting migratory birds) shall be established by a qualified biologist around active nests and no construction/decommissioning activities within the buffer shall be allowed until a qualified biologist has determined that the nest is no longer active (i.e. the nestlings have fledged and are no longer reliant on the nest, or the nest has failed). Encroachment into the buffer may occur at the discretion of a qualified biologist. Any encroachment into the buffer shall be monitored by a qualified biologist to determine whether nesting birds are being impacted.

7.4 MITIGATION FOR POTENTIAL EFFECTS ON ROOSTING BATS

A qualified wildlife biologist will conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). The type of survey will depend on the condition of the potential roosting habitat. If no bat roosts are found, then no further study is required.

- If evidence of bat use is observed, then the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts.
- If roosts are determined to be present and have the likelihood to be disturbed by construction, then a qualified biologist will determine if the bats should be excluded from the roosting site before work adjacent to the roost occurs. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed prior to implementation if exclusion is recommended. Exclusion methods may include use of one-way doors at roost entrances (bats may leave, but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted

during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young).

7.5 MITIGATION FOR IMPACTS TO JURISDICTIONAL WATERS

If it is determined prior to construction that impacts to jurisdictional waters cannot be avoided, then the project proponent shall apply for any necessary permits from the USACE, CDFW, and the RWQCB. If necessary, a routine delineation of wetlands and “other waters” of the United States will be prepared in accordance with the U.S. Army Corps of Engineers’ (USACE) *Corps of Engineers Wetlands Delineation Manual*, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0). Impacts to jurisdictional waters shall be mitigated in accordance with agency requirements to ensure no net loss of acreage or functions and values of waters of the U.S. and State. The City will coordinate with CDFW and, if needed, apply for a Lake and Streambed Alteration Agreement for installation of the new pipeline segment across China Gulch in the northern end of the project site and potentially for removal and replacement of other segments next to the creek.

7.6 MITIGATION FOR REMOVAL OF NATIVE OAK TREES OR HERITAGE TREES

Removal of native oak trees that are nine inches or greater in TDBH or heritage trees will be compensated either by replacement on-site at a 2:1 ratio (two trees planted on site for each tree removed) or by payment into the City of Angels oak tree preservation fund.

7.7 MITIGATION TO AVOID SPREAD OF INVASIVE SPECIES

The following measures shall be implemented to control the spread of invasive species either to or from the project area:

- All equipment and vehicles shall be thoroughly cleaned to remove dirt and weed seeds prior to being transported or driven to or from the project site.
- All temporarily disturbed areas would be revegetated with a native seed mix to control erosion and reduce the likelihood of colonization by invasive species.

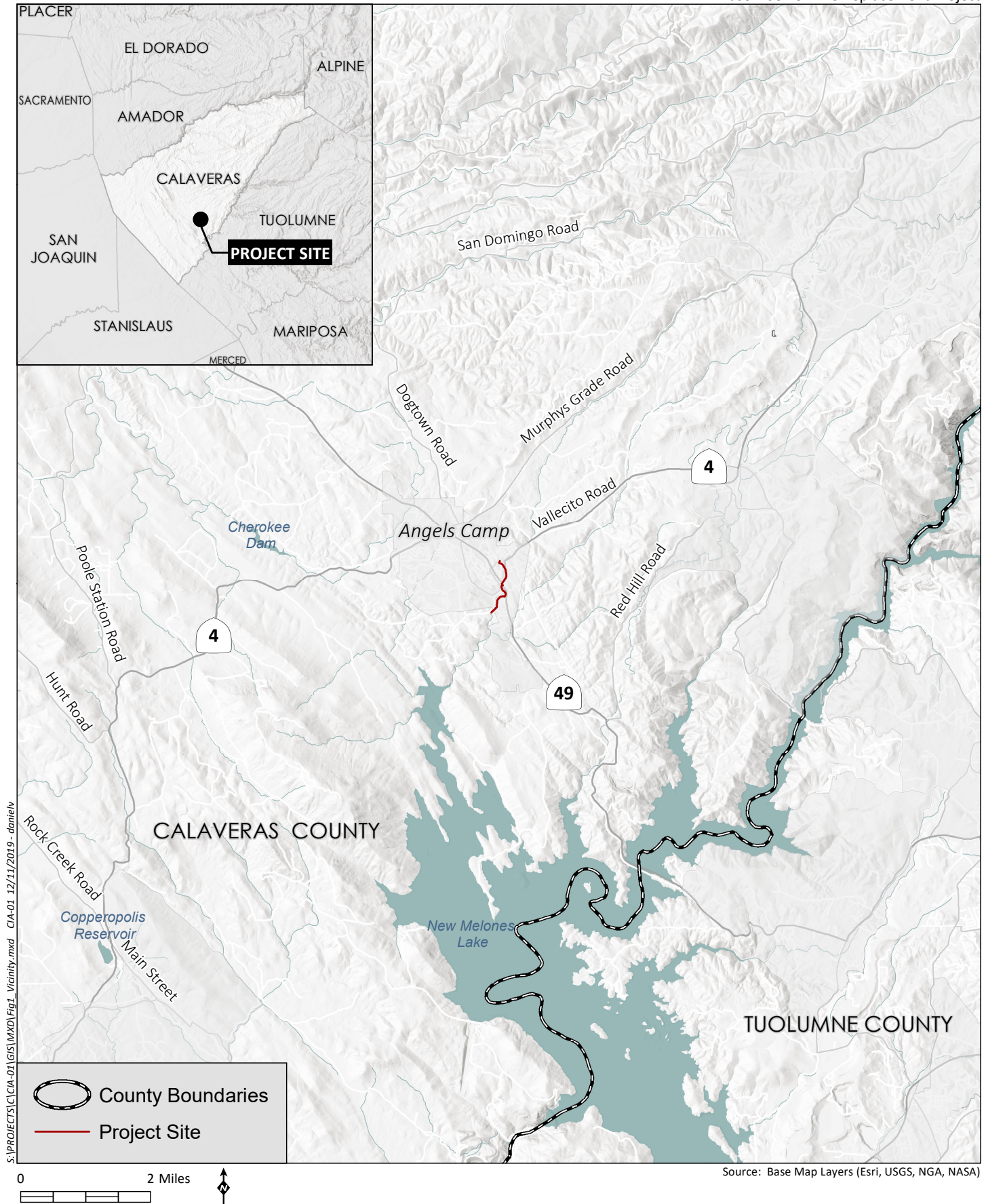
8 REFERENCES

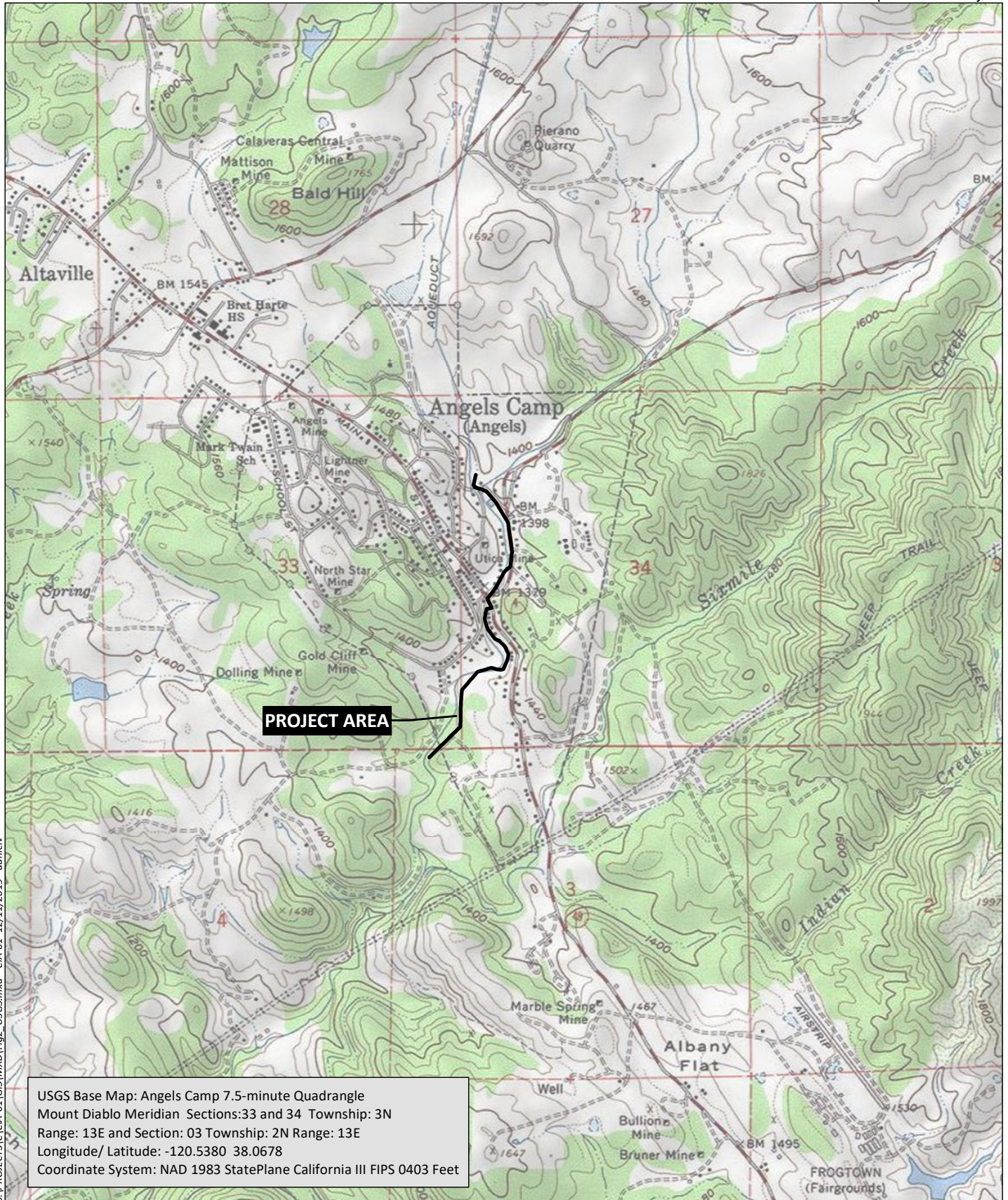
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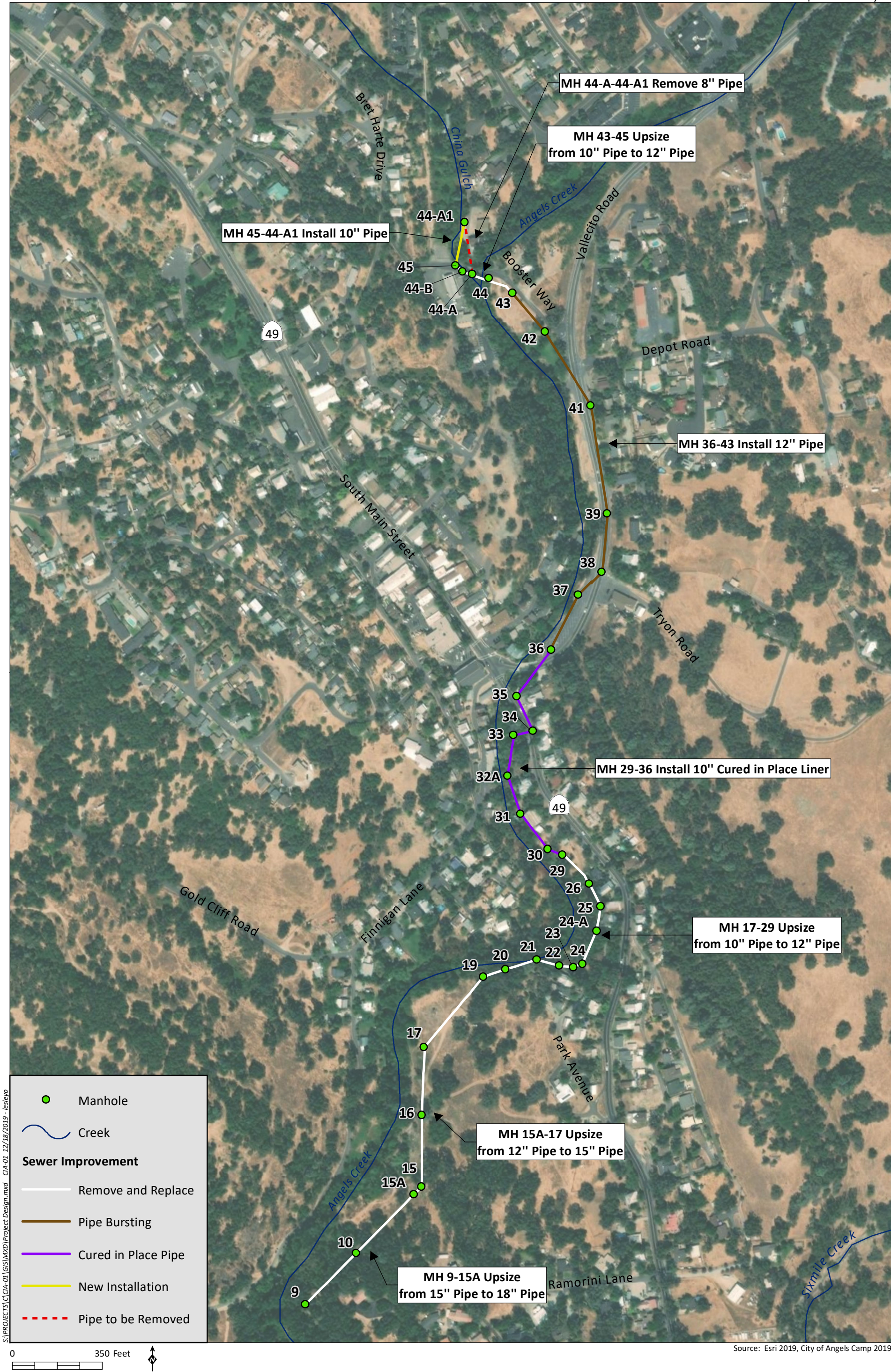
Attachment A

Figures

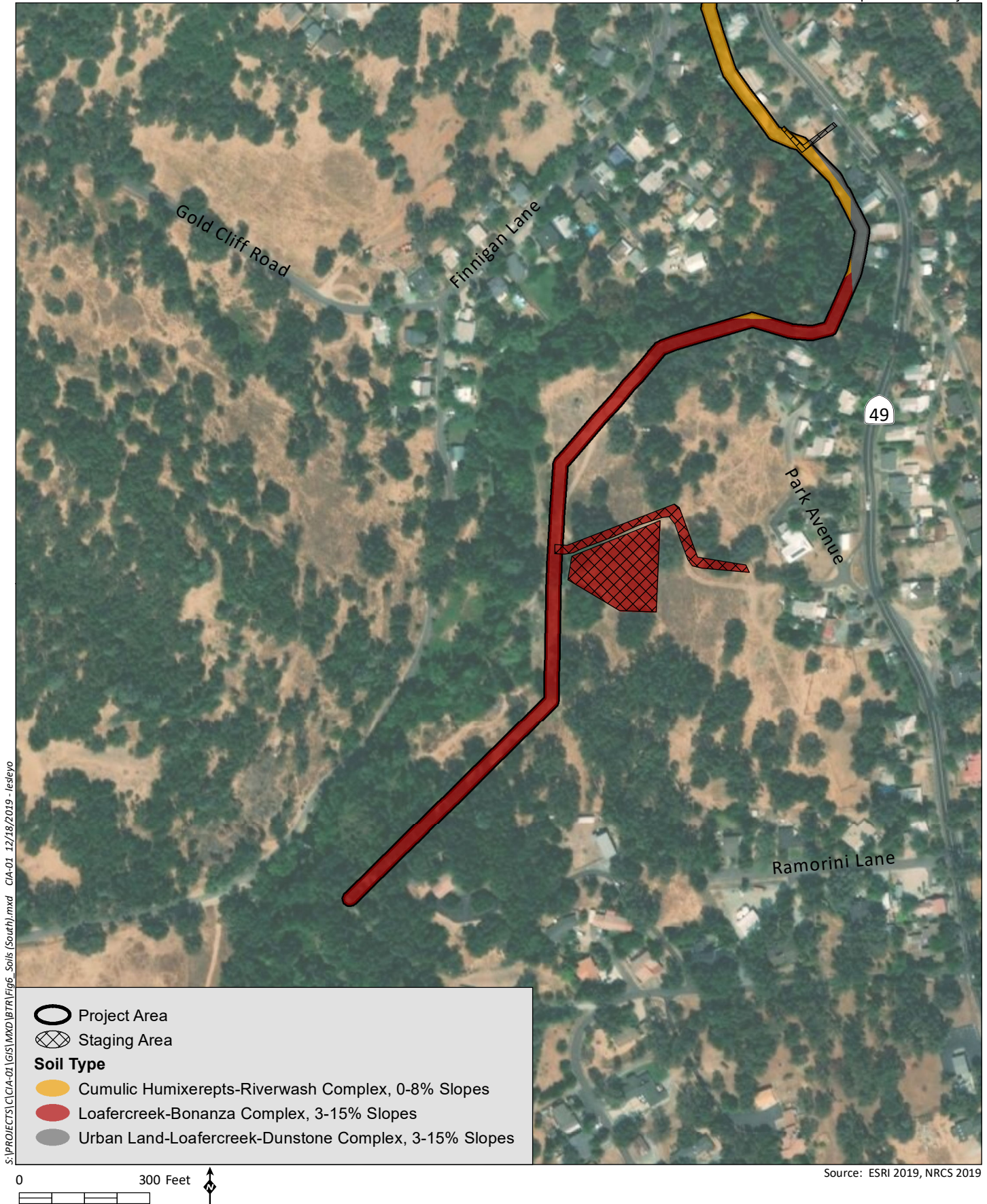


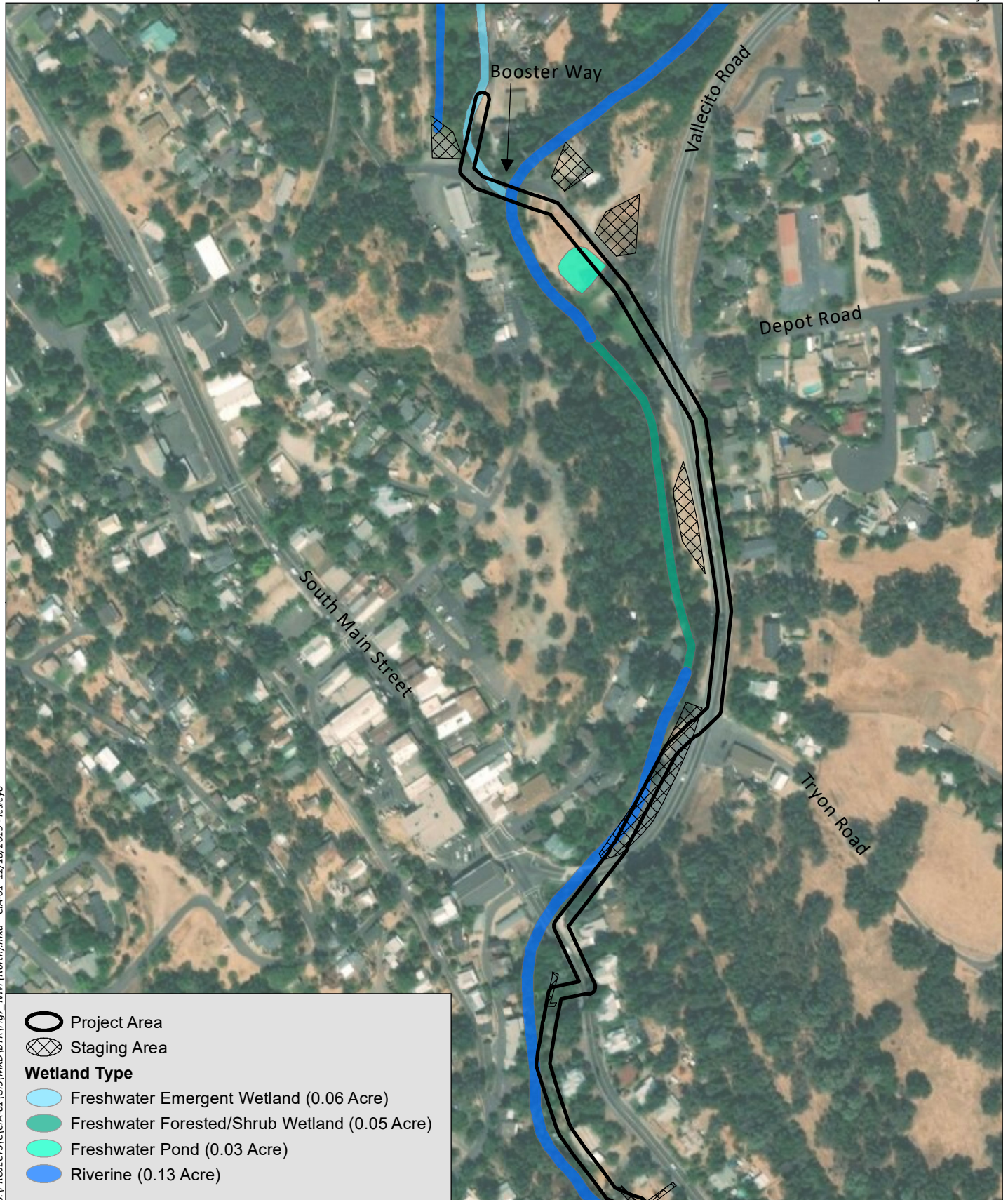


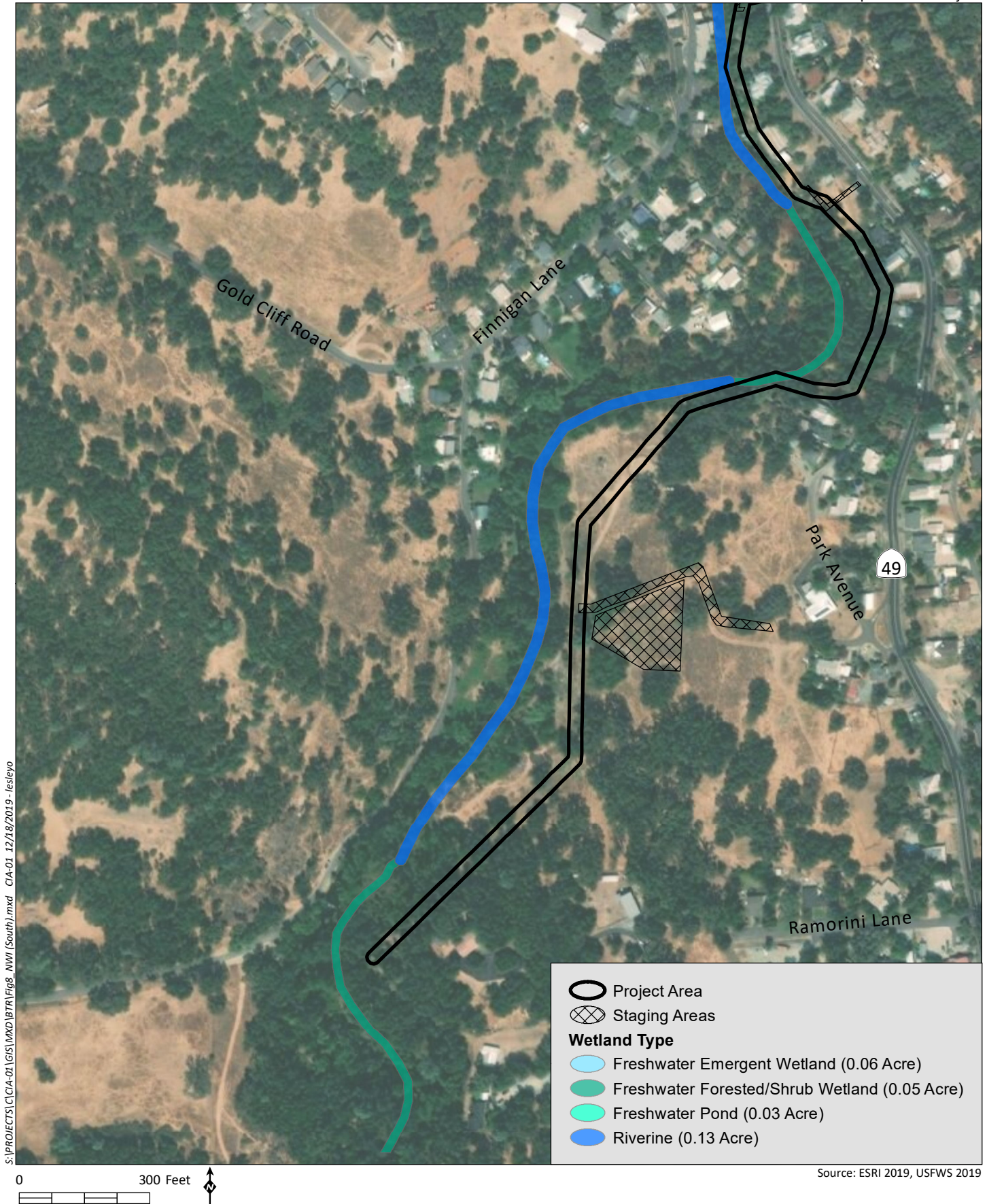


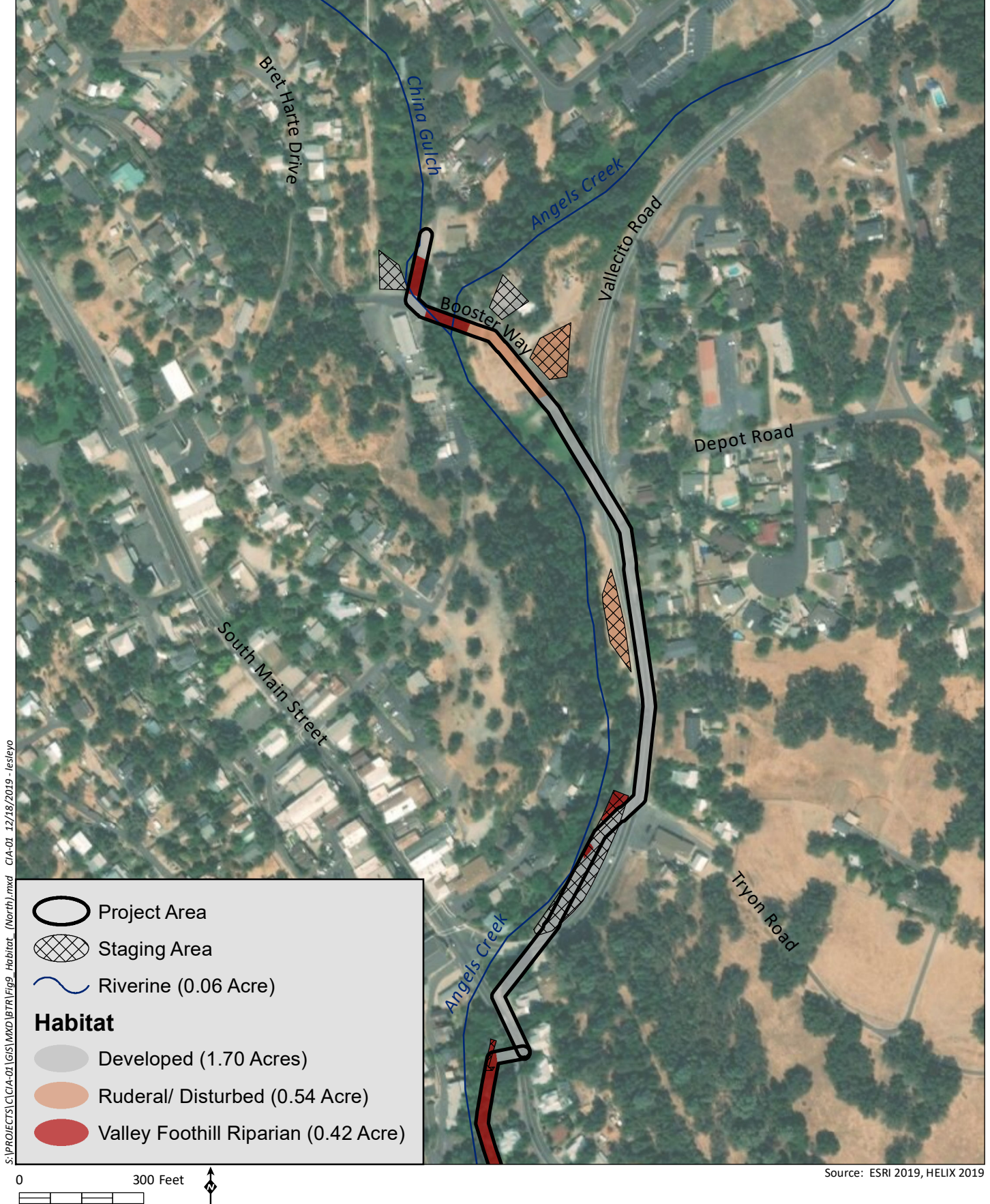


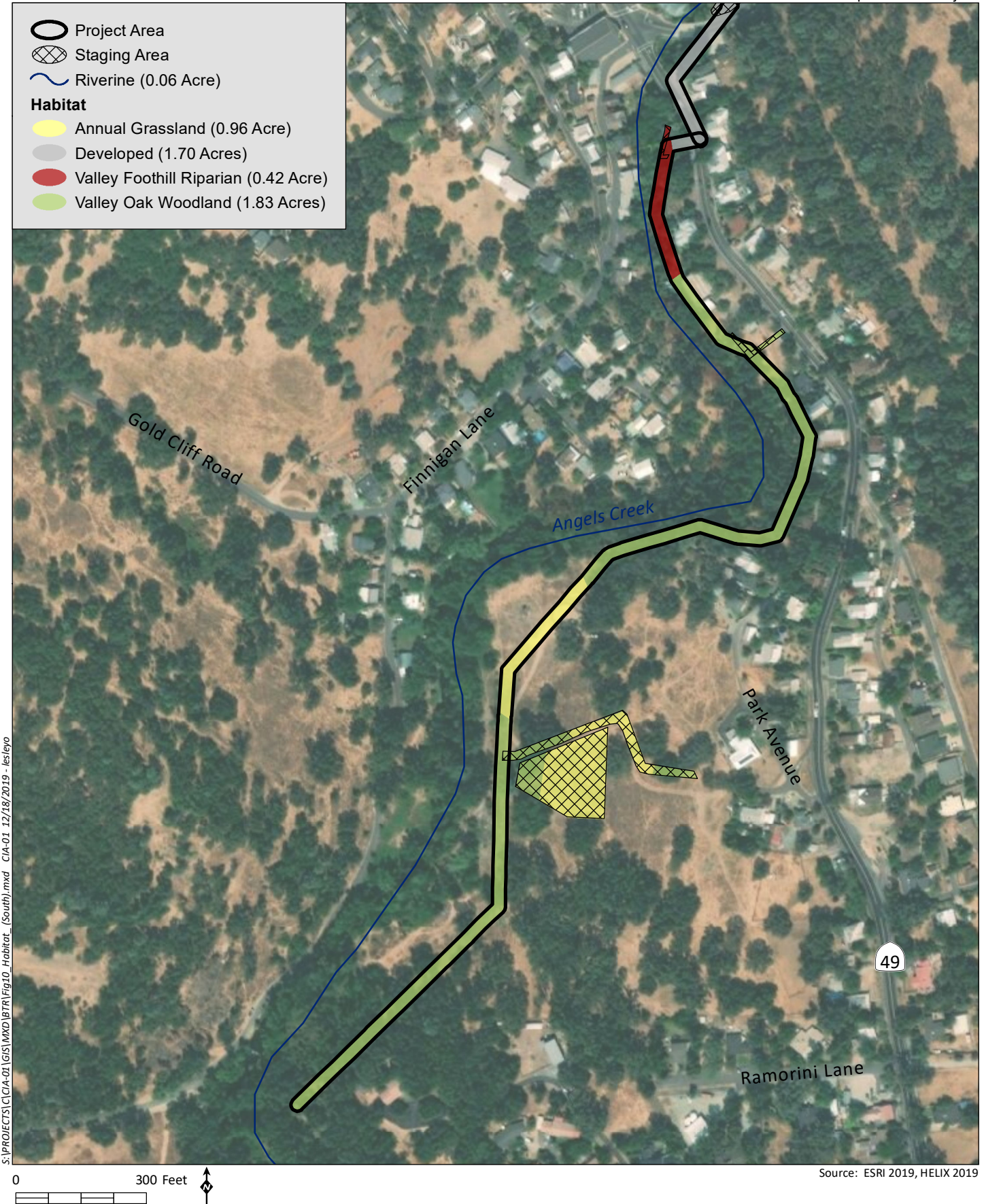












Attachment B

USFWS, CNDDDB, and CNPS Lists of Regionally
Occurring Special-Status Species



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

December 05, 2019

Consultation Code: 08ESMF00-2020-SLI-0497

Event Code: 08ESMF00-2020-E-01478

Project Name: Sewer Line Collection System Improvements & Replacement Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2020-SLI-0497

Event Code: 08ESMF00-2020-E-01478

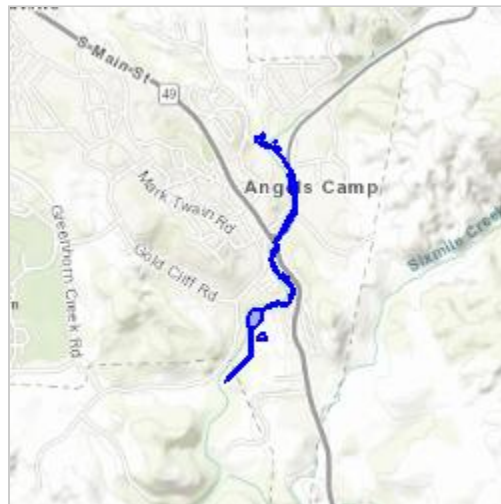
Project Name: Sewer Line Collection System Improvements & Replacement Project

Project Type: WASTEWATER PIPELINE

Project Description: City of Angels, Calaveras County

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.06354438811931N120.53954424080064W>



Counties: Calaveras, CA

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [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.

Amphibians

| NAME | STATUS |
|--|------------|
| California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf | Threatened |
| California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076 | Threatened |

Fishes

| NAME | STATUS |
|--|------------|
| Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321 | Threatened |

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Salt Spring Valley (3812016)> OR Angels Camp (3812015)> OR Columbia (3812014)> OR San Andreas (3812026)> OR Sonora (3712084)> OR Calaveritas (3812025)> OR New Melones Dam (3712085))

| Element Code | Species | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--------------|--|----------------|----------------------|-------------|------------|--------------------------------|
| AAABH01022 | <i>Rana draytonii</i> California red-legged frog | Threatened | None | G2G3 | S2S3 | SSC |
| AAABH01050 | <i>Rana boylei</i> foothill yellow-legged frog | None | Candidate Threatened | G3 | S3 | SSC |
| ABNKC01010 | <i>Pandion haliaetus</i> osprey | None | None | G5 | S4 | WL |
| ABNKC10010 | <i>Haliaeetus leucocephalus</i> bald eagle | Delisted | Endangered | G5 | S3 | FP |
| ABNKD06090 | <i>Falco mexicanus</i> prairie falcon | None | None | G5 | S4 | WL |
| ABPBXB0020 | <i>Agelaius tricolor</i> tricolored blackbird | None | Threatened | G2G3 | S1S2 | SSC |
| AFCJB19021 | <i>Lavinia symmetricus ssp. 1</i> San Joaquin roach | None | None | G4T3Q | S3 | SSC |
| AFCJB19028 | <i>Lavinia symmetricus ssp. 3</i> Red Hills roach | None | None | G4T1 | S1 | SSC |
| AMACC01020 | <i>Myotis yumanensis</i> Yuma myotis | None | None | G5 | S4 | |
| AMACC05030 | <i>Lasiurus cinereus</i> hoary bat | None | None | G5 | S4 | |
| AMACC05060 | <i>Lasiurus blossevillei</i> western red bat | None | None | G5 | S3 | SSC |
| AMACC08010 | <i>Corynorhinus townsendii</i> Townsend's big-eared bat | None | None | G3G4 | S2 | SSC |
| AMACC10010 | <i>Antrozous pallidus</i> pallid bat | None | None | G5 | S3 | SSC |
| AMACD02011 | <i>Eumops perotis californicus</i> western mastiff bat | None | None | G5T4 | S3S4 | SSC |
| AMAFJ01010 | <i>Erethizon dorsatum</i> North American porcupine | None | None | G5 | S3 | |
| ARAAD02030 | <i>Emys marmorata</i> western pond turtle | None | None | G3G4 | S3 | SSC |
| ARACF12100 | <i>Phrynosoma blainvillii</i> coast horned lizard | None | None | G3G4 | S3S4 | SSC |
| CTT37D00CA | <i>Ione Chaparral</i> Ione Chaparral | None | None | G1 | S1.1 | |
| ICBRA03030 | <i>Branchinecta lynchi</i> vernal pool fairy shrimp | Threatened | None | G3 | S3 | |



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



| Element Code | Species | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--------------|---|----------------|-------------------------|-------------|------------|--------------------------------|
| ICMAL05460 | <i>Stygobromus gradyi</i> Grady's Cave amphipod | None | None | G1 | S1 | |
| IICOL48011 | <i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle | Threatened | None | G3T2 | S2 | |
| IIHYM24250 | <i>Bombus occidentalis</i> western bumble bee | None | Candidate Endangered | G2G3 | S1 | |
| IIHYM24480 | <i>Bombus crotchii</i> Crotch bumble bee | None | Candidate Endangered | G3G4 | S1S2 | |
| ILARA14010 | <i>Banksula melones</i> Melones Cave harvestman | None | None | G1 | S1 | |
| ILARA14070 | <i>Banksula martinorum</i> Martins' cave harvestman | None | None | G1 | S1 | |
| ILARA14200 | <i>Banksula tutankhamen</i> King Tut Cave harvestman | None | None | G1 | S1 | |
| ILARA37010 | <i>Aphrastochthonius grubbsi</i> Grubbs' Cave pseudoscorpion | None | None | G1G2 | S1S2 | |
| IMBIV04020 | <i>Anodonta californiensis</i> California floater | None | None | G3Q | S2? | |
| IMGAS47080 | <i>Punctum hannai</i> Trinity Spot | None | None | G1G2 | S1S2 | |
| IMGASB0010 | <i>Ammonitella yatesii</i> tight coin (=Yates' snail) | None | None | G1 | S1 | |
| IMGASC7071 | <i>Monadenia mormonum buttoni</i> Button's Sierra sideband | None | None | G2T1 | S1S2 | |
| IMGASC7072 | <i>Monadenia mormonum hirsuta</i> hirsute Sierra sideband | None | None | G2T1 | S1 | |
| PDAP10Z0P0 | <i>Eryngium pinnatisectum</i> Tuolumne button-celery | None | None | G2 | S2 | 1B.2 |
| PDAP10Z0S0 | <i>Eryngium racemosum</i> Delta button-celery | None | Endangered | G1 | S1 | 1B.1 |
| PDAP10Z0Y0 | <i>Eryngium spinosepalum</i> spiny-sepaed button-celery | None | None | G2 | S2 | 1B.2 |
| PDAP11B0B0 | <i>Lomatium congdonii</i> Congdon's lomatium | None | None | G2 | S2 | 1B.2 |
| PDAST11061 | <i>Balsamorhiza macrolepis</i> big-scale balsamroot | None | None | G2 | S2 | 1B.2 |
| PDAST5J070 | <i>Lagophylla dichotoma</i> forked hare-leaf | None | None | G2 | S2 | 1B.1 |
| PDAST8H0R2 | <i>Senecio clelandii</i> var. <i>heterophyllus</i> Red Hills ragwort | None | None | G4?T2Q | S2 | 1B.2 |
| PDBOR0A1Q0 | <i>Cryptantha mariposae</i> Mariposa cryptantha | None | None | G2G3 | S2S3 | 1B.3 |



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



| Element Code | Species | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--------------|---|----------------|--------------|-------------|------------|--------------------------------|
| PDBOR0A2M2 | <i>Cryptantha spithamea</i> Red Hills cryptantha | None | None | G2 | S2 | 1B.3 |
| PDCAB01010 | <i>Brasenia schreberi</i> watershield | None | None | G5 | S3 | 2B.3 |
| PDCIS020F0 | <i>Crocianthemum suffrutescens</i> Bisbee Peak rush-rose | None | None | G2?Q | S2? | 3.2 |
| PDERI040V0 | <i>Arctostaphylos nissenana</i> Nissenan manzanita | None | None | G1 | S1 | 1B.2 |
| PDERI04240 | <i>Arctostaphylos myrtifolia</i> lone manzanita | Threatened | None | G1 | S1 | 1B.2 |
| PDFAB2B3P0 | <i>Lupinus spectabilis</i> shaggyhair lupine | None | None | G2 | S2 | 1B.2 |
| PDLAM18082 | <i>Monardella venosa</i> veiny monardella | None | None | G1 | S1 | 1B.1 |
| PDONA05051 | <i>Clarkia biloba ssp. australis</i> Mariposa clarkia | None | None | G4G5T3 | S3 | 1B.2 |
| PDONA050Y0 | <i>Clarkia rostrata</i> beaked clarkia | None | None | G2G3 | S2S3 | 1B.3 |
| PDPHR01130 | <i>Erythranthe marmorata</i> Stanislaus monkeyflower | None | None | G2? | S2? | 1B.1 |
| PDPLM0C150 | <i>Navarretia paradoxiclara</i> Patterson's navarretia | None | None | G2 | S2 | 1B.3 |
| PDPLM0C210 | <i>Navarretia miwukensis</i> Mi-Wuk navarretia | None | None | G1G2 | S1S2 | 1B.2 |
| PDROS0W0C0 | <i>Horkelia parryi</i> Parry's horkelia | None | None | G2 | S2 | 1B.2 |
| PDSCR1B280 | <i>Diplacus pulchellus</i> yellow-lip pansy monkeyflower | None | None | G2 | S2 | 1B.2 |
| PDVER0N050 | <i>Verbena californica</i> Red Hills vervain | Threatened | Threatened | G2 | S2 | 1B.1 |
| PMLIL022V0 | <i>Allium jepsonii</i> Jepson's onion | None | None | G2 | S2 | 1B.2 |
| PMLIL022W0 | <i>Allium tuolumnense</i> Rawhide Hill onion | None | None | G2 | S2 | 1B.2 |
| PMLIL0C0C0 | <i>Brodiaea pallida</i> Chinese Camp brodiaea | Threatened | Endangered | G1 | S1 | 1B.1 |
| PMLIL0G020 | <i>Chlorogalum grandiflorum</i> Red Hills soaproot | None | None | G3 | S3 | 1B.2 |
| PMLIL0U0H0 | <i>Erythronium tuolumnense</i> Tuolumne fawn lily | None | None | G2G3 | S2S3 | 1B.2 |
| PMLIL0V010 | <i>Fritillaria agrestis</i> stinkbells | None | None | G3 | S3 | 4.2 |



Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database



| Element Code | Species | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--------------|---|----------------|--------------|-------------|------------|--------------------------------|
| PMPOA040K0 | <i>Agrostis hendersonii</i> Henderson's bent grass | None | None | G2Q | S2 | 3.2 |

Record Count: 62

*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

Plant List

41 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812026, 3812025, 3812015, 3812016, 3812014 3712085 and 3712084;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

| Scientific Name | Common Name | Family | Lifeform | Blooming Period | CA Rare Plant Rank | State Rank | Global Rank |
|---|------------------------|-------------|--------------------------------------|-----------------|--------------------|------------|-------------|
| Agrostis hendersonii | Henderson's bent grass | Poaceae | annual herb | Apr-Jun | 3.2 | S2 | G2Q |
| Allium jepsonii | Jepson's onion | Alliaceae | perennial bulbiferous herb | Apr-Aug | 1B.2 | S2 | G2 |
| Allium sanbornii var. congdonii | Congdon's onion | Alliaceae | perennial bulbiferous herb | Apr-Jul | 4.3 | S3 | G4T3 |
| Allium tuolumnense | Rawhide Hill onion | Alliaceae | perennial bulbiferous herb | Mar-May | 1B.2 | S2 | G2 |
| Arctostaphylos myrtifolia | lone manzanita | Ericaceae | perennial evergreen shrub | Nov-Mar | 1B.2 | S1 | G1 |
| Arctostaphylos nissenana | Nissenan manzanita | Ericaceae | perennial evergreen shrub | Feb-Mar(Jun) | 1B.2 | S1 | G1 |
| Balsamorhiza macrolepis | big-scale balsamroot | Asteraceae | perennial herb | Mar-Jun | 1B.2 | S2 | G2 |
| Brasenia schreberi | watershield | Cabombaceae | perennial rhizomatous herb (aquatic) | Jun-Sep | 2B.3 | S3 | G5 |
| Brodiaea pallida | Chinese Camp brodiaea | Themidaceae | perennial bulbiferous herb | May-Jun | 1B.1 | S1 | G1 |
| Brodiaea rosea ssp. vallicola | valley brodiaea | Themidaceae | perennial bulbiferous herb | Apr-May(Jun) | 4.2 | S3 | G5T3 |
| Ceanothus fresnensis | Fresno ceanothus | Rhamnaceae | perennial evergreen shrub | May-Jul | 4.3 | S4 | G4 |
| Chlorogalum grandiflorum | Red Hills soaproot | Agavaceae | perennial bulbiferous herb | May-Jun | 1B.2 | S3 | G3 |
| | Mariposa clarkia | Onagraceae | annual herb | Apr-Jul | 1B.2 | S3 | G4G5T3 |

| | | | | | | | |
|--|-------------------------------|---------------|----------------------------|--------------|------|------|------|
| <u>Clarkia biloba ssp. australis</u> | | | | | | | |
| <u>Clarkia rostrata</u> | beaked clarkia | Onagraceae | annual herb | Apr-May | 1B.3 | S2S3 | G2G3 |
| <u>Claytonia parviflora ssp. grandiflora</u> | streambank spring beauty | Montiaceae | annual herb | Feb-May | 4.2 | S3 | G5T3 |
| <u>Crocanthemum suffrutescens</u> | Bisbee Peak rush-rose | Cistaceae | perennial evergreen shrub | Apr-Aug | 3.2 | S2? | G2?Q |
| <u>Cryptantha mariposae</u> | Mariposa cryptantha | Boraginaceae | annual herb | Apr-Jun | 1B.3 | S2S3 | G2G3 |
| <u>Cryptantha spithamea</u> | Red Hills cryptantha | Boraginaceae | annual herb | Apr-May | 1B.3 | S2 | G2 |
| <u>Cypripedium montanum</u> | mountain lady's-slipper | Orchidaceae | perennial rhizomatous herb | Mar-Aug | 4.2 | S4 | G4 |
| <u>Delphinium hansenii ssp. ewaniamum</u> | Ewan's larkspur | Ranunculaceae | perennial herb | Mar-May | 4.2 | S3 | G4T3 |
| <u>Diplacus pulchellus</u> | yellow-lip pansy monkeyflower | Phrymaceae | annual herb | Apr-Jul | 1B.2 | S2 | G2 |
| <u>Eryngium jepsonii</u> | Jepson's coyote thistle | Apiaceae | perennial herb | Apr-Aug | 1B.2 | S2? | G2? |
| <u>Eryngium pinnatisectum</u> | Tuolumne button-celery | Apiaceae | annual / perennial herb | May-Aug | 1B.2 | S2 | G2 |
| <u>Eryngium racemosum</u> | Delta button-celery | Apiaceae | annual / perennial herb | Jun-Oct | 1B.1 | S1 | G1 |
| <u>Eryngium spinosepalum</u> | spiny-sepaled button-celery | Apiaceae | annual / perennial herb | Apr-Jun | 1B.2 | S2 | G2 |
| <u>Erythranthe marmorata</u> | Stanislaus monkeyflower | Phrymaceae | annual herb | Mar-May | 1B.1 | SX | GXQ |
| <u>Erythronium tuolumnense</u> | Tuolumne fawn lily | Liliaceae | perennial bulbiferous herb | Mar-Jun | 1B.2 | S2S3 | G2G3 |
| <u>Fritillaria agrestis</u> | stinkbells | Liliaceae | perennial bulbiferous herb | Mar-Jun | 4.2 | S3 | G3 |
| <u>Githopsis pulchella ssp. serpentinicola</u> | serpentine bluecup | Campanulaceae | annual herb | May-Jun | 4.3 | S3 | G4T3 |
| <u>Horkelia parryi</u> | Parry's horkelia | Rosaceae | perennial herb | Apr-Sep | 1B.2 | S2 | G2 |
| <u>Iris hartwegii ssp. columbiana</u> | Tuolumne iris | Iridaceae | perennial rhizomatous herb | May-Jun | 1B.2 | S1 | G4T1 |
| <u>Jepsonia heterandra</u> | foothill jepsonia | Saxifragaceae | perennial herb | Aug-Dec | 4.3 | S3 | G3 |
| <u>Lagophylla dichotoma</u> | forked hare-leaf | Asteraceae | annual herb | Apr-May | 1B.1 | S2 | G2 |
| <u>Lomatium congdonii</u> | Congdon's lomatium | Apiaceae | perennial herb | Mar-Jun | 1B.2 | S2 | G2 |
| <u>Lupinus spectabilis</u> | shaggyhair lupine | Fabaceae | annual herb | Apr-May | 1B.2 | S2 | G2 |
| <u>Monardella venosa</u> | veiny monardella | Lamiaceae | annual herb | May,Jul | 1B.1 | S1 | G1 |
| <u>Navarretia paradoxiclora</u> | Patterson's navarretia | Polemoniaceae | annual herb | May-Jun(Jul) | 1B.3 | S2 | G2 |

| | | | | | | | |
|---|-----------------------|-------------|----------------|---------|------|----|--------|
| <u>Piperia michaelii</u> | Michael's rein orchid | Orchidaceae | perennial herb | Apr-Aug | 4.2 | S3 | G3 |
| <u>Senecio clevelandii</u> <u>var. heterophyllus</u> | Red Hills ragwort | Asteraceae | perennial herb | May-Jul | 1B.2 | S2 | G4?T2Q |
| <u>Trichostema rubisepalum</u> | Hernandez bluecurls | Lamiaceae | annual herb | Jun-Aug | 4.3 | S4 | G4 |
| <u>Verbena californica</u> | Red Hills vervain | Verbenaceae | perennial herb | May-Sep | 1B.1 | S2 | G2 |

Suggested Citation

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Questions and Comments

rareplants@cnps.org

Attachment C

Potential for Special-Status Species and Critical Habitats in the Region to Occur in the Project site

Attachment C. Potential for Special-Status Species and Critical Habitats in the Region to Occur in the Project Site

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|---|--|--|--------------------|---|
| Invertebrates | | | | |
| <i>Bombus crotchii</i> crotch bumblebee | --/SCE/-- | Crotch bumble bee occurs in grassland and scrub habitats (CDFW 2019a). New colonies are initiated by solitary queens, generally in the early spring, which typically occupy abandoned rodent burrows (CDFW 2019a). This species is a generalist forager and individuals have been reported visiting a wide variety of flowering plants. This species has a short tongue and typically prefers open flowers with short corollas but is known to chew through the base of flowers with long corollas. The flight period for queens in California is from February to October. New queens hibernate over the winter and initiate a new colony the following spring (CDFW 2019a). This species is rare throughout its range and in decline in the Central Valley and southern California (CDFW 2019a). | Will not occur | There is no suitable grassland and/or scrub habitat for this species in the project site. Patches of grassland in the project site are too small to support this species. |
| <i>Bombus occidentalis</i> Western bumblebee | --/SCE/-- | Bumble bees are primitively eusocial insects. New colonies are initiated by solitary queens, in the early spring, which occupy abandoned rodent burrows (Thorp <i>et al.</i> 1983). This species is a generalist forager that visit a wide variety of flowering plants. This species has a short tongue and typically prefers open flowers with short corollas but is known to chew through the base of flowers with long corollas. The flight period for queens in California is from early February to late November, peaking in late June and late September. New queens hibernate over the winter and initiate a new colony the following spring (Thorp <i>et al.</i> 1983). This species is rare throughout its range and is limited to high | Will not occur | This species is considered to be extirpated from the project region. |

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|---|--|---|--------------------|---|
| | | meadows in the Sierra Nevada and along the coast (CDFW 2019a). | | |
| <i>Branchinecta lynchi</i> vernal pool fairy shrimp | FT/--/-- | Vernal pools ranging from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. It is most frequently found in pools measuring less than 0.05 acre; although has been collected from vernal pools exceeding 25 acres. The known range within California includes the Central Valley and southern California (USFWS 2005). | Will not occur | There is no suitable vernal pool habitat for this species in the project site. |
| <i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle | FT/--/-- | Endemic to elderberry shrubs (<i>Sambucus</i> spp.) occurring in riparian habitat in the Sacramento and San Joaquin Valleys, riparian habitats in the Sacramento and San Joaquin Valleys, and less common throughout riparian forests of the Central Valley from Redding to Fresno County typically below 152 m amsl (USFWS 2017). | Will not occur | Elderberry shrubs are present in the project site. However, at an elevation of greater than 400 meters amsl, the project site is located well above the current known elevational range of this species (USFWS 2017). Nearby records in the CNDDDB are dated from 20 years ago and are located over 6 miles east of the project site along the margins of New Melones Reservoir. Historic CNDDDB records of this species may not reflect the species range per the recent USFWS guidance from 2017. |
| Fishes | | | | |
| <i>Hypomesus transpacificus</i> Delta smelt | FT/--/-- | Delta smelt spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally-influenced backwater sloughs and channel edgewater. Although spawning has not been observed in the wild, the eggs are thought to attach to substrates such as cattails, tules, tree roots and submerged branches. Delta smelt are found only | Will not occur | The project site is located outside of this species known geographic range. |

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|---|--|---|--------------------|--|
| | | from the Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties (USFWS 1995). | | |
| <i>Lavinia symmetricus</i> ssp. 1 San Joaquin roach | --/--/SSC | San Joaquin roach are found in mid-elevation small streams but may also occur in main channels of larger rivers. May occupy a wide-range of temperature and dissolved oxygen (DO) fluctuations from cold water to warm water habitats with DO as low as 1-2 parts per million (Moyle et. al 2015). This species is particularly well adapted to life in intermittent streams that dry up and form pools. Populations may become dense and isolated (Moyle et. al 2015). | May occur | Suitable habitat is present in Angels Creek and China Gulch for this species and the project site is within its current known range. |
| <i>Lavinia symmetricus</i> ssp. 3 Red Hills roach | --/--/SSC | Red Hills roach are like the San Joaquin roach described above, albeit with an extremely limited range along Six Bit Gulch and its tributaries near Don Pedro Reservoir (Moyle et al. 2015). This species is particularly well adapted to life in intermittent streams that dry up and form pools, however this subspecies of roach is especially vulnerable as a result of its limited range (Moyle et. al 2015). | Will not occur | The project site is outside of the known range of this species. |
| Amphibians | | | | |
| <i>Ambystoma californiense</i> California tiger salamander | FT/ST/-- | California tiger salamanders are generally restricted to vernal pools and seasonal ponds, including many constructed stock ponds, in grassland and oak savannah plant communities from sea level to about 1,500 feet in central California. This species spends the majority of its life in upland areas in the vicinity of suitable breeding ponds, where it inhabits rodent burrows. In order to provide suitable habitat for this species, suitable breeding habitat must be present in combination with suitable upland | Will not occur | Suitable habitat for California tiger salamander is not present in the project site. |

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|---|--|---|--------------------|--|
| | | habitat. In the Coastal region, populations are scattered from Sonoma County in the northern San Francisco Bay Area to Santa Barbara County, and in the Central Valley and Sierra Nevada foothills from Yolo to Kern counties (USFWS 2017). | | |
| <i>Rana boylei</i> Foothill yellow-legged frog | --/CT/SSC | The foothill yellow-legged frog occurs along the coast ranges from Oregon to Los Angeles and along the western side of the Sierra Nevada. This species uses perennial rocky streams in a wide variety of habitats up to 6,400 feet amsl. This species rarely ventures far from water, is usually found basking in the water, or under surface debris or underground within 165 feet of water. Eggs are laid in clusters attached to gravel or rocks along stream margins in flowing water. Tadpoles typically require up to four months to complete aquatic development. Breeding typically follows winter rainfall and snowmelt, which varies based upon location (Jennings and Hayes 1994). | May occur | Suitable rocky stream habitat is present in the project site. Although habitat is present, this stream is located in an urban area, with altered and channelized banks that may render this section of the stream unsuitable. There is one record of this species dated from 1953 approximately 5 miles upstream of the project site (CDFW 2019b). Another record is located in Coyote Creek approximately 3.4 miles east of the project site, where this species was detected during various studies from 1974 through 2005 (CDFW 2019b). |
| <i>Rana draytonii</i> California red-legged frog | FT/--/SSC | The California red-legged frog occupies a fairly distinct habitat, combining both specific aquatic and riparian components. The adults require dense, shrubby or emergent riparian vegetation closely associated with deep (greater than 2 1/3-foot deep) still or slow-moving water. The largest densities of California red-legged frogs are associated with deep-water pools with dense stands of overhanging willows (<i>Salix</i> spp.) and an intermixed fringe of cattails (<i>Typha latifolia</i>). | May Occur | Potentially suitable habitat for California red-legged frog is present in Angels Creek in and adjacent to the project site. However, the potential for occurrence is low because this species was not observed during the biological survey and there are no nearby records that document this species near the project site. In addition, the |

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|---|--|--|--------------------------------------|--|
| | | Well-vegetated terrestrial areas within the riparian corridor may provide important sheltering habitat during winter. California red-legged frogs aestivate (enter a dormant state during summer or dry weather) in small mammal burrows and moist leaf litter. Studies have indicated that this species cannot inhabit water bodies that exceed 70° F, especially if there are no cool, deep portions (USFWS 2002). | | project site is outside of the current known range of this species (USFWS 2002). The nearest recently documented record of California red-legged frog in the CNDDDB is a confirmed population along Young's Creek 17 miles north of the project site (Barry and Fellers 2013). There are no other extant records of this species south of the Young's Creek record in the Sierra Nevada foothills. |
| Reptiles | | | | |
| <i>Actinemys marmorata</i> western pond turtle | --/--/SSC | Turtle that inhabits slow-moving water with dense submerged vegetation, abundant basking sites, gently sloping banks, and dry clay or silt soils in nearby uplands. Turtles will lay eggs up to 0.25-mile from water, but typically go no more than 600 feet (Jennings and Hayes 1994). | May occur | Angels Creek and several nearby ponds provide aquatic habitat for this species. Uplands in the project site within a 0.25-mile radius of aquatic habitat are mostly developed and likely provide only marginal egg laying habitat. |
| <i>Phrynosoma blainvillii</i> Blainville's horned lizard | --/--/SSC | Occurs in the Coast Ranges, southwestern Sierra Nevada, Transverse and Peninsular Ranges, and the southern deserts. Requires sandy soils, chaparral vegetation, and native ant prey (Jennings and Hayes 1994). | Will not occur | Suitable sandy soils are not present in the project site. |
| Birds | | | | |
| <i>Agelaius tricolor</i> tricolored blackbird | --/SCE/-- | Common locally throughout central California. Nests and seeks cover in emergent wetland vegetation, specifically cattails and tules. Nesting area must be large enough to support a minimum colony of 50 pairs as they are a highly colonial species. Forages on ground in | Will not occur (nesting or foraging) | There is no suitable tall freshwater marsh or riparian vegetation in the project site for nesting. Suitable foraging habitat is also not present in the project site. There are several colonies |

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|---|--|---|--------------------|--|
| | | croplands, grassy fields, flooded land, and edges of ponds (Shuford and Gardali 2008). | | near the project site that use impounded sections of streams with emergent vegetation for nesting. The nearest colony is located approximately 2 miles north of the project site and was documented in 2015. The report documents repeated observations of nesting with the latest observation noting that the nesting colony failed in 2015 (CDFW 2019b). The nesting location documented in CNDDDB is surrounded by open grassland and cattle grazed lands, which provide foraging habitat for this species. |
| <i>Elanus leucurus</i> white-tailed kite | --/--/FP | Forages over open grasslands, savannahs, marshes, and cultivated fields. Nests in trees in a variety of locations including isolated trees, and edges and interior of stands (Zeiner <i>et al.</i> 1990). | May occur | There is suitable nesting habitat in the project site in oak woodlands. |
| <i>Haliaeetus leucocephalus</i> Bald eagle | FD/SE/FP | Requires large bodies of water with an abundant fish population. Feeds on fish, carrion, small mammals, and water-fowl. Nests are usually located within a 1-mile radius of water. Nests are most often situated in large trees with a commanding view of the area (Zeiner <i>et al.</i> 1990). | Will not occur | Suitable habitat for bald eagle is not present in the project site. |
| Mammals | | | | |
| <i>Antrozous pallidus</i> pallid bat | --/--/SSC | Occurs throughout California except for the high Sierra Nevada and the northern Coast Ranges. Habitats include grasslands, shrublands, woodlands, and forests from sea level to 6,000 feet. Most common in open, dry | May occur | Suitable roosting habitat is present in a bridge, trees, rock walls and buildings along the project alignment. There is one |

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|--|--|---|--------------------|---|
| | | habitats with rocky areas for roosting; roosts also include cliffs, abandoned buildings, bird boxes, and under bridges (Bolster, ed. 1998). | | CNDDDB record in the project site (see text). |
| <i>Bassariscus astutus</i> ringtail | --/--/FP | Widely distributed throughout California in riparian forests, woodlands and shrub dominated habitats with rocky outcrops or tree snags with cavities. This species is omnivorous relying on variety of vertebrate and invertebrate prey in addition to seasonal berry producing plants such as mistletoe (<i>Phoradendron</i> spp.). Avoids open ground and prefers moving from tree to tree through the canopy or jumping from trunk to trunk. This species is poorly known and is currently not tracked by the California Department of Fish and Wildlife. | Will not occur | Habitat is not present for this species in the project site since the riparian habitat is bounded by residential homes with landscaped yards. |
| <i>Corynorhinus townsendii</i> Townsend's big-eared bat | --/--/SSC | Occurs primarily in rural settings and is strongly associated with the availability of caves or cave-like roosting habitat. Population concentrations occur in areas with substantial surface exposures of cavity-forming rock, and in old mining districts. Primarily a cave-dwelling species, but also roosts in cave analogues, especially old mine workings. Has been found in old, mostly abandoned, buildings with darkened, enclosed cave-like attics and in other anthropogenic structures (Bolster, ed. 1998). | Will not occur | There is no suitable roosting habitat in the project site. |
| <i>Eumops perotis californicus</i> western mastiff bat | --/--/SSC | Found throughout California and the southwestern U.S. to west Texas. Roosts in natural crevices in large outcrops of granite, sandstone, or basalt, on cliff faces, among boulders, and in appropriately proportioned cracks in buildings. Roosts are at least 10 feet above the ground (Bolster 1998). | Will not occur | Suitable habitat for roosting and steep drops for catching flight are not present. |
| <i>Lasiurus blossevillii</i> | --/--/SSC | Roosts primarily in woodlands and forests amongst branches and avoids roosting in caves | May occur | Marginal habitat for a maternity roost is present in riparian |

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|---|--|--|--------------------|--|
| <i>Western red bat</i> | | or buildings (Bolster 1998). Forages in open habitat such as croplands, grasslands and shrublands. This species is typically associated with water and has a poor urine concentrating ability. Primarily roosts solitarily in trees from 2–40 feet high in the trees, with females and young roosting higher in the trees than males. Forages along edge habitats (Zeiner et al. 1990). This species is rarely found in the winter at locations that freeze (Pierson et al. 2006). | | habitat along Angels Creek. Habitat is marginal since riparian habitat in the project site abuts to an urban area which experiences constant disturbance. There are no documented roosts near the project site and the only record of this species in the region was detected in flight over New Melones Reservoir in 1999 (CDFW 2019b). |
| <i>Taxidea taxus</i> <i>American badger</i> | --/--/SSC | Inhabits drier open stages of most shrub, forest, and herbaceous habitats with loose, friable soils. Preys on a wide variety of mammals, reptiles, birds, and carrion, and hunts mostly by digging out fossorial prey. Occasionally takes prey on the surface. Not tolerant of cultivation (Williams 1986). | Will not occur | American badger is not expected to occur since the area is predominantly developed surrounding the project site. Badger would not be expected to move through this area even though habitat in the project area is suitable. The project area is isolated and fragmented when compared to the surrounding landscape. |
| Plants | | | | |
| <i>Agrostis hendersonii</i> Henderson's bent grass | --/--/3.2 | An annual herb found in mesic areas in valley and foothill grasslands and in vernal pool habitats in the Sacramento Valley, northern San Joaquin Valley and Sierra Nevada foothills from an elevation of approximately 210 to 915 feet. This species is currently known to occur in Butte, Calaveras, Merced, Shasta, Tehama, and Tuolumne counties. Blooms April to May (CNPS 2019). | Will not occur | Suitable vernal pool and mesic grassland habitat is not present in the project site. |

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|--|--|---|--------------------|---|
| <i>Allium jepsonii</i> Jepson's onion | --/--/1B.2 | A perennial bulbiferous herb in serpentinite or volcanic soils in chaparral, lower montane coniferous forest, and cismontane woodlands. Elevation: 300 – 1,320 meters (m) above mean sea level (amsl) Blooms: April – August (CNPS 2019). | Will not occur | Serpentinite soils are not present in the project site. This species is not known to occur in Calaveras County. |
| <i>Allium tuolumnense</i> Rawhide onion | --/--/1B.2 | A perennial bulbiferous herb in serpentinite soils in cismontane woodland. Elevation: 300 – 600 m amsl. Blooms: March – May (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |
| <i>Arctostaphylos myrtifolia</i> lone manzanita | FT/--/1B.2 | A perennial evergreen tree in acidic, lone soil, or clay and sandy soils in chaparral and cismontane woodland. Elevation: 60 – 580 m amsl. Blooms: November – March (CNPS 2019). | Will not occur | Suitable soils are not present in the project site. This species would have been identifiable during the rare plant survey conducted in April and it was not detected. |
| <i>Arctostaphylos nissenana</i> Nissenan manzanita | --/--/1B.2 | A perennial evergreen tree in rocky soils in closed cone coniferous forest and chaparral. Elevation: 450 – 1,100 m amsl. Blooms: February – March (June) (CNPS 2019). | Will not occur | The project site is below the elevational range of this species. This species would have been identifiable during the rare plant survey conducted in April and it was not detected. |
| <i>Balsamorhiza macrolepis</i> big-scale balsamroot | --/--/1B.2 | Perennial herb. Grows on slopes in chaparral, cismontane woodland, and valley and foothill grassland, sometimes in serpentinite soil. Elevation: 45 – 1,555 m amsl. Flowering period March – June (CNPS 2019). | Will not occur | Steep slope habitat or serpentinite soils are not present in the project site. This species is not known to occur in Calaveras County. |
| <i>Brasenia schreberi</i> Watershield | --/--/2B.3 | A rhizomatous aquatic herb found in natural and artificial freshwater marshes and swamps from 30 to 2,200 meters in elevation. Currently known to occur in Butte, El Dorado, Fresno, Kern, Lake, Lassen, Mendocino, Nevada, Plumas, Sacramento, Shasta, Siskiyou, San Joaquin, Sutter, Tehama, Tulare, and Tuolumne counties. Blooms June to September (CNPS 2019). | Will not occur | Suitable habitat is not present in the project site. There is only one known record in Calaveras County, which is situated on a private ranch approximately 12 miles northeast of the project site. |

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|--|--|---|--------------------|---|
| <i>Brodiaea pallida</i> Chinese Camp brodiaea | FT/SE/1B.1 | Perennial bulbiferous herb. Grows in serpentinite streambeds in cismontane woodland, and valley and foothill grassland. Elevation: 165 – 385 m amsl. Flowering period May – June (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |
| <i>Chlorogalum grandiflorum</i> Red Hills soaproot | --/--/1B.2 | A perennial bulbiferous herb in serpentinite and gabbroic soils in lower montane coniferous forest, cismontane woodland and chaparral. Elevation: 245 – 1,690 m amsl. Flowering period April – May (CNPS 2019). | Will not occur | Suitable serpentinite and gabbroic soils are not present in the project site. |
| <i>Clarkia biloba ssp. australis</i> Mariposa clarkia | --/--/1B.2 | An annual herb in serpentinite soil in cismontane woodland and chaparral. Elevation: 300 – 1,460 m amsl. Flowering period April – July (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |
| <i>Clarkia rostrata</i> Beaked clarkia | --/--/1B.3 | An annual herb in cismontane woodland and valley and foothill grassland. Elevation: 60 – 500 m amsl. Flowering period April – May (CNPS 2019). | Will not occur | Cismontane woodland and grassland habitat is present in the project site; however, the project site is located in an urban area and is dominated by non-native species. There is only one known record for this species in Calaveras County, located approximately 11.5 miles south of the project site and southwest of New Melones Reservoir (CDFW 2019b). This species was not observed in a focused rare plant survey conducted on April 18, 2019, during the appropriate blooming period for this species. |
| <i>Crocanthemum suffrutescens</i> Bisbee peak rush-rose | --/--/3.2 | A perennial evergreen shrub in gabbroic or lone soils, often burned or disturbed in chaparral. Elevation: 75 – 670 m amsl. Flowering period April – August (CNPS 2019). | Will not occur | Suitable gabbroic or lone soils are not present in the project site. |

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|--|--|---|--------------------|--|
| <i>Cryptantha mariposae</i> Mariposa cryptantha | --/--/1B.3 | An annual herb in rocky serpentinite soil in chaparral. Strictly endemic to serpentinite soils. Elevation: 200 – 650 m amsl. Flowering period April – June (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |
| <i>Cryptantha spithamaea</i> Red Hills cryptantha | --/--/1B.2 | An annual herb in serpentinite soil, streambeds and openings in cismontane woodland and chaparral. Elevation: 275 – 460 m amsl. Flowering period April – May (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |
| <i>Diplacus pulchellus</i> Yellow-lipped pansy monkeyflower | --/--/1B.2 | An annual herb in clay soil in meadows and seeps and lower montane coniferous forest (vernally mesic, often disturbed). Elevation: 600 – 2,000 m amsl. Flowering period April – July (CNPS 2019). | Will not occur | The project site is located below the elevational range of this species and suitable clay soil is absent. |
| <i>Eryngium jepsonii</i> Jepson's coyote thistle | --/--/1B.2 | A perennial herb in clay soil in vernal pools and valley and foothill annual grasslands. Elevation: 3 – 300 m amsl. Flowering period April – August (CNPS 2019). | Will not occur | Suitable grassland and vernal pool habitat are not present in the project site. The project site is located above the elevational range of this species. |
| <i>Eryngium pinnatisectum</i> Tuolumne button-celery | --/--/1B.2 | An annual/perennial herb in mesic cismontane woodlands, vernal pools and lower montane coniferous forest. Elevation: 70 – 915 m amsl. Flowering period May – August (CNPS 2019). | Will not occur | Suitable vernal pool habitat is not present in the project site. |
| <i>Eryngium racemosum</i> Delta button-celery | --/SE/1B | An annual/ perennial herb found in vernal mesic clay depressions in riparian scrub from 3 to 30 meters in elevation. Currently known to occur in Calaveras, Contra Costa, Merced, San Joaquin, and Stanislaus counties. Blooms June to September (CNPS 2019). | Will not occur | Suitable clay soil in riparian scrub depression is not present in the project site. |
| <i>Eryngium spinosepalum</i> spiny-sepaled button-celery | --/--/1B.2 | Annual/perennial herb. Occurs in valley and foothill grassland and vernal pools. Occurs at elevations from 80 – 975 m amsl. Flowering period April – June (CNPS 2019). | Will not occur | Suitable grassland and vernal pool habitat are not present in the project site. |

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|---|--|--|--------------------|---|
| <i>Erythranthe marmorata</i> Stanislaus monkeyflower | --/--/1B.1 | An annual herb in cismontane woodland and lower montane coniferous forest. Elevation: 100 – 900 m amsl. Flowering period March – May (CNPS 2019). | Will not occur | Cismontane woodland is present in the project site; however, the project site is located in an urban area and is dominated by non-native species. Additionally, there are no current records in Calaveras County that indicate this species persists. This species was previously considered to be extirpated (CNPS 2019). Additionally, this species was not observed in a focused rare plant survey conducted on April 18, 2019, during the appropriate blooming period for this species. |
| <i>Erythronium tuolumnense</i> Tuolumne fawn lily | --/--/1B.2 | A perennial bulbiferous herb in broad-leaved upland forest, chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 510 – 1,365 m amsl. Flowering period March – June (CNPS 2019). | Will not occur | The project site is located below the elevational range of this species. |
| <i>Horkelia parryi</i> Parry's horkelia | --/--/1B.2 | A perennial herb in chaparral and cismontane woodland. Occurs in lone formation soils and other soils. Elevation: 80 – 1,070 m amsl. Flowering period April – September (CNPS 2019). | Will not occur | Suitable lone soils are not present in the project site. |
| <i>Iris hartwegii</i> ssp. <i>columbiana</i> Tuolumne iris | --/--/1B.2/ | A perennial rhizomatous herb in cismontane woodland and lower montane coniferous forest. Elevation: 425 – 1,400 m amsl. Flowering period May – June (CNPS 2019). | Will not occur | Suitable habitat is not present for this species. The closest record of this species is located in Snake Gulch of New Melones Reservoir. |
| <i>Lagophylla dichotoma</i> Forked hare-leaf | --/--/1B.1 | An annual herb in cismontane woodland and valley and foothill grassland, sometimes in clay. Elevation: 45 – 335 m amsl. Flowering period April – May (CNPS 2019). | Will not occur | Cismontane woodland and grassland are present in the project site; however, the project site is located in an |

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|---|--|---|--------------------|--|
| | | | | urban area and is dominated by non-native species. Additionally, the project site is located at or above the upper elevational range of this species. This species was not observed in a focused rare plant survey conducted on April 18, 2019, during the appropriate blooming period for this species. |
| <i>Lomatium congdonii</i> Congdon's lomatium | --/--/1B.2 | A perennial herb in serpentinite soils in chaparral and cismontane woodlands. Elevation: 300 – 2,100 m amsl. Flowering period March – June (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |
| <i>Lupinus spectabilis</i> Shaggy lupine | --/--/1B.2 | An annual herb in serpentinite soils in chaparral and cismontane woodlands. Elevation: 260 – 825 m amsl. Flowering period April – May (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |
| <i>Monardella venosa</i> Veiny monardella | --/--/1B.1 | An annual herb in heavy clay soils in cismontane woodlands and valley and foothill grasslands. Elevation: 60 – 410 m amsl. Flowering period May – July (CNPS 2019). | Will not occur | Suitable heavy clay soils are not present in the project site. |
| <i>Navarretia miwukensis</i> Mi-Wuk navarretia | --/--/1B.2 | An annual herb in lower montane coniferous forest in open and sparsely vegetated pyroclastic flows. Elevation: 800 – 1,500 m amsl. Blooms: May – August | Will not occur | The project site is located below the elevational range of this species and habitat is not present. |
| <i>Navarretia paradoxiclara</i> Patterson's navarretia | --/--/1B.3 | Annual herb found in meadows and seeps. Often found in drainages, openings, vernal mesic sites and serpentinite soil. Elevation: 150 – 430 m amsl. Flowering period April – July (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |
| <i>Senecio clevelandii</i> var. <i>heterophyllus</i> | --/--/1B.2 | A perennial herb in serpentinite seeps in cismontane woodlands. | Will not occur | Suitable serpentinite soils are not present in the project site. |

| Scientific Name/ Common Name | FESA/CESA/ CRPR or Other State Status* | General Habitat Description | Potential to Occur | Rationale |
|---|--|--|--------------------|--|
| Red Hills ragwort | | Elevation: 260 – 385 m amsl. Flowering period May – July (CNPS 2019). | | |
| <i>Verbena californica</i> Red Hills vervain | FT/ST/1B.1/-- | A perennial herb in mesic, usually serpentinite seeps or creeks in cismontane woodland and valley and foothill grassland. Elevation: 260 – 400 m amsl. Flowering period May – September (CNPS 2019). | Will not occur | Suitable serpentinite soils are not present in the project site. |

Note: Bold font indicates a species with the potential to occur in the project site; these species are evaluated in detail in the body of the report.

*FESA=Federal Endangered Species Act; CESA=California Endangered Species Act; FE – FESA endangered; FT – FESA threatened; FC – FESA candidate; FD – FESA delisted; SE – CESA endangered; ST – CESA threatened; SCE – CESA candidate endangered; SSC – state species of special concern; FP = Fully Protected; CRPR – California Rare Plant Rank (see definitions of CRPR rankings below)

CNPS ratings:

1B = Rare, threatened, or endangered in California and elsewhere

1B.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

1B.2 = Fairly endangered in California (20-80% occurrences threatened)

1B.3 = not very endangered

3 = More information needed.

.2 = Fairly endangered in California (20-80% occurrences threatened)

³Status in the Project site is assessed as follows. **Will Not Occur:** Species is either sessile (*i.e.* plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur on the project site and/or the project site is located outside of the known range of the species; **Not Expected:** Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur on the project site, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty; **Presumed Absent:** Habitat suitable for residence and breeding occurs on the project site; however, focused surveys conducted for the current project were negative; **May Occur:** Species was not observed on the site and breeding habitat is not present but the species has the potential to utilize the site for dispersal, **High:** Habitat suitable for residence and breeding occurs on the project site and the species has been recorded recently on or near the project site, but was not observed during surveys for the current project; **Present:** The species was observed during biological surveys for the current project and is assumed to occupy the project site or utilize the project site during some portion of its life cycle.

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Attachment D

Plant and Wildlife Species Observed in the Project site

Plant Species Observed

| Family | Species Name | Common Name | Status |
|-----------------|---|------------------------------|--------|
| Native | | | |
| Adoxaceae | <i>Sambucus nigra ssp. caerulea</i> | blue elderberry | -- |
| Agavaceae | <i>Chlorogalum pomeridianum</i> | Amole | -- |
| Anacardiaceae | <i>Toxicodendron diversilobum</i> | poison oak | -- |
| Asteraceae | <i>Artemisia douglasiana</i> | California mugwort | -- |
| | <i>Baccharis pilularis</i> | coyote brush | -- |
| Betulaceae | <i>Alnus rhombifolia</i> | White alder | -- |
| Boraginaceae | <i>Amsinckia menziesii</i> | Common fiddleneck | -- |
| | <i>Nemophila heterophylla</i> | Canyon nemophila | -- |
| Brassicaceae | <i>Lepidium nitidum</i> | shining peppergrass | -- |
| Caryophyllaceae | <i>Silene lacinata</i> | Cardinal catchfly | -- |
| Cucurbitaceae | <i>Marah watsonii</i> | Manroot | -- |
| Cyperaceae | <i>Carex densa</i> | Sedge | -- |
| | <i>Carex praegracilis</i> | Field sedge | -- |
| | <i>Cyperus eragrostis</i> | tall flatsedge | -- |
| Equisetaceae | <i>Equisetum laevigatum</i> | Smooth scouring rush | -- |
| Fabaceae | <i>Acmispon americanus</i> | American bird's foot trefoil | -- |
| Fagaceae | <i>Quercus lobata</i> | valley oak | -- |
| | <i>Quercus wislizeni</i> | interior live oak | -- |
| Juglandaceae | <i>Juglans hindsii</i> | California black walnut | -- |
| Juncaceae | <i>Juncus mexicanus</i> | Mexican rush | -- |
| Montiaceae | <i>Claytonia parviflora</i> | Miner's lettuce | -- |
| Oleaceae | <i>Fraxinus latifolia</i> | Oregon ash | -- |
| Onagraceae | <i>Epilobium ciliatum ssp. Ciliatum</i> | willow herb | -- |
| Onagraceae | <i>Clarkia spp.</i> | Clarkia | -- |
| Papaveraceae | <i>Dicentra formosa</i> | Pacific bleeding heart | -- |
| | <i>Eschscholzia californica</i> | California poppy | -- |
| Pinaceae | <i>Pinus sabiniana</i> | foothill pine | -- |
| Polemoniaceae | <i>Leptosiphon bicolor</i> | True babystars | -- |
| Rhamnaceae | <i>Rhamnus californica</i> | California coffeeberry | -- |
| Rosaceae | <i>Drymocallis glandulosa</i> | sticky cinquefoil | -- |
| | <i>Heteromeles arbutifolia</i> | toyon | -- |
| | <i>Rosa californica</i> | California rose | -- |
| Rubiaceae | <i>Galium aparine</i> | Stickywilly | -- |
| Salicaceae | <i>Populus fremontii</i> | Fremont cottonwood | -- |

| Family | Species Name | Common Name | Status |
|-------------------|--------------------------------|-----------------------|----------|
| | <i>Salix exigua</i> | narrowleaf willow | -- |
| | <i>Salix laevigata</i> | red willow | -- |
| Sapindaceae | <i>Aesculus californicus</i> | California buckeye | -- |
| Saxifragaceae | <i>Lithophragma bolanderi</i> | Hillstar | -- |
| Urticaceae | <i>Urtica dioica</i> | Stinging nettle | -- |
| Vitaceae | <i>Vitis californica</i> | California wild grape | -- |
| Non-native | | | |
| Amaryllidaceae | <i>Amaryllis belladonna</i> | Naked lady | -- |
| Apiaceae | <i>Torilis arvensis</i> | field hedge parsley | Moderate |
| Apocynaceae | <i>Vinca major</i> | Periwinkle | Moderate |
| Araceae | <i>Zantedeschia aethiopica</i> | Common calla | Limited |
| Araliaceae | <i>Hedera helix</i> | English ivy | High |
| Asteraceae | <i>Carduus pycnocephalus</i> | Italian thistle | Moderate |
| | <i>Centaurea solstitialis</i> | yellow star thistle | High |
| | | | Moderate |
| | <i>Cirsium vulgare</i> | bull thistle | --/C |
| | <i>Silybum marianum</i> | milk thistle | Limited |
| Brassicaceae | <i>Brassica nigra</i> | black mustard | Moderate |
| Convolvulaceae | <i>Convolvulus arvensis</i> | Field bindweed | --/C |
| Fabaceae | <i>Lathyrus latifolius</i> | Everlasting pea | -- |
| | <i>Robinia pseudoacacia</i> | black locust | Limited |
| | <i>Trifolium dubium</i> | Shamrock clover | -- |
| | <i>Trifolium hirtum</i> | rose clover | Limited |
| | <i>Vicia spp.</i> | Vetch | -- |
| Geraniaceae | <i>Erodium botrys</i> | long-beak filaree | -- |
| | <i>Geranium molle</i> | crane's bill geranium | -- |
| Iridaceae | <i>Iris pseudacorus</i> | Horticultural iris | Limited |
| Juglandaceae | <i>Carya illinoensis</i> | pecan | -- |
| Lythraceae | <i>Punica granatum</i> | pomegranate | -- |
| Moraceae | <i>Ficus carica</i> | Common fig | Moderate |
| | <i>Morus alba</i> | Mulberry | -- |
| Oleaceae | <i>Ligustrum lucidum</i> | glossy privet | Limited |
| | <i>Olea europaea</i> | Olive | Limited |
| Plantaginaceae | <i>Plantago lanceolata</i> | English plantain | Limited |
| Poaceae | <i>Avena sativa</i> | cultivated oats | -- |
| | <i>Bromus diandrus</i> | ripgut brome | Moderate |
| | <i>Bromus hordeaceus</i> | soft brome | Limited |
| | <i>Cynosurus echinatus</i> | bristly dogtail grass | Moderate |

| Family | Species Name | Common Name | Status |
|------------------|--|------------------------|----------|
| | <i>Cynodon dactylon</i> | Bermuda grass | Moderate |
| | <i>Festuca perennis</i> | Italian ryegrass | -- |
| | <i>Festuca myuros</i> | Rattail sixweeks grass | Moderate |
| | <i>Hordeum marinum</i> ssp. <i>Gussoneanum</i> | seaside barley | Moderate |
| | <i>Hordeum murinum</i> | Foxtail barely | Moderate |
| | <i>Paspalum dilatatum</i> | dallis grass | -- |
| | <i>Poa annua</i> | Annual blue grass | -- |
| | <i>Poa bulbosa</i> | Bulbous blue grass | -- |
| | <i>Polypogon monspeliensis</i> | annual beardgrass | Limited |
| Polygonaceae | <i>Rumex crispus</i> | curly dock | Limited |
| Rosaceae | <i>Rubus armeniacus</i> | Himalayan blackberry | High |
| | <i>Prunis</i> spp. | domestic plum | -- |
| Scrophulariaceae | <i>Verbascum thapsus</i> | common mullein | Limited |
| | <i>Verbascum blattaria</i> | moth mullein | -- |
| Simaroubaceae | <i>Ailanthus altissima</i> | tree-of-heaven | Moderate |

Cal-IPC Rating = Limited –; Moderate –; High.

CDFA Rating = C –

Wildlife Species Observed

| Order/Family | Species Name | Common Name | Status* |
|-------------------|----------------------------------|-----------------------|---------|
| Amphibians | | | |
| Anura | | | |
| Hylidae | <i>Pseudocris sierra</i> | Sierran treefrog | -- |
| Reptiles | | | |
| Squamata | | | |
| Phrynosomatidae | <i>Sceloporus occidentalis</i> | western fence lizard | -- |
| Scincidae | <i>Plestiodon gilberti</i> | Gilbert's skink | -- |
| Birds | | | |
| Accipitriformes | | | |
| Accipitridae | <i>Buteo jamaicensis</i> | red-tailed hawk | -- |
| | <i>Buteo lineatus</i> | red-shouldered hawk | -- |
| Cathartidae | <i>Cathartes aura</i> | Turkey vulture | -- |
| Anseriformes | | | |
| Anatidae | <i>Anas platyrhynchos</i> | Mallard | -- |
| | <i>Branta canadensis</i> | Canada goose | -- |
| Caprimulgiformes | | | |
| Trochilidae | <i>Calypte anna</i> | Anna's hummingbird | -- |
| Columbiformes | | | |
| Columbidae | <i>Patagionenas fasciata</i> | band-tailed pigeon | -- |
| | <i>Zenaida macroura</i> | mourning dove | -- |
| Coraciiformes | | | |
| Alcedinidae | <i>Megaceryle alcyon</i> | Belted kingfisher | -- |
| Falconiformes | | | |
| Falconidae | <i>Falco sparverius</i> | American kestrel | -- |
| Galliformes | | | |
| Odontophoridae | <i>Callipepla californica</i> | California quail | -- |
| Passeriformes | | | |
| Aegithalidae | <i>Psaltiriparus minimus</i> | bushtit | -- |
| Cardinalidae | <i>Pheucticus melanocephalus</i> | Black-headed grosbeak | -- |
| Corvidae | <i>Aphelocoma californica</i> | California scrub jay | -- |
| | <i>Corvus corax</i> | common raven | -- |
| Fringillidae | <i>Haemorhous mexicanus</i> | house finch | -- |
| | <i>Spinus psaltria</i> | Lesser goldfinch | -- |
| Icteridae | <i>Euphagus cyanocephalus</i> | Brewer's blackbird | -- |
| Mimidae | <i>Mimus polyglottos</i> | Northern mockingbird | -- |
| Paridae | <i>Baeolophus inornatus</i> | Oak titmouse | -- |

| Order/Family | Species Name | Common Name | Status* |
|----------------|---------------------------------|----------------------------|---------|
| Parulidae | <i>Setophaga coronate</i> | yellow-rumped warbler | -- |
| Passerellidae | <i>Junco hyemalis</i> | Dark-eyed junco (Oregon) | -- |
| | <i>Melospiza crissalis</i> | California towhee | -- |
| | <i>Pipilo maculatus</i> | Spotted towhee | -- |
| | <i>Zonotrichia leucophrys</i> | White-crowned sparrow | -- |
| | <i>Sitta carolinensis</i> | white-breasted nuthatch | -- |
| Sittidae | <i>Sitta carolinensis</i> | white-breasted nuthatch | -- |
| Sturnidae | <i>Sturnus vulgaris</i> | European starling | -- |
| Troglodytidae | <i>Thryomanes bewickii</i> | Bewick's wren | -- |
| Turdidae | <i>Sialia mexicana</i> | western bluebird | -- |
| | <i>Turdus migratorius</i> | American robin | -- |
| Tyrannidae | <i>Myiarchus cinerascens</i> | ash-throated flycatcher | -- |
| | <i>Sayornis nigricans</i> | Black phoebe | -- |
| | <i>Tyrannus verticalis</i> | Western kingbird | -- |
| Pelecaniformes | | | |
| Ardeidae | <i>Ardea alba</i> | Great egret | -- |
| Piciformes | | | |
| Picidae | <i>Colaptes auratus</i> | northern flicker | -- |
| | <i>Dryobates nuttallii</i> | Nuttall's woodpecker | -- |
| | <i>Melanerpes formicivorus</i> | Acorn woodpecker | -- |
| Mammals | | | |
| Artiodactyla | | | |
| Cervidae | <i>Odocoileus hemionus</i> | mule deer | -- |
| Carnivora | | | |
| Canidae | <i>Canis latrans</i> | coyote | -- |
| Procyonidae | <i>Procyon lotor</i> | Raccoon | -- |
| Rodentia | | | |
| Sciuridae | <i>Otospermophilus beecheyi</i> | California ground squirrel | -- |
| | <i>Sciurus griseus</i> | western gray squirrel | -- |
| | <i>Sciurus niger</i> | Eastern fox squirrel | -- |

*Status for animal species: -- = none.

Attachment E

Representative Site Photographs



Photo 1. Photo of the existing above ground sewer line taken underneath the bridge on Booster Way over Angels Creek looking east.



Photo 2. Photo taken from Booster Way bridge over Angels Creek looking east near manhole #45.



Photo 3. Photo of the existing alignment south of Booster Way taken from manhole #43 looking southeast. The existing alignment is vegetated with ruderal herbaceous species in this segment.



Photo 4. Photo taken from manhole #41 looking northwest across Vallecito Road/State Route 4.



Photo 5. Photo taken from a staging area between manholes #41 and #39 and looking south along Angels Creek. Riparian vegetation is patchy and largely confined to the creek channel in this segment.



Photo 6. Photo taken from a paved staging area between manholes #36 and #37 along Angels Creek looking southwest. Riparian vegetation is largely confined to the creek channel in this segment.



Photo 7. Photo taken of existing sewer line in Angels Creek near manhole #33 looking south. The existing sewer line is above ground in this segment.



Photo 8. Photo taken of existing sewer line in Angels Creek near manhole #32A looking north. Existing sewer line is above ground in this segment.



Photo 9. Photo taken along existing sewer alignment near manhole #20 in valley oak woodland looking west. The existing alignment is vegetated primarily with ruderal herbaceous species in this segment, along with shrubs and vines.



Photo 10. Photo taken showing manhole #19 in valley oak woodland looking west.



Photo 11. Photo of the existing sewer alignment taken near manhole #17 looking south showing a proposed staging area. Vegetation is primarily weedy grasses and forbs.



Photo 12. Photo of the existing sewer alignment taken near manhole #16 looking east toward a proposed staging area. The existing alignment is primarily vegetated with ruderal herbaceous species in this segment as well as small trees and shrubs.



Photo 13. Photo taken of manholes #15 and 15A in the existing sewer alignment looking west. The existing alignment is vegetated with ruderal herbaceous species in this segment.



Photo 14. Photo of the existing sewer alignment taken at manhole #10 along an old vegetated dirt road looking southwest. The existing alignment is vegetated with ruderal herbaceous species in this segment.



Photo 15. Photo of the existing sewer alignment taken from the southern terminus of the project near manhole #9 looking northeast. The existing alignment is vegetated with ruderal herbaceous species in this segment.

Appendix D

Cultural Resources Assessment Report
(*Confidential - Not for Public Use*)