DRAFT

Initial Study/Mitigated Negative Declaration

Sugar Bowl Sewer Extension Project

SEPTEMBER 2023

Prepared for:

Donner Summit Public Utility District
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Soda Springs, California 95728
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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
AMSL	above mean sea level
APE	Area of Potential Effect
BMP	best management practice
BRA	Biological Resources Assessment
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFC	California Fire Code
CH_4	methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CWPP	Community Wildfire Protection Plan
dB	decibel
dBA	A-weighted decibel
DSPUD	Donner Summit Public Utility District
DTSC	Department of Toxic Substances Control
EDU	equivalent dwelling unit
EO	Executive Order
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FTA	Federal Transit Administration
GHG	greenhouse gas
GWP	global warming potential
hz	hertz
I	Interstate
IPCC	Intergovernmental Panel on Climate Change
ips	inches per second
IS	Initial Study
L_{dn}	day–night average noise level
L_{eq}	energy-equivalent noise level
L_{xx}	noise level equaled or exceeded x% of the time
MCAB	Mountain Counties Air Basin
MGD	million gallons per day
MM	mitigation measure
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MT	metric ton

N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
O_3	ozone
OEHHA	Environmental Protection Agency's Office of Environmental Health Hazard Assessment
PCAPCD	Placer County Air Pollution Control District
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
PPV	peak particle velocity
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SIP	State Implementation Plan
SR	State Route
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	Tribal Cultural Resource
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compound

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1 Introduction

1.1 Project Overview

The proposed project (Project) includes extending existing sewer mains to service existing residences in the Sugar Bowl Property Owners residential subdivision at the base of the Sugar Bowl Ski Resort in Placer County. The residences are currently served by individual onsite wastewater disposal systems (septic systems). The Project consists of two phases: Phase 1 consists of excavating trenches and installing two sewer collection lines totaling approximately 1,420 linear feet. The Phase 1 sewer collection lines would serve 32 residences. Phase 2 consists of excavating trenches and installing gravity flow collection lines totaling approximately 3,100 linear feet. The Phase 2 sewer collection lines would provide service to 25 residences. The new sewer mains would be installed primarily within the existing roadway sections to minimize tree removals and impacts outside of the roadway section. Sewer main collector lines in the street would generally be 6-inch diameter while laterals serving individual properties would be 4-inch diameter. Manholes would be 48 inches and end of line cleanouts and manholes would be placed intermittently per code. A segment of the Phase 2 sewer collection line would cross under the South Yuba River and would be placed using jack-and-bore directional drilling to avoid disturbance to the bed and bank of the river. Trenching and pipe installation would be completed without disturbing an existing culvert that crosses Mule Ears Drive and the Project would not disturb the aquatic features along Mule Ears Drive. Construction staging areas have not been identified but would be limited to previously disturbed or developed areas.

1.2 California Environmental Quality Act Compliance

The Project is subject to review under the California Environmental Quality Act (CEQA). In accordance with Section 15051 of the CEQA Guidelines, "Criteria for Identifying the Lead Agency," Donner Summit Public Utility District (DSPUD), as a public agency proposing to carry out the Project, is the Lead Agency for the purposes of CEQA compliance.

This document is an Initial Study (IS) and proposed Mitigated Negative Declaration (MND) prepared by DSPUD pursuant to Title 14 of the California Code of Regulations, Section 15063 of the California Environmental Quality Act (CEQA) Guidelines. Section 15063 of the Guidelines requires the Lead Agency to prepare an IS to analyze the potential environmental impacts associated with a Project to determine if the Project could have a significant effect on the environment. This IS/MND has been prepared per CEQA Guidelines Sections 15070-15075 to identify potential environmental impacts of the proposed Project and to identify mitigation measures to avoid or reduce the significance of those impacts. CEQA requires the Lead Agency to adopt a mitigation monitoring and reporting program (MMRP) for all required mitigation measures. The MMRP is attached as Appendix B to this IS/MND.

1.3 Public Review Process

The proposed IS/MND is subject to a 30-day public review period. Approval of the IS/MND and the Project will be considered by DSPUD's Board of Directors at a public hearing. The public is encouraged to provide written comments during the 30-day review period, and/or attend the Board of Director's hearing.

Comments may be submitted to DSPUD by email at:

spalmer@dspud.com

or by U.S. mail:

Donner Summit Public Utility District (DSPUD)
53823 Sherritt Lane
P.O. Box 610
Soda Springs, California 95728

The Notice of Intent to adopt a mitigated negative declaration pursuant to Sections 21092 and 21092.3 of the Public Resources Code and CEQA Guidelines Section 15072 is provided on the following page. The Notice of Intent identifies the location, time and date of the public hearing at which DSPUD's Board of Directors will consider approval of the Project and this Initial Study and Mitigated Negative Declaration.

NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION

(Pursuant to PRC Section 21092 and CEQA Guidelines Section 15072)

AND

NOTICE OF PUBLIC HEARING
Sugar Bowl Sewer Extension Project

The Donner Summit Public Utility District (DSPUD) proposes to adopt a Mitigated Negative Declaration pursuant to the California Environmental Quality Act (CEQA)(Section 15000 et seq., Title 14, California Code of Regulations) for the Sugar Bowl Sewer Extension Project (Project). The Project site is within the Sugar Bowl Property Owners residential subdivision in the Sugar Bowl Village area at the base of the Sugar Bowl Ski Resort in Placer County. The Project site is approximately 2.5 miles south of Interstate 80 and is accessed from Donner Pass Road via Sugar Bowl Road or Old Donner Summit Road. The site is located in Township 17N, Range 14E, Sections 20, 21, 25, 28, 29, and 36 of the Norden, CA U.S. Geologic Survey 7.5-minute quadrangle. The approximate center of the Project site corresponds to 39°18'09.6" north latitude and 120°20'20.8" west longitude.

Project Description: The Project includes extending the existing sewer collection system to serve residences in the Sugar Bowl Property Owners residential subdivision. These residential parcels are currently served by onsite wastewater disposal systems (septic systems). The Project would consist of two phases in which a total of approximately 4,520 linear feet of collection lines would be installed underground within existing roadway right-of-way. The sewer collection line would cross under the South Yuba River by jack and bore/horizontal drilling to avoid surface disturbance to the bed or bank of the stream channel.

Hearing: DSPUD's Board of Directors will hold a public hearing on Tuesday, October 17th, 2023, at 6:00 pm at 53823 Sherritt Lane, Soda Springs, CA (DSPUD's Office) to consider adopting the Mitigated Negative Declaration. The meeting may also be attended, and comments provided, remotely via a web-conferencing link that will be posted to the Project page on DSPUD's website (www.dspud.com/sugar-bowl) on the Friday preceding the meeting.

Public Comment: Written comments on the proposed Mitigated Negative Declaration and Draft Initial Study will be received from September 12th, 2023, to October 12th, 2023. A copy of the documents can be reviewed at DSPUD's District Office at 53823 Sherritt Lane, Soda Springs, CA or online at www.dspud.com/sugar-bowl. Requests for additional information and comments can be sent to Steve Palmer, DSPUD General Manager, at DSPUD's District Office (address above) or emailed to spalmer@dspud.com. Verbal comments may also be provided at the public hearing.

Accessibility: In accordance with the Americans with Disabilities Act and California law, it is the policy of DSPUD to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including individuals with disabilities. If you require any accommodation for this meeting, please contact DSPUD at least 72 hours prior to the meeting. Advance notification within this guideline will enable DSPUD to make reasonable accommodations to ensure accessibility.

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2 Project Setting and Description

2.1 Project Location

The Project site consists of approximately 11.05 acres within the Sugar Bowl Property Owners residential subdivision near the crest of the Sierra Nevada in the Sugar Bowl Village area at the base of Sugar Bowl Ski Resort in Placer County, California (Figure 1 – Project Location, Figure 2 – Project Site). The Project site is approximately 2.5 miles south of Interstate 80 and is accessed from Donner Pass Road via Sugar Bowl Road or Old Donner Summit Road. The Village Gondola located off Donner Pass Road also provides access to the site from Donner Pass Road when in operation during ski season. The site is located in Township 17N, Range 14E, and Sections 20, 21, 25, 28, 29, and 36 of the Norden, CA U.S. Geologic Survey 7.5-minute quadrangle. The approximate center of the Project site corresponds to 39°18'09.6" north latitude and 120°20'20.8" west longitude.

2.2 Existing Conditions and Setting

2.2.1 Existing On-Site Conditions

Elevations on the Project site range from approximately 6,085 feet above mean sea level (AMSL) in the center of the site to 7,068 AMSL in the western portion of the site. The site is within a residential neighborhood at the base of the Sugar Bowl Ski Resort and is generally characterized by red fir forest and woodland with disturbed and developed components including residences and paved and dirt roads and resort facilities including a gondola, ski lifts, and visitor-serving resort facilities; the Sugar Bowl Ski Resort's Village and Judah Lodges are just northeast of the Project site (refer to Figure 2). The Project would require work within the existing roadways including Old Donner Summit Road, Pennyroyal Lane, Mule Ears Drive, Aster Court, Corn Lily Lane, Fiddleneck Place, and Paint Brush Hill Court. Pennyroyal Lane crosses via a bridge over the South Yuba River and associated riparian area at the north end of the Project site and culverts and associated ephemeral and intermittent drainage features occur along Mule Ears Drive and Pennyroyal Lane (Figure 3 – Master Plan Exhibit). The Project roadways are a mix of gravel and asphalt pavement. The only paved roadways within the Project area include Aster Court and a small portion of Old Donner Summit Road. A small wet meadow area of approximately 0.01 acre exists on the south side of Mule Ears Drive approximately 250 feet west of the Pennyroyal Lane/Mule Ears Drive intersection and is associated with the ephemeral drainage and culverts in this location (refer to Appendix D – Biological Resources Report).

The Project site is generally centered on existing roads within the residential subdivision. Zoning applied to developed areas within the subdivision is RS-B-20 (Residential-Single Family - Building Site - 20,000 square foot minimum lot size) and RS-B-20 PD = 2 (Residential-Single Family - Building Site - 20,000 square foot minimum lot size – Planned Development – 2 units per acre). Land use designations applied to lands within the subdivision by the Placer County General Plan include Resorts and Recreation 1, Tourist/Resort Commercial, and Medium Density Residential. Resorts and Recreational and Medium Density Residential designations both allow for residential uses whereas Tourist/Resort Commercial allow for overnight lodging facilities of all types as well as other commercial visitor-serving and resort uses. Designations of Tourist/Resort Commercial are typically applied to major recreational destinations such as ski areas or other types of resorts.

2.2.2 Surrounding Land Uses

Lands surrounding the Project site can generally be described as including a mix of residential, open space, and commercial land uses typically associated with mountain and outdoor recreational uses including snow sports, hiking, cycling, fishing, and other outdoor recreational pursuits. The subdivision is bounded by the Sugar Bowl Ski Resort to the east, south, and west. The Sugar Bowl Resort features ski facilities and commercial uses, including a coffee shop, equipment rental shop, and the Village Lodge and is generally in operation for snow sports resort recreation from November through April, depending on seasonal snow. There are additional commercial and recreational land uses north of the Project site. Most notably, the Boreal Mountain Ski Resort, Donner Ski Ranch, Lake Angela, and other commercial and recreational uses geared toward snow sports and visitor services with similar seasonal operating periods. Land uses west of the Project site are a mix of residential, recreational, commercial, and open space. Specifically, to the west, past the Sugar Bowl Resort, is Soda Springs Mountain Resort as well as a larger residential subdivision surrounding the Serene Lakes.

2.3 Project Description

2.3.1 Project Background

The Sugar Bowl Property Owners residential subdivision has been expanding with additional single-family residences since the 1940's. While sewer was extended to portions of the subdivision between 2017 and 2021 as part of privately funded work, many residences within the subdivision are still served by individual onsite wastewater disposal systems / septic systems. The aging septic systems require regular maintenance and upkeep to maintain proper function and system failures could be detrimental to water quality and result in odor nuisance concerns. The Project would connect the remaining septic-served properties to an existing sewer collection system to provide for sanitary collection and treatment of wastewater generated by the subdivision. The Project will be funded by the benefitting property owners through an assessment or fee implemented by the DSPUD. Once completed, the new sewer system will be operated and maintained by the DSPUD.

2.3.2 Project Components, Installation, and Phasing

The Project includes extending the existing sewer collection system to serve existing residences in the Sugar Bowl Property Owners residential subdivision located at the base of the Sugar Bowl Resort. The Project would consist of two phases in which a total of approximately 4,520 linear feet of collection lines would be installed, generally within the existing roadways (Figure 3 – Master Plan Exhibit). Proposed sewer main collection lines in the roadways would generally be 6-inch diameter gravity lines while laterals serving individual properties would be 4-inch diameter. Manholes would have a diameter of 48 inches and would be placed intermittently per code. In accordance with Truckee Sanitary District Standards, sewer lines would be a minimum of 30 inches below ground surface for non-traffic areas and minimum of 48 inches below ground surface in any vehicle traffic areas. Where feasible, sewer lines would be installed to maintain 10 feet of horizontal separation and 1 foot of vertical separation from underground water utilities and 3 feet of horizontal separation and 1 foot of vertical separation from underground electric, gas or communication lines. If required separation from existing utilities cannot be achieved, the sewer main would be constructed of more robust material per California Water Resources Control Board, Division of Drinking Water regulations. Following installation of sewer piping open trenches would be backfilled and compacted to engineer's specifications.

The sewer collection line would cross under the South Yuba River, which would be achieved by jack and bore/horizontal drilling to avoid surface disturbance to the bed or bank of the stream channel. Individual homeowners would be responsible for constructing their respective sewer laterals to connect to the new sewer main. Project phases are described below.

Phase 1 East Village:

Phase 1 East Village work includes installing sewer mains in the southeastern portion of the subdivision. A portion of Phase 1 work was privately funded and completed between 2017 and 2021; the currently proposed Project includes constructing the remainder of Phase 1 of the sewer collection system. Phase 1 East Village work includes trenching and installation of a total of 1,420 linear feet of 6-inch diameter gravity sewer main collection lines. This phase consists of excavating trenches within existing roadways and installing two new segments of gravity sewer main lines to convey wastewater flow from 32 parcels to the existing gravity sewer main in Mule Ears Drive (Figure 3; Appendix A – Master Plan Exhibit). Sewer main would be constructed within Corn Lily Lane and Paintbrush Hill Court and would connect to an existing underground sewer line near the intersection of Mule Ears Drive and Corn Lily Lane. The other Phase 1 segment of sewer main would be constructed within a portion of Fiddleneck Place and would connect to an existing underground sewer line that crosses Fiddleneck Place and connects to the existing sewer line in Mule Ears Drive to the northwest. Please refer to Appendix A for a more detailed view of the Project's plans.

Phase 2A/2B West Village:

Phase 2 consists of installing a 6-inch diameter underground gravity sewer main collection line totaling approximately 3,100 linear feet (see Figure 3; Appendix A). Trenches would be excavated and sewer main lines would be installed in Pennyroyal Lane, Aster Court, Mule Ears Drive, and Old Donner Summit Road. The Phase 2 sewer main would connect to the existing gravity sewer main at an existing manhole in Old Donner Summit Road just north of its intersection with Pennyroyal Lane. Phase 2 consists of two segments – Phase 2A and Phase 2B. Phase 2A includes installing sewer main in Pennyroyal Lane and connecting to an existing sewer line in Old Donner Summit Road. Phase 2B would connect to Phase 2A near the intersection of Pennyroyal Lane and Mule Ears Drive and would extend south along Mule Ears Drive and Aster Court.

The Phase 2A sewer main would cross under the South Yuba River near the existing bridge on Pennyroyal Lane. The crossing under the river would be approximately 138 linear feet and would be achieved by jack and bore/horizontal drilling to avoid impacts to the bed and bank of the river. Sending and receiving pits would be constructed on either side of the river crossing to allow for drilling work. The pipe crossing under the bed and bank of the river would be installed within a 0.5-inch thick steel casing to increase the pipe's durability and strength and protect against future damage or leaks in the vicinity of the river. A Streambed Alteration Agreement would be obtained from the California Department of Fish and Wildlife (CDFW) for jack and bore/directional drilling under the river. As part of the permitting requirements with CDFW, a drilling Inadvertent Return Monitoring and Mitigation (Frac-Out) Plan would be required to protect against impacts to the river and riparian area during drilling and pipe installation. This plan would provide specific procedures and steps to detect and respond to any inadvertent release of drilling fluids for the horizontal directional drilling under the South Yuba River. No Phase 2A or Phase 2B work has been completed to date. The Phase 2B sewer main would cross under an existing culvert that crosses Mule Ears Drive and carries ephemeral drainage that flows to the north. Trenching and installation of the sewer main would be conducted in the roadway section and the existing culvert and natural drainages on either side of the road would not be disturbed.

Construction Activities and Methods

Construction Access and Staging

Roads within the construction area would be intermittently closed to vehicle traffic during Project construction activities and detours and traffic control would allow access to individual parcels as necessary; emergency access would be maintained at all times throughout Project construction. DSPUD requires the contractor to provide a traffic control plan that will include provisions for advance notification to residents regarding any access restrictions to individual parcels and roads within the subdivision as well as maintaining emergency access. Construction traffic would access the Project site from Interstate 80 via Donner Pass Road, Sugar Bowl Road and Mule Ears Drive. Construction materials, equipment, and vehicles would be staged within existing roadways along the pipeline alignment and within developed and disturbed areas within the subdivision such as the intersection of Mule Ears Drive and Pennyroyal Lane, parking areas along Old Donner Pass Road, and other paved or disturbed areas within parking and roadways on the Sugar Bowl Resort property. Construction debris and materials would be off-hauled and disposed in accordance with applicable local, state, and federal regulations to disposal facilities in Placer County.

Site Preparation, Grading, Paving, and Drainage

Construction of the proposed Project would require trenching to allow for pipeline installation. Trenches would range from approximately 4 feet to 15 feet in depth. Trench width will vary depending on the contractor's method for trench safety. Trench widths will vary from 30 inches at shallow trench depths to 90 inches for deeper excavations based on the recommendations of the Project geotechnical investigation for unconfined excavations. The use of trench plates by the contractor would limit trench widths to 48 inches at all trench depths. Total excavation quantities for all phases of the Project would be approximately 4,310 cubic yards. The Project would require 1,100 cubic yards of engineered soil materials to be imported to the site for pipeline bedding and to allow for proper compaction. It is estimated that approximately 1,100 cubic yards of excavated soil materials would be exported from the Project site. Following placement of sewer mainlines, trenches would be backfilled and compacted to Project specifications. The road surface would be returned to existing conditions by grading and surfacing with gravel. It is anticipated that up to 17 trees would be removed as part of the Project, including 3 trees to construct Phase 1, 12 trees to construct Phase 2A, and 2 trees to construct Phase 2B. Trees removed would be a mix of red fir, white fir, lodgepole pine, and Jeffrey pine.

Individual and group tree protection measures, including the use of fences or armoring of individual trees, would be implemented for all trees within 20 feet of Project construction activities. Upon completion of the Project, all disturbed areas outside of roadway or vehicle use areas would be revegetated with using native weed-free seed mix in accordance with Project revegetation requirements and seed mix.

It is estimated that all phases of the Project will disturb from 0.3 acres to 0.6 acres. Therefore, the Project is not expected to need a Stormwater Pollution Prevention Plan per the National Pollutant Discharge Elimination System and California General Construction Permit. Since Project disturbance remains under 1 acre, a Water Pollution Control Plan and Sediment and Erosion Control Plan, prepared to Placer County specifications would be incorporated into DSPUD's required engineering Plans and Specifications. These plans would include measures to control stormwater drainage, protect water quality, and avoid erosion during construction activities. BMPs could include straw wattles, silt fences, and other measures to avoid sediment transport and control stormwater runoff during construction. The Project includes no new paving and would result in no increase in impervious surface from

existing conditions. All roadways disturbed during construction of the proposed Project would be repaired or paved to return them to existing conditions.

Construction Schedule, Personnel and Equipment

Project construction (from mobilization to demobilization) is anticipated to take approximately 24 months and would occur in three (3) phases. Construction on Phase 2A – West Village would commence in the summer of 2024 and require approximately three (3) months to complete. Phase 1 – East Village would begin in June of 2025 and be completed by November of 2025. Phase 2B – West Village would begin in June of 2026 and would be completed no later than November of 2026. The construction schedule would avoid the winter high season for the resort and all work would be conducted while the site is free of snow cover. All work will be completed or winterized from October 15 to April 30 of any given construction year in accordance with the Placer County Grading, Erosion and Sediment Control Ordinance.

Construction hours would be between the hours of 7:30 a.m. and 5:30 p.m., Monday through Friday. Work on Saturdays would require 72-hour advance notification of residents and would require permission from a representative of the Sugar Bowl Homeowners Association design review board. If approved, construction on Saturdays would also occur between the hours of 7:30 a.m. and 5:30 p.m. Construction would be prohibited on Sundays and federally recognized holidays. Construction equipment for grading and construction would include a grader, excavator, mini excavator, bore rig, compactor, water truck, and light trucks. It is anticipated that the following construction personnel would be on-site at any time during the Project in addition to occasional equipment vendors and delivery personnel visits during construction.

- Site Superintendent (1)
- Project Foreman (1)
- Equipment Operator (1)
- Laborers (3)
- Trucks and Drivers (2)

A jack and bore contractor will be onsite for Phase 2A in 2025 and will include the following personnel:

- Site Superintendent (1)
- Four (4) to five (5) person crew

Project Operations

Following construction, the new sewer collection system would be operated and maintained by the DSPUD. The new sewer main would convey wastewater by gravity flow to the existing Sugar Bowl Lift Station, then by forcemain to the Summit Tract Lift Station and to DSPUD's wastewater treatment plant. The plant currently has capacity to serve the additional hookups proposed as part of the Project and no expansion of offsite conveyance or treatment infrastructure would be required to accommodate the new connections. No additional DSPUD staff will be required to operate or maintain the new sewer collection system or to provide for treatment or conveyance of the additional wastewater generated by the additional connections. The Project is not expected to generate additional vehicle trips over existing conditions in the operational condition. While DSPUD staff and contractors would periodically perform operations and maintenance work on the installed sewer collection system, it is anticipated that fewer vehicle trips would be required to perform operations and maintenance on the proposed sewer main than are currently required to maintain and repair existing individual septic systems currently serving parcels that would be hooked up to the new sewer main. Decommissioning of existing onsite wastewater disposal systems would be in

accordance with Placer County Environmental Health requirements and would be the responsibility of each individual homeowner at the time they choose to connect their property to the sewer system.

2.4 Discretionary Actions

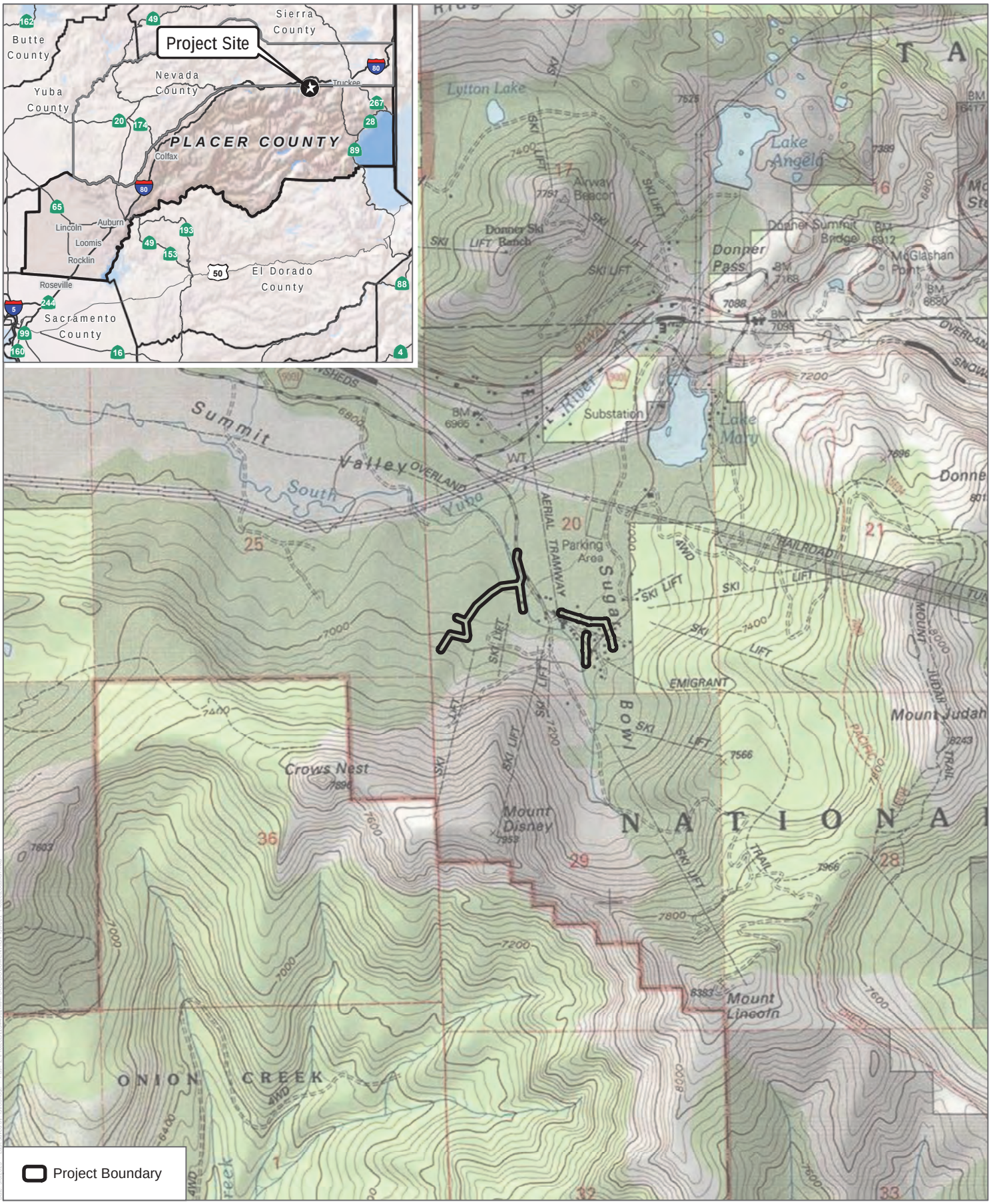
2.4.1 Donner Summit Public Utility District

This IS/MND is intended to serve as the primary environmental document pursuant to CEQA for actions associated with the proposed Project, including discretionary approvals required to implement the Project. In addition, this IS/MND is the primary reference document for the formulation and implementation of the Mitigation Monitoring and Reporting Program for the Project, in accordance with Section 15097 of the CEQA Guidelines.

2.4.2 Responsible and Trustee Agencies

The following permits and approvals could be required to carry out the Project:

- Placer County Grading Permit for excavation and grading to install sewer main.
- California Fish & Wildlife 1600 Permit (Lake and Streambed Alteration Agreement) for horizontal drilling under the South Yuba River



SOURCE: USGS 7.5-Minute Series Norden Quadrangle

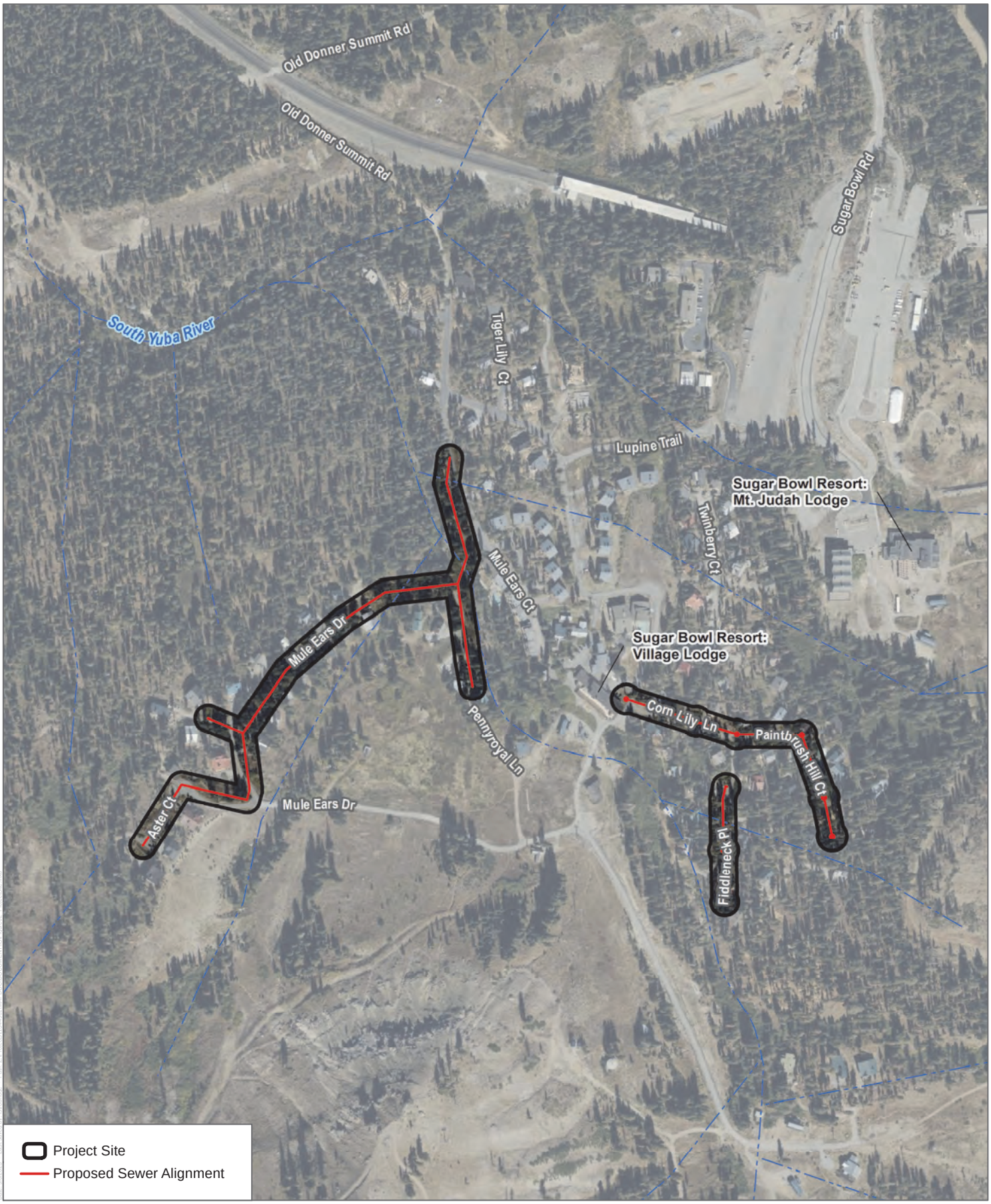
DUDEK

0 1,000 2,000 Feet
0 285 570 Meters
1:24,000

FIGURE 1

Project Location

Sugar Bowl Sewer Extension Project



SOURCE: Bing Maps (Accessed 2021) Placer County 2017

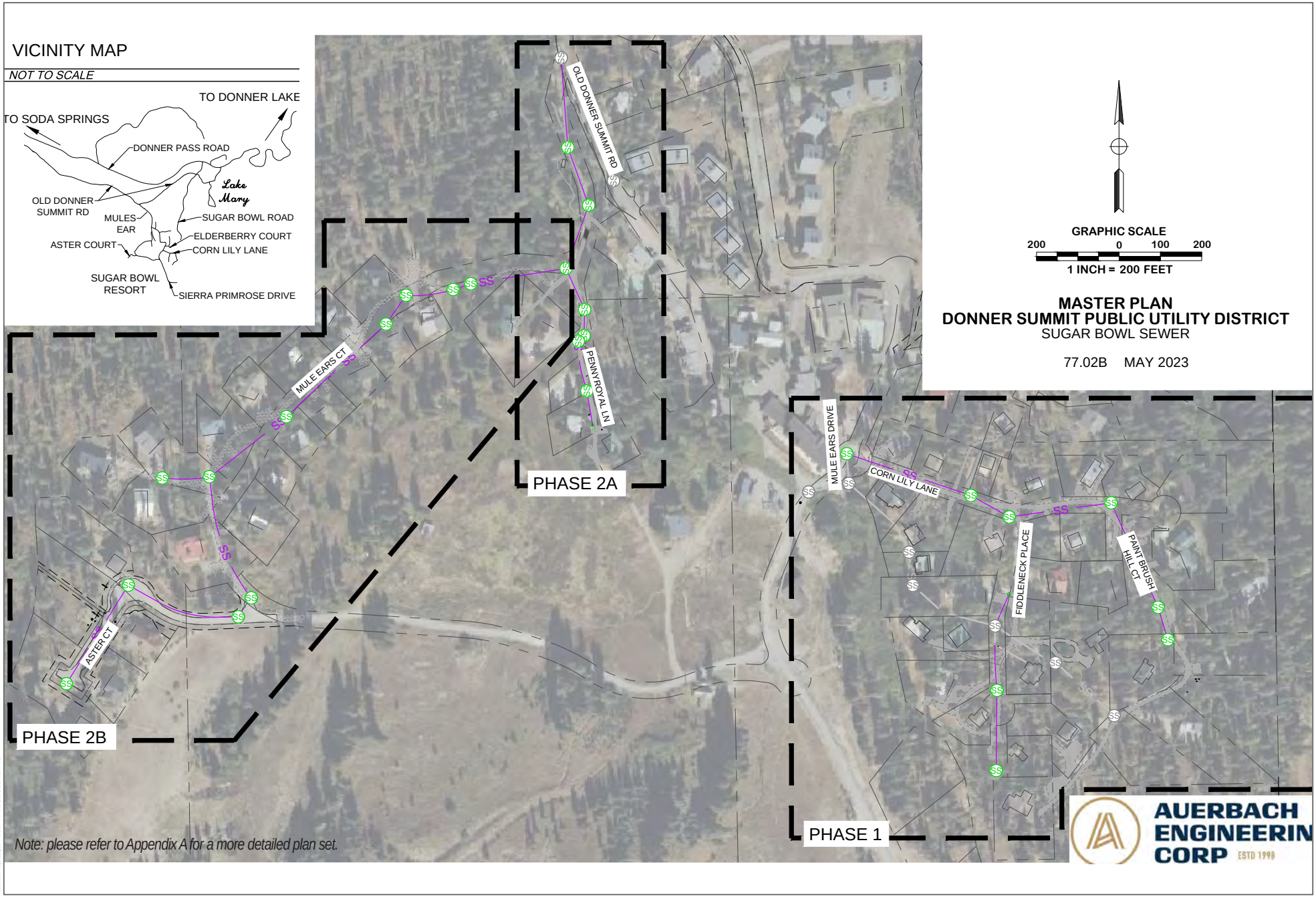
DUDEK

0 250 500 Feet
0 70 140 Meters
1:6,000

FIGURE 2

Project Site

Sugar Bowl Sewer Extension Project



SOURCE: Auerbach Engineering 2023

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FIGURE 3

Project Plan Overview

Sugar Bowl Sewer Extension Project

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3 Initial Study Checklist

1. **Project title:**

   Sugar Bowl Sewer Collection System

2. **Lead agency name and address:**

   Donner Summit Public Utility District (DSPUD)

   53823 Sherritt Lane

   Soda Springs, California 95728

3. **Contact person:**

   Steve Palmer, P.E.; DSPUD General Manager

   (530) 426-3456; spalmer@dspud.com

4. **Project location:**

   The approximately 11.05-acre Project site is located on the Sugar Bowl Property Owners residential subdivision at the base of the Sugar Bowl Ski Resort in Placer County, approximately 1.25 miles north of Mount Lincoln, 2.5 miles south of Interstate 80, 1.5 miles west of Donner Peak, and 2 miles east of Soda Springs Road. From Interstate 80, the site is accessed via Donner Pass Road, Sugar Bowl Road, Old Donner Summit Road.

   The site is located in Sections 32, 33, and 34, Township 11 North, and Range 13 East of the Pollock Pines, CA" U.S. Geological Survey 7.5-minute quadrangle. A sliver of the Project site, near the southeastern extent, is located in Sections 2 and 3, Township 10 North, and Range 13 east of the "Sly Park, CA" quadrangle. The approximate center of the site corresponds to 38°44'59.82" North latitude and 120°31'52.14" West longitude. The Project location is shown in Figure 1 - Project Location and Figure 2 – Project Site.

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

   Donner Summit Public Utility District (DSPUD)

   53823 Sherritt Lane

   Soda Springs, California 95728

6. **General plan designation:**

   Placer County General Plan

7. **Zoning:**

   RS-B-20 (Residential-Single Family - Building Site - 20,000 square foot minimum lot size), RS-B-20 PD = 2 (Residential-Single Family - Building Site - 20,000 square foot minimum lot size – Planned Development – 2 units per acre.

Environmental Factors Potentially Affected

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

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

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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

Signature Date

3.1 Aesthetics

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

Setting

The Project site is located within the Sugar Bowl Property Owners residential subdivision just north of the Sugar Bowl Resort in Norden, CA. The Project site can generally be characterized as paved and gravel/dirt-surfaced roadways within a single-family residential resort subdivision within a mountain environment. Existing underground utilities exist in some of the roadways within the subdivision, as evidenced by manholes within the subdivision's roadways. Existing residential development is consistent with the residential single-family zoning applied to the site by the Placer County Zoning Ordinance.

The aesthetic conditions in the Project area are characterized by varied topography, areas of dense conifer forest vegetation, maintained landscaping around residential and resort / commercial land uses, and developed single-family residential parcels within the Sugar Bowl Village area. Residential parcels range in size from 0.20 acres to 0.82 acres and residential streets are surfaced with dirt/gravel and asphalt. The South Yuba River runs through the north end of the Project site and supports riparian vegetation consisting of willows and deciduous shrubs species and is crossed over via a bridge on *Pennyroyal Lane*. The natural aesthetics surrounding the Project site consist ofsteep, mountainous terrain, canyons and dense forestlands, and hydrologic features including the Yuba River, smaller creeks, and mountain meadows. Recreational land use within the area consists of skiing, hiking, fishing, and similar outdoor activities. The nearest eligible scenic highway is located 2.5 miles from the Project site. The Project site is not within view of this highway. No formally designated scenic vistas include views of the Project site.

Figures, 3.1-1 Representative Project Site Photos and 2 Project Site, display typical views of the existing development and vegetation on and around the Project site.

Impact Discussion

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

Less than Significant. A scenic vista is typically defined as a publicly accessible expansive view of a scenic setting, whether that setting is natural or constructed. The Sugar Bowl sewer line Project site, or portions thereof, are visible from Donner Pass Road to the north and areas of higher elevation to the south within the Sugar Bowl Resort and the trail system west of the Sugar Bowl Resort. Views to the Project site from Donner Pass Road, the ski resort, and hiking trails are long distance views and include the Project site and general developed area at the base of the Sugar Bowl Resort, and are partially obstructed by intervening topography, vegetation, and development associated with the ski resort.

The Project would not create any new elements that would interfere with or intrude on scenic vistas. The Project involves installing new sewer mains underground in to service existing residences in the Sugar Bowl Property Owners residential subdivision. Phase 1 of the Project would consist of excavating trenches and installing two sewer collection lines and Phase 2 also consists of excavating trenches, as well as installing gravity flow collection lines. The new sewer mains would be installed below-grade and would be primarily within the existing roadway sections to minimize tree removals and impacts outside of the roadway section. Tree removals required for the Project would be consistent with the existing developed condition of the residential subdivision and would be expected to result in no substantial change in the scenic mountain and resort views enjoyed in the vicinity of the Project site. It is anticipated that up to 17 trees would be removed as part of the Project, including 3 trees to construct Phase 1, 12 trees to construct Phase 2A, and 2 trees to construct Phase 2B. Trees removed would be a mix of red fir, white fir, lodgepole pine, and Jeffrey pine. Short-term construction impacts would include some ground disturbance associated with excavations, construction vehicles and materials storage. The proposed Project would not alter any scenic vistas after construction is complete and any view obstruction from construction would be minimal and temporary during construction. Therefore, Project impacts to scenic vistas would be less than significant.

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

No Impact. The Project site is not visible from any state scenic highways. State Route (SR) 267 is the nearest state highway to the Project site. It is not designated as a scenic highway. The nearest eligible state scenic highways are Interstate (I) 80 and State Route (SR) 89 (Caltrans 2018). The Project site is 2.5 miles south of I-80 and approximately 7 miles west of SR 89. Since the Project site is not viewable from either highway, no impact would result from damage to resources within view of a State scenic highway.

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

Less than Significant. The Project includes installing a new underground sewer collection system to service the existing residences within the Sugar Bowl subdivision. Long-term changes to the visual character of the site would include the addition of manhole covers in the roadways and the removal of up to 17 trees. Manhole covers would result in no change to the visual character of the subdivision and would be consistent with existing utilities and residential development. Tree removals would be consistent with the developed character of the site and would not affect the overall mountain and forest aesthetic of the community, since proposed tree removals would account for a very small portion of forested areas in the subdivision and surrounding areas. Temporary impacts to the visual character of the site during construction would include visibility from Donner Pass Road to the north and areas of higher elevation to the south within the Sugar Bowl Resort and the trail system west of the Sugar Bowl Resort. Views to the Project site from Donner Pass Road, the ski resort, and hiking trails are long distance views and include the Project site and general developed area at the base of the Sugar Bowl Resort, and are partially obstructed by intervening topography, vegetation, and development associated with the ski resort. Short-term construction impacts and long-term impacts associated with implementation of the Project would be **less than significant**.

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

Less than Significant. The Project does not include any new lighting elements for security or any other purposes. Construction may occur over nighttime hours and would introduce temporary sources of light to areas that are typically not illuminated, however, all construction activities would be temporary. No sources of light or glare would occur regularly during future maintenance or repair operations. The sewer expansion would be constructed below grade and therefore would not have any potential to cause glare. Thus, the Project would not create any new sources of substantial light or glare and would result in no long-term adverse effect on day or nighttime views in the area. Construction impacts would be temporary and less than significant. Therefore, impacts associated with light or glare would be **less than significant**.

3.2 Agriculture and Forestry Resources

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

Setting

The Project site is located within the northeastern portion of Placer County and is zoned as RS-B-20 PD = 2 (Residential-Single Family - Building Site - 20,000 square foot minimum lot size – Planned Development – 2 units per acre) in the Placer County Zoning Ordinance. There are no areas zoned as agricultural or forestry within the area of the Project site that would be subject to disturbance as part of the Project. Areas surrounding the subdivision carry forest and/or open space zoning per the Placer County Zoning Ordinance.

The Project area is not specifically zoned for agricultural, but the residential-single family zones allow for some smaller scale agricultural uses with additional special regulations. These specific regulations allow for the permitted agricultural uses of animal husbandry, raising birds and bees, kennels, catteries, raising dogs and cats, and raising

fowl and poultry (17.56.050 Animal raising and keeping, Placer County). No portion of the Sugar Bowl residential subdivision has been mapped under the California Resources Agency Farmland Mapping and Monitoring Program. Thus, there is no Prime Farmland, Unique farmland, or Farmland of Statewide Importance within or proximate to the Project site. No active agricultural operations occur within the Project site.

- RS-B-20 PD = 2

Impact Discussion

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

No Impact. No portion of the Sugar Bowl residential subdivision has been mapped as Prime Farmland, Unique farmland, or Farmland of Statewide Importance under the California Resources Agency Farmland Mapping and Monitoring Program and no active agricultural operations occur within the Project site. The Project would result in **no impact** associated with conversion of designated Farmland to non-agricultural uses. No mitigation measures are required.

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

No Impact. No portion of the Project site is zoned for agricultural uses other than the limited activities previously mentioned under the Placer County zoning ordinance for zones designated as Residential-Single Family. There are no Williamson Act contracts for land within or adjacent to the Project site (California Department of Conservation 2023). Thus, the Project would result in **no impact** to agricultural zoning or Williamson Act contracts. No mitigation measures are required.

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

No Impact. The Project site is not located in zoning designated for forestry and is not proposing any rezoning, of forest land, timberland, or timberland zoned Timberland Production. As mentioned above, the Project site is zoned for residential-single family use, which does not permit forestry activities. Therefore, the Project will have **no impact**.

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

No Impact. While there are large areas of forest land throughout and surrounding the Sugar Bowl residential community, all Project components would be located within land that is currently developed with residential uses and roads. The Project would construct and expand below grade sewer lines. As discussed in 3.1 Aesthetics, there are trees within and adjacent to the site; however, the construction of the sewer elements will be done underneath the existing roadways to minimize impacts to surrounding trees. There is no forest land within the roadways. Therefore, the Project would not result in the loss of forest land or conversion of forest land to non-forest use and would have **no impact** to forest land. No mitigation measures are required.

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

No Impact. As mentioned previously, the Project site is not designated for agricultural zoning and is not currently being used for agricultural or forestland uses. The Project site is zoned for single-family residential uses. Therefore, no impact would occur.

As noted in response 3.2(a), there are no agricultural activities or farmland within or adjacent to the Project site. As discussed in response 3.2(d), Project components would be located within existing roadways through lands developed with residential uses. Further, the Project would not introduce any new land uses or other environmental changes to the Project area that could lead to conversion of any of the forest land surrounding the Project site. Thus, the Project would have **no impact**. No mitigation measures are required.

3.3 Air Quality

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
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?	☐	☐	☒	☐

Setting

The Project site is within Placer County Air Pollution Control District (PCAPCD), which is the local agency authorized to regulate stationary air quality sources in the Placer County. The Federal Clean Air Act and the California Clean Air Act mandate the control and reduction of specific air pollutants. Under these Acts, the U.S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for specific "criteria" pollutants, designed to protect public health and welfare. Primary criteria pollutants include carbon monoxide, reactive organic gases (ROG), nitrogen oxides (NO_X), coarse particulate matter (PM_{10}), sulfur dioxide, and lead. Secondary criteria pollutants include ozone (O_3), and fine particulate matter ($PM_{2.5}$).

Sensitive receptors are defined as facilities where sensitive population groups are located, including residences, schools, childcare centers, convalescent homes, and medical facilities. Land uses such as schools and hospitals are considered more sensitive than the general public to poor air quality because of an increased susceptibility to respiratory distress within the populations associated with these uses. The closest sensitive receptors to the Project site are existing residences surrounding the Project site.

Common sources of odors and odor complaints include wastewater treatment plants, transfer stations, coffee roasters, painting/coating operations, and landfills. The Project is located close to resort facilities associated with the Sugar Bowl Resort, which includes restaurant uses and ski/snowboard services that are not typically associated with adverse odor impacts.

The PCAPCD regulates many sources of air pollutants and is responsible for implementing certain programs and regulations for controlling air pollutant emissions to improve air quality and attain National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Various development projects have the potential to generate air pollutants that would result in adverse environmental impacts. To evaluate air pollutant emissions from development projects, the PCAPCD recommends significance thresholds for emissions of ROG, NO_x, CO, and PM_{10}. The PCAPCD recommends significance thresholds as listed in Table 2, expressed in pounds per day, which serve as air quality standards that may be used in the evaluation of air quality impacts associated with development projects. These thresholds were included in the 2017 update to PCAPCD's CEQA Air Quality Handbook.

Table 1
PCAPCD Significance Thresholds for Criteria Pollutants

Pollutant	Construction Threshold	Operational Threshold	Operational Cumulative-Level Threshold
	Pounds per Day		
ROG	82	55	55
NO_X	82	55	55
PM_{10}	82	82	82

Source: PCAPCD 2017.

PCAPCD guidelines provide that a project would not result in significant project-level criteria pollutant emissions of ROG, NO_x, and $PM_{10,}$ for which the region is designated non-attainment if it does not exceed the construction and operational significance thresholds. In addition, a project would not be considered to be cumulatively considerable and would result in a less-than-significant cumulative impact if it does not exceed the PCAPCD cumulative-level significance thresholds.

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

The Project site is under the jurisdiction of the PCAPCD within the Mountain Counties Air Basin (MCAB). A project would not conflict with or obstruct the implementation of the regional air quality plan if the project's emissions are anticipated within the emission inventory contained in the regional air quality plan, which is referred to as the State Implementation Plan (SIP), and would not exceed PCAPCD's CEQA thresholds, which are as follows:

1. Construction Threshold of 82 pounds per day for ROG, NO_x, and PM_{10};

2. Operational Threshold of 55 pounds per day for ROG, NO_x and 82 pounds per day for PM_{10}; and

3. Cumulative Threshold of 55 pounds per day for ROG, NO_x and 82 pounds per day for PM_{10}.

The Project consists of two phases: Phase 1 consists of excavating trenches and installing two sewer collection lines totaling approximately 1,420 linear feet. Phase 2 consists of excavating trenches and installing gravity flow collection lines totaling approximately 3,100 linear feet. Construction of the Project would occur seasonally from June to November over a period of approximately 24 months and emissions would cease upon completion.

To reduce construction related emissions, Project construction activities would be required to comply with the following PCAPCD Rules and Regulations for grading and construction and these measures would be required to be included on Project plans and specifications:

- Rule 202—Visible Emissions. Requires that opacity emissions from any emission source not exceed 20 percent for more than three minutes in any one hour.

- Rule 217—Cutback and Emulsified Asphalt Paving Materials. Prohibits the use of the following asphalt materials for road paving: rapid cure cutback asphalt; slow cure cutback asphalt; medium cure cutback asphalt; or emulsified asphalt.

- Rule 218—Application of Architectural Coatings. Requires architectural coatings to meet various volatile organic compound (VOC) content limits.

- Rule 228—Fugitive Dust.

    - Visible emissions are not allowed beyond the project boundary line.

    - Visible emissions may not have opacity of greater than 40 percent at any time.

    - Track-out must be minimized from paved public roadways.

Overall, the daily maximum emission thresholds represent an emission level below which a project's contribution to criteria pollutant emissions would be deemed less than significant. In addition, with compliance with PCAPCD Rules and Regulations, impacts related to short-term construction-related emissions would be less than significant. The Project would extend sewer mains to service existing residences in the Sugar Bowl Property Owners residential subdivision. Therefore, the Project would not lead to unplanned population, housing or employment growth that exceeds the forecasts used in the development of the State Implementation Plan. **No impact** would occur as a result of conflicts with the regional air quality plan.

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

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and PCAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in determining whether a project's individual emissions would have a

cumulatively significant impact on air quality. In considering cumulative impacts from the Project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the MCAB is designated as nonattainment for the CAAQS and NAAQS. If a project's emissions would exceed PCAPCD's significance thresholds, it would be considered to have a cumulatively considerable contribution to nonattainment status in the MCAB. If a project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality. The basis for analyzing a project's cumulatively considerable contribution is if the project's contribution accounts for a significant proportion of the cumulative total emissions.

The MCAB has been designated as a federal nonattainment area for O_3, and a state nonattainment area for O_3 and PM_{10}. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the MCAB, including motor vehicles, off-road equipment, forestry activities, and commercial and industrial facilities.

California Emissions Estimator Model (CalEEMod) Version Version 2022.1.1.18 was used to estimate emissions from construction of the Project. CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant emissions associated with construction and operational activities from a variety of land use projects, including residential development. The following discussion summarizes the quantitative project-generated construction and operational emissions and impacts that would result from implementation of the proposed project. Detailed assumptions and results of this analysis are provided in Appendix C, Air Quality and Greenhouse Gas Emissions CalEEMod Output Files.

Construction Emissions

Construction of the Project would generate construction-related air pollutant emissions from entrained dust, equipment and vehicle exhaust emissions, asphalt pavement, and architectural coatings. Exhaust from internal combustion engines used by construction equipment, vendor trucks (delivery trucks), haul trucks, and worker vehicles would result in emissions of ROG, NO_x, and PM_{10}. Construction of the project would also generate CO, SO_x and $PM_{2.5}$ emissions; however, only the criteria air pollutants that the PCAPCD have adopted thresholds for are presented in Table 2, though all criteria air pollutant emissions are included in Appendix C. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. To account for compliance with PCAPCD Rule 228 (fugitive dust), it was assumed that the active sites would be watered at least twice daily, or as necessary depending on weather conditions. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce VOC (ROG) emissions. The Project would comply with the requirements of PCAPCD Rule 218 (Architectural Coatings) in regard to the re-paving of asphalt surfaces.

Table 2 shows the estimated maximum daily construction emissions associated with the construction of the Project occurring in 2024, 2025, and 2026.

Table 2
Maximum Daily Construction Criteria Air Pollutant Emissions

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
Summer Emissions			
2024	0.51	4.06	0.32
2025	0.45	3.72	0.28
2026	0.43	3.58	0.27
Winter Emissions			
2024	-	-	-
2025	0.47	3.89	0.28
2026	0.88	7.33	0.52
Maximum Daily Project Emissions	**0.88**	**7.33**	**0.52**
PCAPCD threshold	*82*	*82*	*82*
Threshold exceeded?	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
Source: See Appendix C for details.
These estimates reflect implementation of PCAPCD Rule 228, which assumes watering of the site two times per and Rule 218 that regulates the VOC content of architectural coatings.

As shown in Table 2, ROG, NO_x and PM_{10} emissions during construction would not exceed the PCAPCD significance thresholds; therefore, the Project would have a **less than significant** impact.

Operational Emissions

Once construction associated with the extending of the existing sewer mains is completed, operational activities associated with the Project (e.g., routine maintenance vehicle trips) would be required. Vehicle trips associated with maintenance activities would be infrequent and would not generate daily vehicle-exhaust emissions that could exceed the PCAPCD significance thresholds and impacts would be **less than significant**.

Cumulative

The greatest cumulative impact on the quality of regional air quality would be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with construction activities. Construction activities would temporarily result in pollutant emissions that would contribute to cumulative air quality impacts. However, in accordance with the PCAPCD methodology, projects that do not exceed the PCAPCD criteria or can be mitigated to less than criteria levels would not be considered to result in a cumulatively considerable impact associated with degradation of air quality. With respect to short- and long-term emissions, this Project would have a **less-than-significant** cumulative impact.

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

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the

rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed "sensitive receptors" are the most serious hazards of existing air quality conditions. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. The discussion below reviews the significance of emissions within the context of potential impacts to sensitive receptors. Sensitive receptors in the vicinity of the Project include single-family residential uses, located adjacent to the Project's boundary to the north, east, and west.

Toxic Air Contaminants

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of Toxic Air Contaminants (TACs) resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard California Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be diesel particulate matter emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB Airborne Toxic Control Measures to reduce diesel particulate matter emissions. According to the OEHHA, health risk assessments for airborne emissions should be based on a 30-year exposure duration based on typical residency period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, the duration of proposed construction activities (up to 13 months over 2 years) would only constitute a small percentage of the total long-term exposure period and would not result in substantial risk associated with exposure of proximate sensitive receptors to substantial TACs. It is further noted that Project construction would be limited disturbance of less than one acre in total and would not require the use of a large number of diesel-powered equipment.

In regards to Project operational emissions, the Project does not include potential sources of substantial TACs, such as large boilers or emergency diesel generators. As such, the Project would not result in a substantial increase in TAC generation from on-site sources during long-term operations and health risk at nearby sensitive receptors as a result of the Project would be less than significant.

Health Effects of Criteria Air Pollutants

Construction and operation of the Project would not result in emissions that exceed the PCAPCD significance thresholds for any criteria air pollutants, including ROG, NO_x, or PM_{10}. ROG emissions would be associated with motor vehicles, construction equipment, and architectural coatings; however, the Project is of a limited scale and Project construction would generate minimal and temporary ROG emissions while emissions during operations and maintenance would be negligible as emissions would be produced only during infrequent maintenance activities.

ROG and NO_x are precursors to O_3, for which the MCAB is designated as nonattainment with respect to the NAAQS and CAAQS. The health effects associated with O_3 are generally associated with reduced lung function. The contribution of ROG and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the MCAB due to O_3 precursor

emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the precursor emissions would occur because exceedances of the O_3 AAQS tend to occur between April and October when solar radiation is highest. The effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, because ROG and NO_x emissions associated with Project construction and/or operation would be minimal due to the short-term duration of construction and limited emissions generated by operations and maintenance activities, the Project would not be expected to contribute substantially to regional O_3 concentrations and associated health effects.

Construction and operation of the Project would not contribute to exceedances of the NAAQS and CAAQS for NO_2. Health effects that result from NO_2 (which is a constituent of NO_x) include respiratory irritation, which could be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, construction activities would be short-term after which activities would cease. In addition, existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards and construction and operation of the Project would not create substantial NO_x emissions. Therefore, the Project is not anticipated to result in potential health effects associated with NO_2.

Mobile source impacts occur on two scales of motion. Project-related travel would add to regional trip generation and increase the VMT within the local airshed and the MCAB. Locally, Project-generated traffic would be added to the roadway system. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds and is operating on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of substantially elevated and localized CO emissions, such as congested intersections. During construction, the Project would result in CO emissions from construction worker vehicles, haul trucks, and off-road equipment. Title 40, section 93.123(c)(5) of the California Code of Regulations, Procedures for Determining Localized CO, PM_{10}, and $PM_{2.5}$ Concentrations (hot-spot analysis), states that "CO, PM_{10}, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities, which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established 'Guideline' methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site" (Cal. Code Regs., tit. 40, § 93.123). Since construction activities would be temporary, a project-level construction hotspot analysis is not required. In regards to operations, the Project would generate only infrequent traffic trips associated with operations and maintenance. Thus, the Project's CO emissions would not contribute to significant health effects associated with this pollutant.

Construction and operation of the Project would also generate minimal PM_{10} and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter or obstruct the MCAB from coming into attainment for these pollutants. Furthermore, the Project would be required to comply with PCAPCD Rule 228, which would help reduce the amount of fugitive dust generated during construction. Due to the minimal contribution of PM_{10} during construction and operation, it is not anticipated that the Project would result in potential health effects associated with particulate matter emissions.

In summary, because construction and operation of the Project would not result in exceedances of the PCAPCD significance thresholds for ROG, NO_x, and PM_{10}, and because the PCAPCD thresholds are based on levels that the MCAB can accommodate without affecting the attainment date for the AAQS, it is

anticipated that the Project would not result in health effects associated with criteria air pollutants and the impact would be **less than significant**.

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

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. In general, odors are highest near the source, but disperse quickly resulting in a reduced offsite exposure. Sensitive receptors located adjacent to the Project site may be affected. However, construction activities would use typical construction techniques in compliance with PCAPCD rules and any odors associated with Project construction activities would be temporary and would cease upon completion of construction. Therefore, impacts associated with odors during construction would be **less than significant**.

In regards to operations and land use compatibility, odor impacts are addressed qualitatively based on odor screening distances as recommended by PCAPCD guidance. Certain highly odiferous sources have screening distances of two miles. These include wastewater treatment plants, sanitary landfills, and certain industrial facilities (petroleum refineries, asphalt batch plants, and chemical manufacturing). Other odor sources have screening distances of one mile and include recycling and waste transfer stations, coffee roasters, and food processing facilities (PCAPCD 2017). The Project involves installing a new sewer collection system. The collection system will be buried underground under existing roadways. Therefore, impacts associated with odors generated from operations would be **less than significant**.

3.4 Biological Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

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

Setting

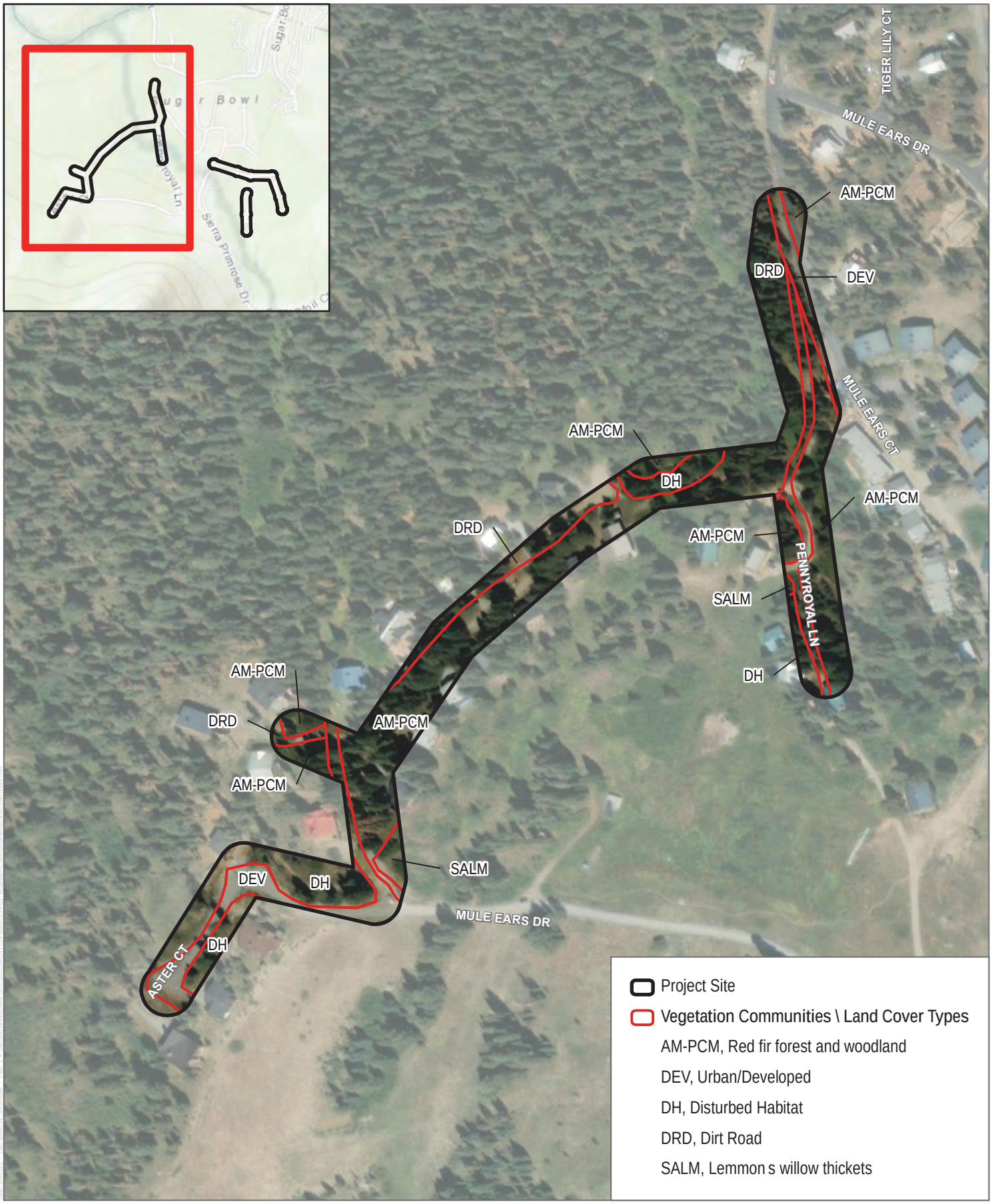
Dudek prepared a Biological Resources Assessment (BRA) for the Project (Appendix D) to identify and evaluate biological resource issues and potential constraints to development posed by such resources, including potential permitting and regulatory requirements. The BRA includes: a description of existing habitat conditions on the site and an analysis of special-status plant and wildlife species and other sensitive biological resources potentially present, including aquatic resources and sensitive natural communities.

As shown in Figures 3.4-1 and 3.4-2, Vegetation Communities and Land Cover Types, the predominant natural land cover type within the study area is Red Fir Forest and Woodland. The BRA also mapped areas of areas of disturbed habitat, urban/developed lands, and dirt roads within the study area. There is also a small amount of Lemmon's Willow Thickets, or riparian scrub or woodland, located adjacent to intermittent and perennial drainages within the Project site. This habitat type is identified by the California Department of Fish and Wildlife (CDFW) as a sensitive natural community and is the only sensitive natural community mapped on the Project site.

The BRA further identified approximately 0.39 acre of aquatic resources within the study area that would be anticipated to meet the criteria to be considered jurisdictional aquatic resources under federal and/or state jurisdiction. The Project disturbance footprint was subsequently revised to avoid impacts to these resources to the

greatest extent possible. As such, the aquatic resources identified within the Project site are shown in Figures 3.4-3, 3.4-4, and 3.4-5, Aquatic Resources Delineation, and include a total of 0.08 acre of aquatic resources. According to the USFWS National Wetlands Inventory, there are four aquatic resources mapped within the study area: riverine, freshwater emergent wetland, and freshwater forested/shrub wetland. Representative photos of aquatic resources on the Project site are provided in Figure 3.4-6.

The Project site occurs within the Upper South Yuba River watershed, which drains approximately 126,647 acres of land in Placer County. Surface run-off on the Project site is generally by sheet flow and roadside drainages downgradient to a perennial tributary of the South Yuba River that flows south to north through the northern portion of the Project site. Water is channeled to the perennial waterway through several roadside ditches, ephemeral drainages and one intermittent drainage.



SOURCE: Bing Maps (Accessed 2021), Placer County 2017

DUDEK

0 125 250 Feet
0 35 70 Meters
1:3,000

FIGURE 3.4-1

Vegetation Communties and Land Cover Types

Sugar Bowl Sewer Extension Project

SOURCE: Bing Maps (Accessed 2021), Placer County 2017

DUDEK

0 75 150 Feet
0 20 40 Meters
1:1,800

FIGURE 3.4-2

Vegetation Communties and Land Cover Types

Sugar Bowl Sewer Extension Project

SOURCE: Esri Basemap (Accessed 2021), Placer County 2017

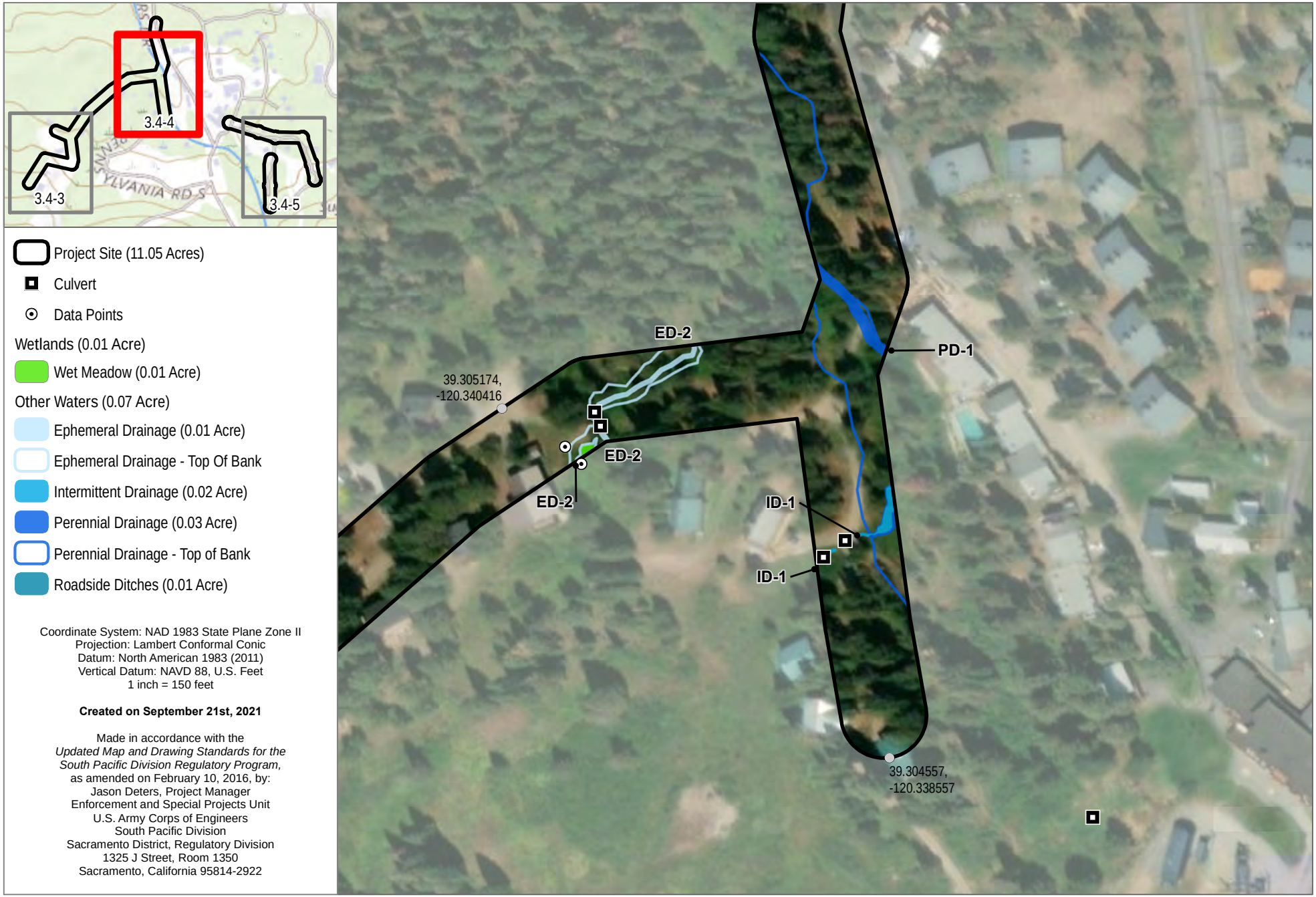
DUDEK

0 75 150 Feet

FIGURE 3.4-3

Aquatic Resources Delineation

Sugar Bowl Sewer Extension Project



Coordinate System: NAD 1983 State Plane Zone II
Projection: Lambert Conformal Conic
Datum: North American 1983 (2011)
Vertical Datum: NAVD 88, U.S. Feet
1 inch = 150 feet

Created on September 21st, 2021

Made in accordance with the
Updated Map and Drawing Standards for the South Pacific Division Regulatory Program,
as amended on February 10, 2016, by:
Jason Deters, Project Manager
Enforcement and Special Projects Unit
U.S. Army Corps of Engineers
South Pacific Division
Sacramento District, Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2922

SOURCE: Esri Basemap (Accessed 2021), Placer County 2017

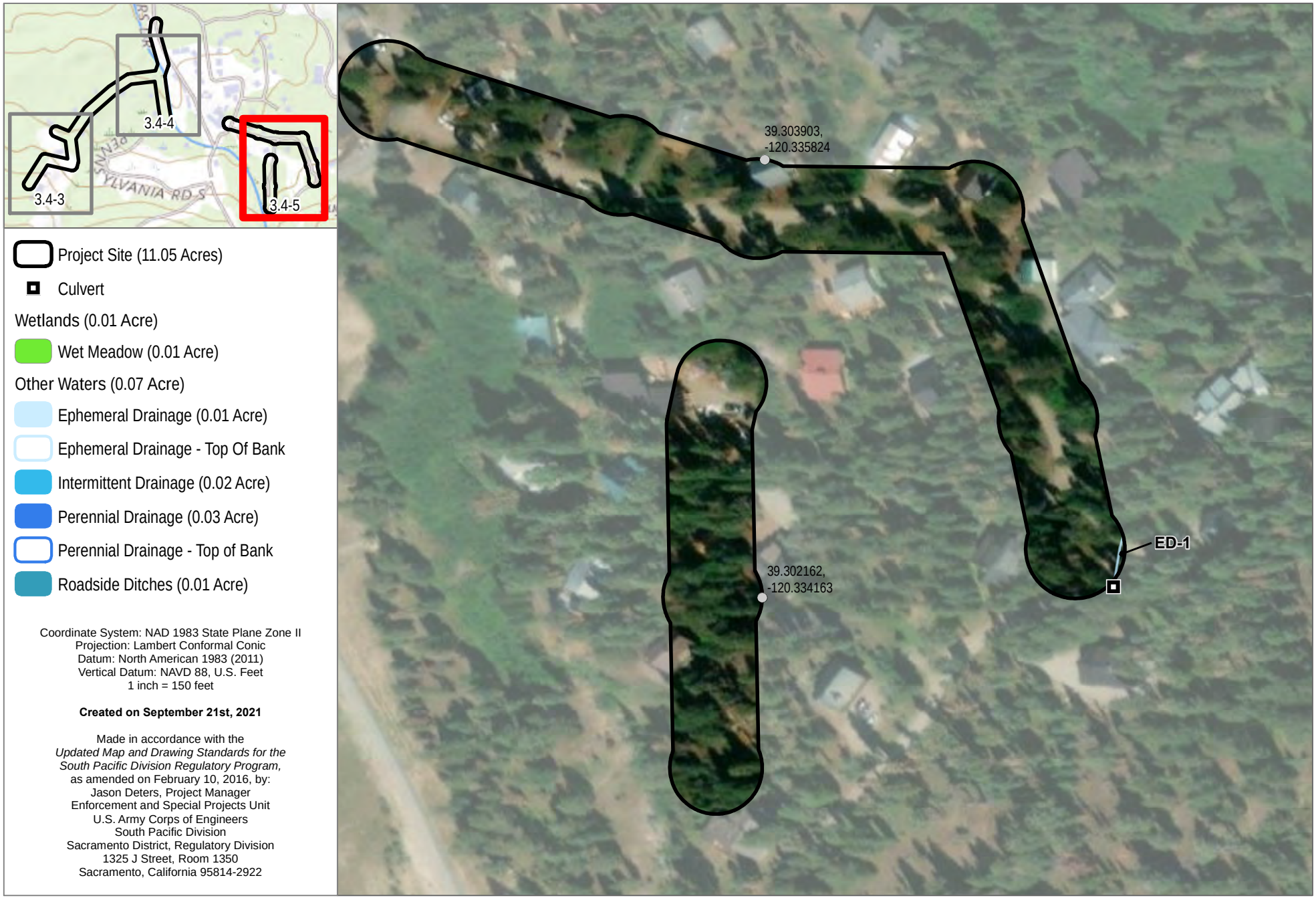
DUDEK

0 75 150 Feet

FIGURE 3.4-4

Aquatic Resources Delineation

Sugar Bowl Sewer Extension Project



SOURCE: Esri Basemap (Accessed 2021), Placer County 2017

DUDEK

0 75 150 Feet

FIGURE 3.4-5

Aquatic Resources Delineation

Sugar Bowl Sewer Extension Project

Photo 1: Wet Meadow adjacent to ephemeral drainage and Mule Ears Drive, facing southwest.

Photo 2: Crossing of perennial drainage (South Yuba River) and riparian area, facing southeast.

Photo 3: Crossing of perennial drainage (South Yuba River) and riparian area, facing northwest.

Photo 4: Facing southwest towards perennial drainage crossing.

FIGURE 3.4-6

Photographs of Aquatic Resource Areas

Sugar Bowl Sewer Extension Project

DUDEK

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

Preparation of the BRA (Appendix D) included queries of the CDFW California Natural Diversity Database (CNDDB), USFWS Inventory for Planning and Consultation database, and California Native Plant Society's Inventory of Rare and Endangered Plants data to obtain records of special-status plant and animal species occurrences within the Project region. This search returned 46 special-status plant species that are known to occur in the Project region. Of these, 29 special-status plant species were removed from further consideration due to lack of suitable habitat within or adjacent to the Project site, the site being outside of the species' known geographic or elevation range. The remaining 17 plant species were determined to have some potential to occur on the Project site due to the presence of suitable habitat and known elevation and geographic ranges of the species. Of these, 15 species were considered to have a low potential to occur and 2 were determined to have a moderate or high potential to occur due to habitat conditions. Botanical surveys were conducted onsite in 2021 during the appropriate blooming period or at times when the species could be accurately identified if present. No special-status plant species were observed during the botanical surveys and no impacts to special-status plant species would result from Project implementation.

Results of the USFWS and CNDDB searches revealed 26 special-status wildlife species that are known to occur in the Project region. Of these, 14 species were removed from further consideration due to lack of suitable habitat conditions or the site being outside of the known geographic or elevation range of the species. The remaining 12 special-status wildlife species were determined to have some potential to occur in the Project area and are identified in Table 3.4-1, below. However, none were observed during the site surveys, and thus, no impacts to these species are anticipated.

Table 3.4-1. Special-Status Wildlife Species with Potential to Occur in the Project Site

Scientific Name	Common Name	*Status (Fed/State)*	*Potential to Occur*
Amphibians			
Rana sierrae	Sierra Nevada yellow-legged frog	FE/ST	**Low potential to occur.** Aquatic habitat onsite provides marginally suitable habitat due to the heavy tree canopy and lack of open, sunny banks or open water. 2021 occurrence reported just outside of Kingvale.
Birds			
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	**Moderate potential to occur.** Suitable nesting habitat is present within the Project site. Multiple recent occurrences have been reported in and near Soda Springs.
Accipiter gentilis (nesting)	northern goshawk	None/SSC	**Low potential to nest.** Suitable habitat is present; however this species is typically intolerant of disturbance near the nest site and

Table 3.4-1. Special-Status Wildlife Species with Potential to Occur in the Project Site

Scientific Name	Common Name	*Status (Fed/State)*	*Potential to Occur*
			thus would not be expected to nest near existing development. 2021 occurrence reported in Tahoe National Forest and in 2016 in Nevada County.
Empidonax traillii (nesting)	willow flycatcher	BCC/SE	**Low potential to occur.** There is a small amount of suitable nesting habitat present, and the species is relatively rare. Thus, there is low potential for this species to nest within the Project site. 2020 occurrence reported south of Soda Springs and east of Donner <3 miles from the Project site.
Haliaeetus leucocephalus (nesting & wintering)	bald eagle	FPD, BCC/FP, SE	**Moderate potential to occur, low potential to nest**. Suitable habitat is present for nesting, however the species tends to reuse existing nest sites. The species would be most likely to occur briefly in the Project site and would be expected to spend more time closer to larger bodies of water outside of the Project site. Several recent occurrences reported (2019, 2020, 2021) just outside of Norden <3 miles from the Project site.
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	**Low potential to occur**. There is a small amount of suitable nesting habitat (riparian vegetation) present within the Project site. Known to occur in Donner Memorial State Park. Recent occurrences reported (2019) just outside of Norden <3 miles from the Project site.
Mammals			
Gulo gulo	California wolverine	None/FP, ST	**Low potential to occur**. Suitable physical habitat is present, and the Project footprint is within historic range. Potential to occur is lower since the area experiences moderate human disturbance from surrounding development and recreational activities. Last recorded occurrence was in Truckee in 2018.

Table 3.4-1. Special-Status Wildlife Species with Potential to Occur in the Project Site

Scientific Name	Common Name	*Status (Fed/State)*	*Potential to Occur*
Lasionycteris noctivagans	silver-haired bat	None/None	**High potential to occur.** Suitable habitat is present. 2018 occurrence reported between Independence Lake and Highway 89.
Lepus americanus tahoensis	Sierra Nevada snowshoe hare	None/SSC	**Low potential to occur**. Small amount of suitable habitat (willow thickets) within the Project area. Several recent sightings (<20 years) in Placer County and around Lake Tahoe.
Myotis volans	long-legged myotis	None/None	**High potential to occur**. Suitable habitat is present within the Project footprint and work area within historic range.
Vulpes vulpes necator	Sierra Nevada red fox	FE/ST	**Low potential to occur.** The Project site is in an area that experiences moderate human disturbance from surrounding development and recreational activities and therefore provides only marginal habitat. Project footprint is within historic range.
Invertebrates			
Bombus occidentalis	western bumble bee	None/SCE	**Low potential to occur** due to disturbed/developed habitat within disturbance area. Project footprint is within historic range for this species and there are abundant floral resources for nectar plants within and adjacent to the Project site.

FE – Endangered (federal); SE – Endangered (State of California); ST – Threatened (State of California); SCE – Candidate Endangered (State); BCC – Bird of Conservation Concern (federal); SSC –Species of Special Concern (State of California); WL – Watch List

It was determined that special status wildlife species with low potential to occur in the Project area include Sierra Nevada yellow-legged frog, northern goshawk, willow flycatcher, yellow warbler, California wolverine, Sierra Nevada snowshoe hare, Sierra Nevada red fox, and western bumble bee. Species with moderate or high potential to occur in the Project area include Cooper's hawk, bald eagle, silver-haired bat, and long-legged myotis. Potential for California wolverine, Sierra Nevada snowshoe hare, and Sierra Nevada red fox to occur within Project disturbance areas or to be affected by Project implementation is considered extremely low due to existing human presence, habitat quality within the proposed disturbance areas (roadways and road shoulders), and historical occurrences and current species status and no impacts to these species are anticipated to occur with implementation of the Project. Western bumble bee could utilize the floral resources on the Project site and while potential for this species to nest on the Project site is

considered low, there is some potential for this species to establish nests within the site. Mitigation measure MM-BIO-1 would require a preconstruction survey for western bumble bee nests and implementation of measures to avoid or minimize impacts to nests if any are discovered during surveys. Impacts to this species would be less than significant with implementation of mitigation measures MM-BIO-1.

The Project was designed in consultation with biologists to avoid impacts to all aquatic features and riparian habitat on the Project site and would therefore result in no impacts to potentially suitable habitat for Sierra Nevada yellow-legged frog and no impacts to this species are anticipated to occur. No impacts would occur to the South Yuba River as horizontal directional drilling would avoid all disturbance to the bed, bank or channel river and the associated riparian area.

The Project site provides suitable nesting habitat for local and migratory birds protected by the federal Migratory Bird Treaty Act and the California Fish and Game Code and suitable roosting habitat for bats protected by the California Fish and Game Code, including bird and bat species identified in Table 3.4-1, above. Shrubs, open habitat, and human-made structures and buildings on the Project site provide suitable bird nesting and bat roosting habitat. Thus, the Project has the potential to adversely affect bats and migratory birds and raptors. Construction of the Project would require clearing vegetation, removing outcrops, and the removal of 17 trees, which may provide suitable habitat for nesting birds and roosting habitat for bats. The Project would implement mitigation measures **MM-BIO-2** and **MM-BIO-3**, which would require pre-construction surveys and habitat assessments to determine the presence of nesting birds and bats as well as provides protective measures should active nests or roosting sites be identified. With the implementation of mitigation measure **MM-BIO-2**, Nesting Birds and **MM-BIO-3**, Native Bats, impacts to special-status nesting birds and roosting bats would be avoided and impacts would be less than significant.

The Project includes directional horizontal drilling to cross under the South Yuba River and install a casing within which the sewer collection line would be installed. The horizontal bore and sewer line crossing would be adjacent to the existing bridge over the South Yuba River on Pennyroyal Lane just west of the Old Donner Summit Road/Pennyroyal Lane intersection. Horizontal drilling under the South Yuba River would require a 1600 Permit - Lake and Streambed Alteration Agreement from CDFW for horizontal drilling under the South Yuba River to protect against potential impacts to the riparian area and waterway as a result of inadvertent release of drilling fluids (mud) to the surface during drilling operations, which can sometimes occur through fractures or voids in bedrock or geologic materials around the hole being drilled. A spill of this type is known as drilling inadvertent return or frac-out. CDFW 1600 permit terms and conditions would require implementation of an approved drilling Inadvertent Return Monitoring and Mitigation (Frac-Out) Plan to protect against impacts to the river and riparian area during horizontal drilling and pipe installation and protective measures and protocol that must be implemented in the event of inadvertent drilling fluid leakage. This plan would include specific procedures and steps to detect and respond to any inadvertent release of drilling fluids for the horizontal directional drilling under the South Yuba River. Implementation of the plan in compliance with terms and conditions of the 1600 permit would ensure that no substantial adverse effects would result from horizontal drilling under the South Yuba River.

As previously stated, the riparian woodland mapped in the Project site is identified as sensitive vegetation by CDFW. In addition, riparian woodland and riparian vegetation associated with the intermittent and perennial drainages onsite are vegetation communities likely regulated by CDFW as part of the lake or stream zone pursuant to Section 1600 of the CFGC. Mitigation measure **MM-BIO-4** - Sensitive Natural Communities requires protective fencing to be installed between construction areas and sensitive riparian

areas on the Project site to ensure that no inadvertent impacts to riparian areas would occur during Project construction.

Operations and maintenance would not require any disturbance of biological resources on the Project site. As such, impacts to this criterion would be **less than significant with mitigation incorporated**.

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

Dudek mapped approximately 0.08 acre of aquatic resources anticipated to meet the criteria to be considered jurisdictional aquatic resources under federal and/or state jurisdiction within the Project site. Riparian woodland and riparian vegetation associated with the intermittent and perennial drainages onsite are vegetation communities typically regulated by CDFW as part of the lake or stream zone pursuant to Section 1600 of the CFGC. Unpermitted direct and indirect impacts to these sensitive natural communities could result in a significant impact. The Project would implement mitigation measure **MM-BIO-4**, which requires measures to avoid impacts to riparian habitats during Project construction, including protective fencing. Additionally, best management practices (BMPs) for stormwater, erosion control, and spill prevention would be implemented prior to, during, and following ground disturbance in compliance with the Placer County Grading Ordinance and mitigation measures identified in Sections 3.7, 3.9 and 3.10.

These requirements would minimize the chance for accidental encroachment of construction equipment and personnel into the riparian areas and minimize potential for sedimentation and pollutants to enter aquatic resources during construction activities. This would ensure that impacts to sensitive natural communities would be less-than-significant.

After construction, Project operation would not require any disturbance of biological resources. As such, impacts to this criterion would be **less than significant with mitigation incorporated.**

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

Dudek documented two ephemeral drainages, two perennial drainages, one intermittent drainage, and one wet meadow within the Project area. As discussed under 3.14(b), all drainages and the meadow are anticipated to meet the criteria to be considered jurisdictional aquatic resources subject to federal and state regulation. However, as discussed in response 3.4(b), the Project has been designed to avoid direct impacts to all of the features delineated on the Project site. Indirect impacts to the aquatic resources could occur where ground disturbance is proposed. mitigation measure MM-BIO-4 requires installing exclusion fencing or flagging between areas of riparian vegetation and the limits of disturbance during construction and spill prevention and stormwater and erosion control measures and requirements of the Placer County Grading Ordinance would protect against indirect impacts to waters. These requirements would minimize the chance for inadvertent encroachment of construction equipment and personnel into the riparian vegetation and minimize the chance for sedimentation and pollutants to enter waters during construction activities. This would ensure that indirect impacts to aquatic features and associated riparian habitat would be **less than significant with mitigation incorporated**.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

While common local wildlife likely move through and use portions of the Project site, the Project site is within an area of residential development and existing roadways and does not function as an important wildlife corridor or habitat linkage used by wildlife during migration and does not occur within any designated wildlife corridors or habitat linkages. The South Fork of the Yuba River and associated riparian zone represents the highest value area on the Project site for wildlife movement and use and would not be affected by the Project as directional drilling would be employed to cross the sewer line under the river. Thus, potential impacts to wildlife movement and migration patterns would be limited to the potential effects to migratory birds as discussed in response 3.4(a) above. With implementation of mitigation measure MM-BIO-2, this impact would be reduced to a **less than significant level with mitigation incorporated**.

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

The Placer County Code and General Plan policies establish standards for protection of aquatic resources, sensitive natural communities, special-status species, and trees.

The Project would have no direct effects to any aquatic resources or sensitive natural communities, as discussed above in responses 3.4(b) and 3.4(c). With implementation of mitigation measures MM-BIO-1, BIO-2, BIO-3, and BIO-4 the potential for indirect impacts to these resources would be reduced to a less than significant level.

The Project's direct impacts to special status species would be limited to potential impacts to nesting bees, birds and bats as discussed in response 3.4(a); potential impacts would be less than significant with implementation of mitigation measures MM-BIO-1, MM-BIO-2 and MM-BIO-3. The Project's potential indirect impacts to special status species would be less than significant with implementation of mitigation measure MM-BIO-4, as discussed in response 3.4(a).

There are no oak woodlands or individual oak tree within or adjacent to the Project site. Thus, the provisions of Placer County Code Article 19.50, Woodland Conservation, are not applicable. The Project would require removal of 17 trees including red fir, white fir, lodgepole pine, and Jeffery pine trees of varying size.

Approval for the proposed tree removal would be provided through issuance of a grading permit for the Project pursuant to the grading ordinance (Placer County Code Article 15.48) and thus the Project would not require a separate tree removal permit, in accordance with Placer County Code Section 12.20.040. Project plans include measures and BMPs, including the use of protective fences, that would be implemented to protect trees that would be retained onsite.

Placer County Code Article 12.20, Tree Preservation in Area East of Sierra Summit does not require replacement of trees or payment of mitigation fees. Proposed new vegetation is limited to use of a native seed mix in vegetated stormwater infiltration areas. No new trees are proposed to be planted. With implementation of typical BMPs, including protective fencing around remaining trees, impacts would be **less than significant with mitigation incorporated**.

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

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other conservation plans that apply to the Project site. The Placer County Conservation Program applies only to the central and western portions of the County. The Project would have **no impact** related to conservation plans. No mitigation measures are required.

Mitigation Measures

MM-BIO-1 Western Bumble Bee. Prior to the initiation of construction, a qualified biologist familiar with western bumble bee behavior and life history should conduct surveys to determine the presence/absence of the species. Surveys should be conducted during the colony active period when the species is most likely to be detected above ground, between approximately April to September. Survey methods should follow CDFW guidance per the Survey Considerations for California Endangered species Act (CESA) Candidate Bumble Bee Species (June 6, 2023).

Survey results, including negative findings, should be submitted to CDFW prior to ground-disturbing activities. The survey report should include the following information:

- A description and map of the survey area, focusing on areas that could provide suitable habitat for western bumble bee;
- Field survey conditions that should include the name(s) of qualified biologist(s) and their qualifications, date and time of the survey, survey duration, general weather conditions, survey goals, and species searched.
- Map(s) showing the location of nests/colonies; and,
- A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions where each nest/colony is found. A sufficient description of biological conditions, primarily impacted habitat, should include native plant composition (e.g., density, cover, and abundance) within the impacted habitat (e.g., species list separated by vegetation class, density, cover, and abundance of each species).

If a qualified biologist determines western bumble bees are present, and if "take" or adverse impacts to this species cannot be avoided during project activities, the CDFW will be consulted to determine if a CESA Section 2080 Incidental Take Permit will be required and appropriate mitigation for any impacts.

MM-BIO-2: Nesting Birds. If avoidance of nesting birds is not feasible and construction would occur during the nesting season (February through August), the following measures shall be implemented to avoid or minimize impacts to nesting birds:

- A qualified biologist shall conduct a pre-construction survey for nesting birds no more than 14 days prior to vegetation or structure removal or ground-disturbing activities conducted during the nesting season (February through August). The survey shall cover the limits of construction and suitable nesting habitat within 500 feet of the Project site for raptors and 100 feet for other nesting birds, as feasible and accessible.

- If any active nests are observed during surveys, a qualified biologist shall establish a suitable avoidance buffer from the active nest. The buffer distance will typically range from 100 to 300 feet, and shall be determined based on factors such as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests shall be established in the field with flagging, fencing, or other appropriate barriers and shall be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.

- If vegetation removal activities are delayed, additional nest surveys shall be conducted such that no more than 7 days elapse between the prior survey and vegetation removal activities.

- If an active nest is identified in or adjacent to the construction limits after construction has started, work in the vicinity of the nest shall be halted until the qualified biologist can provide appropriate avoidance and minimization measures to ensure that the nest is not disturbed by construction. Appropriate measures may include a no-disturbance buffer until the birds have fledged and/or full-time monitoring by a qualified biologist during construction activities conducted near the nest.

MM-BIO-3: Native Bats. To avoid or minimize the potential for take of roosting bats, the following shall be implemented:

- A qualified biologist shall conduct a focused bat roost assessment within the Project site. The assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site, access routes, and 50 feet around these areas. The biologist shall survey these areas between 30 and 120 days prior to the start of work. Potential roosting features found during the survey shall be flagged or marked.

- If bats are determined to be using on-site structures/resources for day roosts and such areas cannot be completely avoided, the individuals shall be safely evicted under the direction of the qualified bat biologist. If individuals cannot be safely evicted due to factors such as lack of alternative roosting sites, as determined by the qualified bat biologist, ground-disturbing activities within a specified distance of the roost (specified distance to be determined by the bat biologist, based on surroundings and vulnerability of roost site, etc.) shall be postponed or halted until conditions are suitable for safe eviction or the roost has vacated naturally.

MM-BIO-4: Sensitive Natural Communities. To avoid or minimize impacts to sensitive natural communities, the following shall be implemented:

- Prior to the initiation of ground-disturbing activities in riparian habitat (i.e., willow riparian corridor along PD-1 and ID-1, Lemmon's willow thickets), avoidance/exclusion fencing (e.g., mesh exclusion fencing, flagging, or similar) shall be installed between the riparian habitat and limits of disturbance to protect these features from inadvertent construction impacts. No construction, staging, or other ground disturbing activities should be permitted beyond the construction fence. A qualified wetland specialist should guide installation of the avoidance/exclusion fencing.

3.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
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?	☐	☐	☒	☐

Setting

The discussion of existing conditions and analysis of potential impacts included in this section relies on and summarizes information contained in a Cultural Resources Inventory Report prepared for the Project site (Appendix E). or Area of Potential Effect (APE), The survey limits, or Area of Potential Effect (APE), used for the cultural resources assessment included an area of approximately 33.9 acres, although the direct Project footprint would be smaller, including only the existing roads where sewer improvements and staging would occur. The vertical APE, or maximum depth of disturbance, was assumed to be 15 feet below the existing ground surface, though the maximum depth of disturbance is not likely to exceed 3 feet below the existing road surface in most areas.

The cultural resources investigation identified no prehistoric resources within the Project site. One historic-era resource, consisting of two potentially intact segments of the Overland Emigrant Trail, were noted to have been previously recorded within the survey limits. An intensive-level pedestrian survey confirmed the presence of these two segments of the Overland Emigrant Trail within the APE. The two segments of the Overland Emigrant Trail were re-documented and locations were compared against the footprint of the Project and it was determined that the Emigrant Trail segments would be outside of the Project impact area.

Records Search

The Cultural Resources Inventory Report included a records search that was completed for the APE and a ½ mile buffer by staff at the North Central Information Center (NCIC) at California State University Sacramento on July 20, 2021. This search identified that 24 previous cultural technical studies have been performed for the search area. Five of those previous studies covered at least a portion of the Project site. The records search also identified 24 cultural resources within the search area with 23 of those located outside of the study APE. The one resource intersecting the study APE was identified as the Overland Emigrant Trail (P-31-000825). The Overland Emigrant Trail is listed as California State Historical Landmark No. 799. The segment of the trail within the APE is referred to as the Truckee Route of the California Portion of the Overland Emigrant Trail.

Archival Search

In addition to the records search, historic maps and aerial photographs of the Project area and general vicinity were reviewed to determine past development and land use of the Project area. Review of these materials determined that in 1953 the APE was largely undeveloped except for the ski lodge and chairlifts, and Old Donner Summit Road intersecting the APE oriented north-south from Historic U.S. 40. In 1957 thirty additional residences were constructed within the Resort Village. From 1998 to 2005 increased development of the APE occurred with road paving and paved parking areas added, along with Resort maintenance and operations facilities. By 2005 the current extent of roads had been developed along with many of the residences along Mule Ears Drive, Aster Court, Corn Lilly Lane and Paintbrush Hill. Between 2005 and 2009 additional development within the center of the APE occurred with construction of multi-family residences along Mule Ears Court. Residential construction within the APE is ongoing, with active construction along Mule Ears Drive.

Site Survey

A Dudek archaeologist inspected all portions of the APE on July 22, 2021, using standard archaeological procedures and techniques that meet the Secretary of Interior's Standards and Guidelines for cultural resources inventory. Exposed ground surfaces were observed for surface artifacts, undisturbed areas, archaeological deposits, or geological exposures. Subsurface exposures from erosion were opportunistically inspected for indications of soils with the potential to contain deposits. Much of the site is developed with roads and residential development. No prehistoric resources were identified during the survey. Two segments of the aforementioned Overland Emigrant Trail were relocated within the APE.

Geomorphology

Potential for cultural resources to be found in the vicinity of the Project site was reviewed against geologic and topographic GIS data for the area and information from other nearby projects. The "archaeological sensitivity," or potential to support the presence of buried prehistoric archaeological deposits, is generally interpreted based on geologic landform and environmental parameters (i.e., distance to water and landform slope). Soils present in the APE are consistent with alluvial deposits derived from an assortment of parent materials in the surrounding area underlain by Mesozoic granitic rocks. Sediment formation in this location would likely have occurred primarily since the Holocene, generally the result of receding glaciers in the High Sierra and associated increased water flows following Pleistocene glaciation. Soils within the specific Project site are substantially disturbed as a result of road construction and development; the potential for intact buried deposits is considered low.

Native American Heritage Commission and Tribal Coordination

The Native American Heritage Commission (NAHC) was contacted on July 15, 2021 to request a search of the Sacred Lands File for the Project area. The response received from the NAHC dated July 28, 2021, stated that Native American resources have been previously reported within the search area and suggested that tribal representatives identified in the NAHC response should be contacted for additional information. All NAHC-listed tribal representatives were sent letters by DSPUD. The letters contained a project description, invitation to participate in consultation, and contact information for the appropriate lead agency representative. A record of this outreach is on file with DSPUD.

The Project is subject to compliance with AB 52 (PRC 21074), which requires consideration of impacts to Tribal Cultural Resources as part of the CEQA process and requires the lead agency to provide notification of a proposed

project to California Native American Tribal representatives (who have requested notification) who are traditionally or culturally affiliated with the geographic area of the proposed project. In compliance with this requirement, all NAHC-listed tribal representatives were sent letters by DSPUD, as discussed above. Impacts to Tribal Cultural Resources are discussed further in Section 3.18.

Archaeological Context

It is believed that human occupation of the Sierra Nevada began at least 9,000 years ago, although there is limited available data because only a handful of artifacts from this period have been recorded. Archaeologists have been able to develop much more detailed understanding of subsequent prehistoric temporal sequences due to the greater amount of available data. The Tahoe Reach is currently the most commonly applied cultural temporal sequence within the region. This sequence includes several phases, of which the Martis Complex and the Kings Beach Complex are most relevant to the Project area.

The Martis complex has been identified to extend from Lassen County to Alpine County and occurred between 3000 B.C. to approximately 500 A.D. Subsistence during the Martis Complex was based on hunting and seed collecting, with populations that migrated between higher and lower elevation areas to obtain seasonally available resources and avoid harsh weather conditions. During this period there was a more intensive exploitation of local materials, rather than non-local cherts and obsidian, for the manufacture of formed flaked tools.

The Kings Beach complex is placed as spanning from 500 A.D. to the time of contact with European settlers, generally around 1750. The population migration patterns that occurred in the Martis complex continued during this period, however subsistence shifted toward a focus on fishing and gathering, with a greater reliance on exploitation of acorns as evidenced by the increased presence of bedrock mortars and pestles. In addition, bow and arrow technology was adopted which allowed populations to exploit additional wildlife resources for food. There was also greater use of obsidian and chert in place of volcanic materials such as basalt, which suggests that there was an increase in trade with neighboring tribes during this period because high quality obsidian and chert was not available locally.

The period after 1750 is identified as the Ethnohistoric period. The Project region was in Washoe tribal territory during this period. This Washoe Tribe's primary use area included the areas surrounding Lake Tahoe; extending north to Honey Lake, south beyond Topaz lake, west beyond the present Town of Truckee, and east beyond present Reno and Virginia City. The Washoe subsistence strategy was centered on fishing, hunting, and collecting vegetative resources. This group utilized larger central habitation areas as well as satellite sites that were used during hunting excursions and for pre-processing of collected plant resources such as acorns and pinyon. Common tools included the bow and arrow, traps, harpoons, hooks, nets, portable and stationary grinding implements, and pestles and hand stones.

Historic Context

Post-contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1822), which began with the establishment of a settlement at San Diego and the founding of Mission San Diego de Alcalá; the Mexican Period (1822-1848), which began with Mexico's independence from Spain in 1821; and the American Period (1848–present) which began with the end of the Mexican American War at the signing of the Treaty of Guadalupe Hidalgo in 1848 and is when California became a territory of the United States.

During the Spanish Period (1769-1822), Gaspar de Portolá entered the San Francisco Bay in 1769. Additional explorations of the San Francisco Bay and the plains to the east were conducted by Father Pedro Fages in 1772 and Juan Bautista De Anza in 1776. In 1808, Lieutenant Gabriel Moraga led the first Spanish expedition into the Sacramento Valley. This group explored areas along the American, Calaveras, Cosumnes, Feather, Merced, Mokelumne, Sacramento, and Stanislaus River watersheds. The most recent Spanish expedition into this region was conducted by Luis Arguello in 1817. This group traveled up the Sacramento River to the mouth of the Feather River. Spanish missionization of Alta California was initiated in San Diego 1769. A total of 21 missions were constructed by the Dominican and Franciscan orders between 1769 and 1823.

The Mexican Period (1822-1848) began with Mexico's separation from the Spanish empire in 1821. Following the establishment of the Mexican republic, the government seized many of the lands belonging to Native Americans, providing them as parts of larger Land Grants to affluent Mexican citizens and rancheros. Captain John Sutter was granted the two largest areas of land in the Sacramento Valley area. Sutter founded New Helvetia, a trading and agricultural empire, in 1839. Also during this time period, American fur trappers and traders conducted explorations into west Sierra Nevada Mexican territory. Notably, in 1826, Jebediah Smith led a small party of trappers in an expedition along the Sierra Nevada range, eventually entering the Sacramento Valley in 1827.

The American Period (Post 1848) saw the first discovery of gold at Sutter's Mill in Coloma in January 1848. This led to a surge of migrants entering California via passes north and south of the Tahoe Basin; the main northern route was the Overland Emigrant Trail. In 1859, the Central Pacific Railroad Company developed transportation routes that connected Sacramento to Virginia City, Nevada, where silver had been recently discovered. Joseph Henry Gray, George Schaffer, and S.S. Coburn profited from the developing railroad and established the first waystations, businesses, and industries, including lumber and ice harvesting in the northern Tahoe region..

Development in the area gradually shifted from a logging- and mining-based economy to one based on tourism and recreation, in particular skiing. The vast majority of skiing in America remained focused in the northeastern United States until 1936 when the Aspen-Ashcroft area in Colorado was ski surveyed and residents formed the Roaring Fork Winter Sport Club near Aspen, Colorado. In 1938, Dave McCoy organized a rope tow at Mammoth Mountain, California, and the following year Sugar Bowl opened in Norden, California, approximately six miles southeast of Kingvale. A decade later in 1949, the ski resort at Olympic Valley, California, opened for business. The 1960 Winter Olympics held in Olympic Valley resulted in further development of the area and completion of Interstate 80. The area continued to grow throughout the 1980s and 1990s and remains a popular recreational destination.

Impact Discussion

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

Less than Significant with Mitigation. A historical resource is one that meets the eligibility criteria for the California Register of Historical Resources. This includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1[j]). The significance of an historic resource is impaired when a project demolishes or materially alters those physical characteristics that convey its significance.

In 1953, the Project area was largely undeveloped except for the ski lodge and chairlifts, and Old Donner Summit Road. There were 30 residential dwellings constructed within the Sugar Bowl Resort Village around

1957. From 1998 to 2005 increased development of the Project area occurred with road paving and paved parking areas added, along with resort maintenance and operations facilities. By 2005 the current extent of roads had been developed along with many of the residences along Mule Ears Drive, Aster Court, Corn Lily Lane and Paintbrush Hill. Between 2005 and 2009 additional development occurred with construction of multi-family residences along Mule Ears Court. Residential of vacant lots within the Project area is ongoing.

The 1957 residences are historic-era buildings and would not be negatively affected or disturbed by the Project. The proposed expansion of the sewer collection system would install sewer collection lines underground in existing roadways to correct issues with onsite septic systems and would result in no impacts to the existing structures.

The Overland Emigrant Trail is listed as California State Historical Landmark No. 799 and two potential segments of the trail are within the APE. These features have not been evaluated for NRHP listing. These remnant features of the Overland Emigrant Trail are not within the anticipated disturbance footprint of the Project and would not be expected to be adversely affected by any activities that would occur as part of the Project. To ensure these features are protected from inadvertent construction disturbance, mitigation measure **MM-CUL-1** requires that protective fencing be installed prior to Project construction.

With implementation of mitigation measure **MM-CUL-1,** impacts to remnant portions of the Overland Emigrant Trail and any resources with potential to be considered eligible for listing in the National Register of Historic Places or the California Register of Historic Resources would be **less than significant with mitigation**.

MM-CUL-1: Construction Exclusion Area for Overland Emigrant Trail. An exclusionary Environmentally Sensitive Area (ESA) boundary area shall be established to ensure no construction disturbance occurs to remnant segments of the Overland Emigrant Trail. The ESA boundaries shall be shown on Project plans and delineated in the field with orange construction fencing or flagging. The Project archaeologist shall review and approve ESA depictions on Project plans and the Project contractor shall be responsible for establishing ESA boundaries in the field prior to construction activities.

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

Less than Significant with Mitigation. The database records search, intensive pedestrian survey, correspondence with the NAHC, outreach to local tribal representatives, and review of previous technical studies completed in the Project area that were performed as part of the cultural resources assessment identified no prehistoric archaeological resources within the Project site. Potential impacts to historical period resources are discussed in Section 3.5(a), above. Based on findings of previous surveys in the Project area, site soils, and previous development and site disturbance, the cultural resources assessment concluded that potential for subsurface resources to be discovered during construction activities is low. In the unlikely event that construction encounters unanticipated archaeological resources, mitigation measure **MM-CUL-2** would be implemented. **MM-CUL-2** requires that construction be halted if archaeological materials are encountered to allow for evaluation of the find by a qualified archaeologist who will make recommendations for appropriate treatment and additional study. With implementation of MM-CUL-1, impacts would be **less than significant with mitigation**.

MM-CUL-2: Unanticipated Discovery of Archaeological Resources. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under CEQA (14 CCR 15064.5(f); PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

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

Less than Significant. There are no known human burial sites within the Sugar Bowl Resort area, including the Project APE. Therefore, is it not expected that any human remains would be encountered during construction of the Project. In the unlikely event that human remains are encountered, Section 7050.5 of the California Health and Safety Code, requires that the county coroner be immediately notified of the discovery. The coroner would provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, may occur until a determination has been made. If the county coroner determines that the remains are, or are believed to be, Native American, they must notify the NAHC within 24 hours. In accordance with California Public Resources Code Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendent from the deceased Native American. Within 48 hours of their notification, the most likely descendent will recommend to the lead agency their preferred treatment of the remains and associated grave goods. Adherence to the California Health and Safety Code would ensure that if any human remains are encountered during construction, the remains will be appropriately evaluated and handled such that impacts would be **less than significant**. No mitigation measures are required.

3.6 Energy

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy – 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?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Setting

There are federal regulations addressing energy efficiency in the built environment, fuel efficiency for motor vehicles, energy sources used by the United States, and national conservation goals; none of these regulations and policies applies directly to the Project. Appendix F of the CEQA Guidelines calls for discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The State of California has passed several laws governing energy usage. AB 32 establishes regulatory, reporting, and market procedures to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions; the most significant proposed GHG reductions are recommended through improving emission standards for light-duty vehicles, implementation of the Low-Carbon Fuel Standard, energy efficiency measures in buildings and appliances, and a renewable portfolio standard for electricity production. Title 24 sets the energy efficiency standards for residential and nonresidential buildings and the California Green Building Standards Code, or CALGreen Code (24 CCR 11), which took effect on January 1, 2023, requires buildings to reduce energy and water consumption and establishes specific performance standards that appliances and fixtures must meet.

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

Energy Consumption: The short-term construction and long-term operation of the Project would require the consumption of energy resources in several forms at the Project site and within the Project area. Construction and operational energy consumption is evaluated further below.

Construction Energy Use

Electricity

The electricity used for construction activities would be temporary and minimal and generally related to charging hand tools and small electronic devices and would be provided by temporary grid power or by onsite generators. No Project construction activities would be expected to result in wasteful, inefficient, or unnecessary consumption of electricity.

Natural Gas

Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection.

Petroleum

Heavy-duty construction equipment associated with construction activities would rely on diesel fuel, as would haul and vendor trucks involved in the soil export from, and delivery of materials to, the Project site. Construction workers would travel to and from the Project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel to and from the site in gasoline-powered light-duty vehicles.

Petroleum would be consumed throughout construction of the Project through powering of construction equipment and operation of motor vehicles for hauling construction materials and worker commutes. Construction of the Project would be a temporary, short-term activity, and any petroleum used during the construction phase would be used towards the development of the Project; as such, petroleum use for construction would be relatively nominal and would not be wasteful or inefficient use of resources. Construction activities would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Operational energy use would be for the purposes of operations and maintenance activities on the sewer collection system; the Project includes no components that would result in the long-term operational use of energy in an unnecessary, wasteful, or inefficient way. Impacts associated with unnecessary, wasteful, or inefficient use of energy would be **less than significant**.

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

The Project would require minimal electricity from the local provider sourced in compliance with applicable plans for renewable energy sources. Construction would be temporary and would be carried out using light-duty and heavy equipment operated in compliance with applicable fuel and emissions standards. Worker vehicles would meet the applicable standards of Assembly Bill (AB) 1493 (vehicles manufactured 2009 or later), which ensures that vehicles meet fuel efficiency standards and that older vehicles are replaced. The Project would not result in a net increase beyond existing levels in energy use or vehicle trips during operation. The Project would not involve land use changes that would indirectly result in an increase in vehicle trips or vehicle miles traveled. Therefore, operation of the Project would require little or no energy in addition to the existing condition. The Project would result in **no impact** associated with any conflict or obstruction of a state or local plan for renewable energy or energy efficiency.

3.7 Geology and Soils

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS – 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.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Setting

The California Department of Conservation Seismic Hazards Map application identifies that there are no Alquist-Priolo fault zones, liquefaction zones, or landslide zones within the Project site. The nearest Alquist-Priolo fault zone to the Project site is the West Tahoe Fault, located near Emerald Bay, Lake Tahoe (CGS, 2023). The Geotechnical Investigation report prepared for the Sugar Bowl Village by NV5 (2021) for the Project site found that there are no known faults within the Project site and no possibility of liquefaction at the site. There are approximately seven potentially active faults in the Project region, including the Dog Valley Fault (active, approximately 6 miles northeast), a group of faults southeast of Truckee (active and potentially active, approximately 8.5 miles east), the Polaris Fault (active, approximately 10 miles northeast), the West Tahoe-Dollar Point Fault zone (potentially active, approximately 10.5 miles southeast), the West Tahoe Fault (active, approximately 19 miles southeast), the Tahoe-Sierra Frontal Fault Zone (potentially active, approximately 8 miles southeast), and the North Tahoe Fault (active, approximately 18.5 miles southeast). Earthquakes associated with these faults could cause strong ground shaking at the Project site (NV5, 2021).

Topography of the Project site slopes generally downhill from south to north and surface water drainage is generally by overland flow toward the South Yuba River. The South Yuba River flows south to north and bisects the northern portion of the proposed sewer alignment running under the bridge on Pennyroyal Lane. Granitic, volcanic, and metamorphic cobbles and boulders are located throughout the Project site.

The Geotechnical Engineering Report found that the Project site is underlain by Holocene and Pleistocene aged colluvium and glacial drift deposits comprised of unsorted silt, sand, cobbles, and boulders. The soil conditions encountered during NV5's field investigation generally consisted of medium dense to dense coarse-grained soil

types of low plasticity overlying near surface granitic rock (NV5, 2021; Appendix F). The Biological Resources Assessment prepared for the Project identified three primary soil series on the Project site: Meiss-Waca-Cryumbrepts (wet complex, 30 to 75 percent slopes), Tallac-Cryumbrepts (wet complex, 2 to 30 percent slopes), and Tinker-rock outcrop (metamorphic-Cryumpbrepts complex 2-30% slopes), These soils are generally well-drained and mostly formed in glacial deposits or outwash. A secondary soil series was also identified - Cryumbrepts Complex. This secondary series is characterized by well-drained to poorly- drained soils formed in glacial outwash or alluvium (Appendix D).

Impact Discussion

a) Would the project 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.

and

ii) Strong seismic ground shaking?

and

iii) Seismic-related ground failure, including liquefaction?

Less than Significant. There are no Alquist-Priolo fault zones or other known earthquake faults within or directly adjacent to the Project site. Thus, the Project site is not subject to rupture of a known earthquake fault. Known faults in the Project region could result in strong shaking and present a potential hazard to underground infrastructure. The proposed sewer main would be constructed in compliance with the requirements set forth in the California Building Code, Placer County Code, and Truckee Sanitary District and DSPUD standards related to materials and construction methodologies, excavation, grading and earthwork. Compliance with these standards would ensure that pipeline construction and installation are appropriate for site conditions and hazards associated with seismic ground shaking expected to occur at the Project site.

The California Department of Conservation Seismic Hazards Map indicates that there is no potential for landslides or slope instability and a low potential for liquefaction (CGS 2023) at the Project site. Further, the Geotechnical Investigation report provides site-specific data and based on the finding that the site is underlain with medium dense to dense silty Sand with gravel (SM) and silty Gravel with sand (GM), this soil profile has a low potential for liquefaction; thus, the Geotechnical Investigation report concludes there is no possibility of liquefaction to occur. Further the report concludes that due to the granular and rocky nature of the Project site and general surrounding area, the potential for slope instability is considered low.

The Project includes no habitable structures or other structural development intended for human occupancy that could result in risk of loss, injury, or death in the event of strong seismic ground shaking. Compliance with applicable codes and standards and recommendations of the Geotechnical Investigation would ensure that the Project is constructed to appropriate standards for the region and site conditions and impacts associated with risk of adverse effects resulting from seismic activity would be **less than significant**.

iv) Landslides?

No Impact. As stated in response 3.7(a)(i) – 3.7(a)(iii), the Geotechnical Investigation report finds that the natural slopes at the site are stable and there are no steep slopes within the Project site. The site is not located in a landslide zone, as mapped by the California Department of Conservation. The sewer main would be installed below-grade and the Project includes no grading that would alter site topography and result in steep or unstable slopes. The Project includes no components that would result in increased risk of landslide. Thus, the Project would have **no impact** related to risk associated with landslides.

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

Less than Significant with Mitigation Incorporated. Construction of the Project would include excavation and trenching for installing sewer lines within the roadways, followed by back-filling, compaction and surfacing disturbed areas within roadways and revegetation/stabilization of any areas disturbed outside of roadways. These construction activities would result in ground and soils disturbance and exposure that could result in soil erosion and loss of topsoil if measures are not implemented to control erosion and stabilize soils.

The Project would be required to comply with Placer County's Grading Ordinance (Code Section 15.48.630) and Stormwater Quality Ordinance (Code Section 8.28), which identifies requirements to control erosion and sedimentation and maintain stormwater quality for construction projects and grading through the use of best management practices (BMPs). To protect water quality and control erosion during and following construction activities, the Project would implement mitigation measure **MM-GEO-1**, which requires preparation of a Water Pollution Control Plan and Sediment and Erosion Control Plan that would be incorporated into engineering plans and specifications for the Project. The Water Pollution Control Plan and Sediment and Erosion Control Plan would require implementation of erosion control measures in accordance with the California Stormwater Quality Association's Stormwater Best Management Practices Handbook. Erosion control best management practices (BMPs) would include measures to control stormwater drainage, protect water quality, and avoid erosion during and after construction. BMPs could include straw wattles, silt fences, covering soil stockpiles, and other measures to avoid erosion and control sediment transport from the construction area. Compliance with Placer County Code and implementation of mitigation measure MM-GEO-1 would ensure that impacts from erosion and loss of topsoil would be **less than significant with mitigation**.

MM-GEO-1: To reduce runoff and erosion, and minimize the potential of sedimentation as a result of the Project, construction shall be carried out in compliance with a Water Pollution Control Plan and Erosion Control Plan providing site-specific measures for stormwater management and sediment and erosion control in accordance with the California Stormwater Quality Association's *Stormwater Best Management Practices Handbook* and *Erosion and Sediment Control Guidelines for Developing Areas of the Sierra Foothills and Mountains* or other erosion control reference determined to be appropriate by the Project Engineer. Specific minimum site stabilization and erosion control measures identified in Project plans shall include:

- Installing erosion-control filter/silt fence and fiber wattles;
- Containing and securely protecting soil stockpiles with fiber wattles and coverings;
- Revegetating all disturbed areas with appropriate "weed-free" seed mixes and native species;

- Applying mulch or an erosion control blanket to inactive disturbed areas.

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

No Impact. As noted under Section 3.7(a) above, there are no Alquist-Priolo fault zones mapped within the Project site and no known faults intersect the Project site, the Project site has no potential for landslides or slope instability and a low potential for liquefaction. The site-specific Geotechnical Investigation report found no substantial risks associated with site geology. The proposed sewer main would be constructed in compliance with the requirements set forth in the California Building Code, Placer County Code, and Truckee Sanitary District and DSPUD standards related to materials and construction methodologies, excavation, grading and earthwork. Therefore, the Project would not exacerbate geotechnical hazards related to an unstable geologic unit or soils. No impact.

d) Would the project 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. Expansive soils are clay-based and tend to increase in volume due to water absorption and decrease in water volume due to drying. As noted in the Setting section, there are four soil types mapped on the Project site – Meiss-Waca-Cryumbrepts (wet complex, 30 to 75 percent slopes), Tallac-Cryumbrepts (wet complex, 2 to 30 percent slopes), and Tinker-rock outcrop (metamorphic-Cryumpbrepts complex 2-30% slopes), and a secondary soil series listed as Cryumpbrepts Complex. These soils are generally well-drained and composed of high percentages of silt, sand, and gravel, which are not subject to the shrink and swell conditions associated with expansive soils. The Geotechnical Investigation report found that the site soils consist of medium dense to dense coarse-grained soil types of low plasticity overlying near surface granitic rock. There was no highly plastic, compressible, or potentially expansive soil encountered during the geotechnical survey. Thus, no impact would occur.

e) Would the project 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. No septic tanks or alternative wastewater disposal systems would be constructed or used as a result of the Project. Therefore, the Project would have no impact associated with such systems.

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

Less than Significant with Mitigation Incorporated. There are no known paleontological resources or unique geologic features in the Project vicinity. The Project would be constructed at an existing, previously developed site and would require excavation to a maximum depth of 15 feet for installation of the sewer collection system. Given the relatively limited degree of disturbance required by the Project, it is unlikely that paleontological resources would be disturbed during these activities. However, a significant impact could occur if a unique paleontological resource or geologic feature is encountered during Project construction. Mitigation measure MM-GEO-2 would require work to stop in the vicinity of any paleontological resources discovered during construction and would require that the find be evaluated and appropriate

management measures implemented to avoid or minimize impacts to the discovered resources. Impacts would be **less than significant with mitigation**.

MM-GEO-2: Unanticipated Paleontological Resources. If fossils or fossil bearing deposits are discovered during ground-disturbing activities, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. Ground disturbance work shall cease until a qualified paleontologist determines whether the resource requires further study. The paleontologist shall document the discovery as needed (in accordance with Society of Vertebrate Paleontology standards [Society of Vertebrate Paleontology 1995]), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall consult with DSPUD to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If avoidance is not feasible, the paleontologist shall prepare an appropriate plan for mitigating the effect of construction activities on the discovery. All construction activity shall adhere to the recommendations in the mitigation plan.

3.8 Greenhouse Gas Emissions

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

Setting

Greenhouse gases (GHGs) are gases that absorb infrared radiation in the atmosphere. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect. Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), O_3, and water vapor. If the atmospheric concentrations of GHGs rise, the average temperature of the lower atmosphere will gradually increase. Globally, climate change has the potential to impact numerous environmental resources through uncertain impacts related to changes in future air temperatures and precipitation patterns. Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. Climate change is already affecting California: average temperatures have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP), which varies among GHGs. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG emissions are typically measured in terms of pounds or tons of CO_2 equivalent (CO_2e).[1]

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs (CAT 2010). This approach is consistent with the *Final Statement of Reasons for Regulatory Action* for amendments to the CEQA Guidelines, which confirms that an environmental impact report or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009).

CEQA Guidelines

The significance criteria used to evaluate impacts to greenhouse gases/climate change are based on Appendix G of the CEQA Guidelines. Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR §15064.7(c)). Similarly, the revisions to Appendix G, Environmental Checklist Form, which is often used as a basis for lead agencies' selection of significance thresholds, do not prescribe specific thresholds. Rather, the CEQA Guidelines establish two new CEQA thresholds related to GHGs, and these will therefore be used to discuss the significance of Project impacts:

- Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Placer County Air Pollution Control District recommends the following approach to determine if a project's GHG emissions would result in a significant impact:

- Tier 1 would consist of evaluating whether or not a project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a qualified climate action plan. If a project is consistent with a qualifying local climate action plan, it does not have significant GHG emissions.
- Tier 3 consists of comparing the project's GHG emissions to the de minimis level of 1,100 MT CO_2e per year. If a project does not exceed this threshold, it does not have significant GHG emissions.
- Tier 4 is a bright line threshold level to determine significance using an 82% emission capture rate approach and is 10,000 MT CO_2e per year, for both construction and operational phases. If a project exceeds this

[1] The CO_2e for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of CO_2e = (metric tons of a GHG) × (GWP of the GHG). CalEEMod assumes that the GWP for CH_4 is 25, which means that emissions of 1 metric ton of CH_4 are equivalent to emissions of 25 metric tons of CO_2, and the GWP for N_2O is 298, based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report.

cap, impacts are found to be significant. If a project does not exceed this threshold, the project is compared with the efficiency thresholds.

- Tier 5 compares the project emissions to efficiency thresholds. These thresholds are 4.5 MT CO_2e per capita for residential projects in an urban area and 5.5 MT CO_2e per capita for residential projects in a rural area. For nonresidential development, the thresholds are 26.5 MT CO_2e per 1,000 sf for projects in urban areas and 27.3 MT CO_2e per 1,000 sf for projects in rural areas. If a project does not exceed the applicable efficiency threshold, it does not have significant GHG emissions.

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

Construction Emissions

Construction of the Project would result in GHG emissions that are primarily associated with use of off-road construction equipment and off-site sources including haul trucks, vendor trucks, and worker vehicles associated with pipeline trenching and installation, as well as on-road vehicle trips for mobilization and demobilization activities (e.g., potholing, materials and equipment staging, and other activities). CalEEMod was used to calculate the annual GHG emissions based on the construction scenario as analyzed in Section 3.3, Air Quality. Modeling assumed that construction would begin in summer of 2024. Emissions from on-site and off-site sources are combined for the purposes of this analysis and are presented below in Table 3.8-1.

Table 3.8-1
Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
2024	26.40	<0.01	<0.01	0.01	26.77
2025	49.49	<0.01	<0.01	0.02	50.07
2026	49.57	<0.01	<0.01	0.02	50.15
				Total Project Emissions	**126.99**
				PCAPCD De Minimis Level	1,100
				Threshold Exceeded?	No

Notes: MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R = refrigerants; CO_2e = carbon dioxide equivalent; 0.01 = value less than reported 0.01 metric tons per year.
Source: See Appendix C for detailed results.

Table 3.8-1 indicates that the GHG emissions associated with operation of the Project would be 127 MT CO_2e per year, which is well below PCAPCD's de minimis level of 1,100 MT CO_2e per year. Therefore, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment and this would represent a cumulatively **less than significant** GHG impact. In addition to the low per year generation of GHGs, the construction activities would be required to adhere to existing energy efficiency requirements, including CARB's In-Use Off-Road Diesel-Fueled Fleets Regulations that limit vehicle idling time to five minutes, restrict adding vehicles to construction fleets that have lower than Tier 3 engines, and establish a schedule for retiring older and less fuel-efficient engines (CARB 2011).

Operational Emissions

Once construction is complete, the Project would not result in a net increase in operation emissions because the pipeline would not require energy use to operate, since maintenance of the new pipeline would be incorporated into existing operations and maintenance activities. Because the Project would generate a minimal amount of operational GHG emissions, impacts would be **less than significant**.

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

The Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017, with the 2022 Scoping Plan released in 2022) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects (i.e., the Scoping Plan does not require adoption of policies, programs, or regulations to reduce GHG emissions), nor is it intended to be used for project-level evaluations. Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions, and new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, certain high GHG-emitting consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that would affect a local jurisdiction's emissions inventory from the top down.

The Project would be required to adhere to the applicable programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32 and SB 32, and in the future per AB 1279. Therefore, implementation of the Project would not obstruct implementation of the CARB Scoping Plan.

Executive Order (EO) S-3-05 identified the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. Senate Bill (SB) 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. Assembly Bill (AB) 1279 establishes a policy of the state to achieve net zero GHG emissions no later than 2045 and for statewide anthropogenic GHG emissions to be reduced to at least 85% below 1990 levels by 2045.

Each Scoping Plan builds upon the successful framework established by the initial Scoping Plan and subsequent updates, while also identifying new, technologically feasible, and cost-effective strategies to ensure that California meets increasingly stringent GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Scoping Plan updates have continued to express optimism in meeting future year targets of 2050 and 2030, as evaluated in the 2014 and 2017 Scoping Plans (respectively), and most recently, the 2045 goal addressed in the 2022 Scoping Plan under EO B-55-18, which AB 1279 codified and expanded on.

While there are no established protocols or thresholds of significance for the future year analysis, CARB forecasted in the 2014 Scoping Plan that compliance with the current Scoping Plan would put the state on a trajectory of meeting the long-term 2050 GHG goals, although the specific path to compliance was unknown at the time (CARB 2014). The 2017 Scoping Plan outlined a strategy to achieve the 2030 GHG reduction target. The proposed scenario in the 2022 Scoping Plan lays out a path not just to carbon neutrality by 2045, but also to the 2030 GHG emissions reduction target (CARB 2022). The modeling indicates that, if the plan described in the proposed scenario is fully implemented, and done so on schedule, the state is on track to reduce its emissions to 260 MMT CO_2e by 2030 (CARB 2022).

The Project would not impede the attainment of the GHG reduction goals for 2030, 2045, or 2050 identified in SB 32, AB 1279, and EO S-3-05, respectively. As discussed above, the Project's GHG construction and operational GHG emissions would be minimal, not exceeding PCAPCD's de minimis level of 1,100 MT CO_2e per year due to the short-term nature of construction activity and minimal operational GHG emissions. GHG emissions generated by the Project would not interfere with implementation of GHG reduction goals for 2030, 2045, and 2050.

The Project would result in **no impact** resulting from conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

3.9 Hazards and Hazardous Materials

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

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

Setting

The Project site consists of approximately 11.05 acres within the Sugar Bowl Property Owners residential subdivision near the crest of the Sierra Nevada in the Sugar Bowl Village area at the base of Sugar Bowl Ski Resort in Placer County, California. The Project site is approximately 2.5 miles south of Interstate 80 and is accessed from Donner Pass Road via Sugar Bowl Road or Old Donner Summit Road. The Village Gondola located off Donner Pass Road also provides access to the site from Donner Pass Road when in operation during ski season. The existing roadways of the Project area that will be excavated for the sewer lines include Old Donner Summit Road, Pennyroyal Lane, Mule Ears Drive, Aster Court, Corn Lily Lane, Fiddleneck Place, and Paint Brush Hill Court. Pennyroyal Lane crosses by bridge over the South Yuba River and there are culverts and associated ephemeral and intermittent drainage features along Mule Ears Drive and Pennyroyal Lane.

As discussed previously, the Project site is developed with roadways and residential housing. According to the California Department of Toxic Substances Control (DTSC) EnviroStor database and the State Water Resources Control Board (SWRCB) GeoTracker database, the Project site is not located within or in close proximity to a hazardous materials site (DTSC 2023; SWRCB 2023).

The nearest public airport is the Truckee Tahoe Airport located approximately 11 miles east of the Project site; the Project site is not within an airport land use plan area. The nearest school to the Project site is the Donner Trail Elementary School, which is roughly 6.5 miles west of the Project site.

The Truckee Fire Protection District provides emergency response to the Project site. According the CalFire Fire Hazard Severity Zone (FHSZ) Viewer, the Project site is located within a very high FHSZ within a State Responsibility Area (CalFire 2023).

The Truckee Fire Protection District has adopted a Community Wildfire Protection Plan (CWPP) that provides a framework and wildfire mitigation roadmap to identify and prioritize future wildfire protection projects. Their goal is to foster a community wide collaborative approach to reduce wildfire risk and hazards to life, property, and natural

resources by getting input from the public. The CWPP identifies the Sugar Bowl Village area as 'intermix' in relation to its wildland urban interface classification (Truckee Fire, 2023).

The Truckee Fire Protection District performs inspections for compliance with California Defensible Space Regulations. The CWPP is also consistent with federal fuel reduction policies, a fire-adapted community plan, state community fire protection policies, and local ordinances (Truckee Fire, 2023).

Impact Discussion

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

Less-than-Significant Impact with Mitigation. Project-related transportation, use, and disposal of hazardous materials would be limited to common substances used to maintain and operate construction equipment (such as fuels and lubricants). Storage, handling, and transport of potentially hazardous materials would occur in compliance with applicable local, state, and federal regulations implemented to minimize risk of hazardous materials release. Sewer collection lines would be constructed in accordance with DSPUD standards and would not present a substantial risk associated with leaks or spills of wastewater. Project construction activities would involve the use of hazardous materials commonly used in construction, including bonding agents and solvents, sealant coatings, and petroleum-based fuels, hydraulic fluids, and lubricants used in vehicles and equipment. Large quantities of these materials would not be stored at or transported to the construction site. All construction waste materials would be disposed of in compliance with state and federal hazardous waste requirements and at appropriate facilities. Inadvertent spills or releases of even small quantities of some of these materials could have adverse effects to sensitive riparian and meadow habitat and groundwater or surface water quality and could result in undesirable Project impacts. Mitigation measure MM-HAZ-1, therefore, requires specific measures for spill prevention and containment of hazardous materials on the Project site during construction. With implementation of mitigation measures and requirements identified above, impacts associated with transport, use, inadvertent release, or disposal of hazardous materials would be **less than significant with mitigation**.

MM-HAZ-1*:* The following measures shall be implemented prior to and during construction and shall be incorporated into Project plans and specifications.

- All equipment shall be inspected by the contractor for leaks prior to the start of construction and regularly throughout Project construction. Leaks from any equipment shall be contained and the leak remedied before the equipment is again used on the site.

- Best management practices for spill prevention shall be incorporated into Project plans and specifications and shall contain measures for secondary containment and safe handling procedures according to the Product Safety Data Sheets.

- A spill kit shall be maintained on site throughout all construction activities and shall contain appropriate items to absorb, contain, neutralize, or remove hazardous materials stored or used in large quantities during construction.

- Project plans and specifications shall identify construction staging areas and designated areas where equipment refueling, lubrication, and maintenance may occur. Areas designated for refueling, lubrication, and maintenance of equipment shall be approved by the District and shall be located away from any drainage or waterway.

- In the event of any spill or release of any chemical or wastewater during construction, the contractor shall immediately notify the District.

- Hazardous substances shall be handled in accordance with labeling, Product Safety Data Sheets and applicable codes.

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

Less-than-Significant Impact with Mitigation. As discussed in response to Threshold 3.9(a), implementation of standard construction BMPs and mitigation measure **MM-HAZ-1** would minimize potential for accidental release of hazardous materials associated with the Project into the environment. Project BMPs would include spill prevention and control practices to reduce the potential impact of accidental spills during construction. Additionally, operation and maintenance of the Project would require the use of small quantities of potentially hazardous materials to maintain the sewer collection system. The Project would comply with applicable local, state, and federal regulations implemented for the minimization of hazardous materials risk. Therefore, impacts related to the accidental release of hazardous materials would be **less than significant with mitigation incorporated**.

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

No Impact. The Project site is not within 0.25 miles of a school. Therefore, the Project would have no impact and no mitigation measures are required.

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

No Impact. As noted in the Setting section above, a search of the State Geotracker and EnviroStor databases determined that no active hazardous materials cleanup sites are located in proximity to the Project site (DTSC 2023; SWRCB 2023). **No impact** would occur.

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 is not located within an airport land use plan or within two miles of a public use airport. The nearest airport is the Truckee Tahoe Airport located approximately 11 miles east of the Project site. **No impact** related to airport hazards would occur.

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

Less-than-Significant Impact. The Project would not require modifications to existing roadways that could impede emergency response or evacuation activities. During Project construction, temporary partial closure of roadways within the subdivision would be required to complete trenching and installation of the sewer collection system. Any such closure would be in accordance with a traffic control plan approved by DSPUD and would be coordinated with the Truckee Fire Protection District to ensure that the traffic control plan includes provisions for adequate emergency access to all parts of the Sugar Bowl residential subdivision. Notification would also be provided to the Placer County Sheriff's Office. Upon completion of construction, all associated roadways would be restored to their existing condition. As such, construction and operation of the Project would not interference with an adopted emergency response or emergency evacuation plan. The Project would have a **less-than-significant impact**, and no mitigation measures are required.

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

Less-than-Significant Impact with Mitigation. Please refer to the impact discussion in Section 3.20(b). Typical operations and maintenance of the sewer collection system would not pose a substantial risk of fire ignition and all operations and maintenance work would be carried out in accordance with existing District procedures for fire safety. Project construction activities would be a potential source of wildland fire ignition and impacts associated with wildland fire. Project construction would be conducted in accordance with local and state regulations governing fire prevention and safety. Chapter 33 of the California Fire Code (CFC) outlines general fire safety precautions during construction and demolition that are intended to maintain minimum levels of fire protection and limit the spread of fire (California Fire Code 2022). Mitigation measure **MM-FIRE.1** (see Section 3.20(b)) requires that Project plans and specifications include a Fire Prevention Plan for construction activities. The Fire Prevention Plan would require that fire safe practices be followed, and that basic fire suppression equipment is maintained on site at all times to reduce the risk of fire associated with construction activities. Through compliance with existing codes and implementation of the Fire Prevention Plan as required by mitigation measure **MM-FIRE.1**, risks associated with an elevated risk of wildland fire during Project construction would be **less than significant with mitigation.**

3.10 Hydrology and Water Quality

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**HYDROLOGY AND WATER QUALITY – Would the project:**				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i) result in substantial erosion or siltation on or off site;	☐	☒	☐	☐
	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 planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
	iv) impede or redirect flood flows?	☐	☐	☐	☒
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

Setting

The majority of the Project site consists of previously developed land with impervious surfaces as well as gravel or dirt roads and roadway shoulder areas. As depicted in Figure 2 – Project Site, the South Yuba River flows through the Project site. Water quality in the Project area is regulated by the California Regional Water Quality Control Board (RWQCB) Central Valley Region. The Central Valley Region Basin Plan outlines water quality standards for the surface and ground waters within the region (RWQCB 2023). The Project site is not located within a groundwater

basin assigned any level of prioritization under the Sustainable Groundwater Management Act (DWR 2020). Domestic water service in the Sugar Bowl Property Owners subdivision is provided by DSPUD.

According to the BRA prepared for the proposed Project (Appendix D), the Project site is located within the Upper South Yuba watershed, which drains approximately 126,647 acres of land in Placer County. The USFWS National Wetlands Inventory identifies four aquatic resources mapped on the Project site: riverine, freshwater pond, freshwater emergent wetlands, and freshwater forested/shrub wetland. Surface run-off on the Project site is generally by sheet flow and roadside drainages downgradient (north, northeast) to a perennial tributary of the South Yuba River that flows south to north through the northern portion of the Project site. Water is channeled to the perennial waterway through several roadside ditches, ephemeral drainages and one intermittent drainage. Also refer to the discussion of jurisdictional waters delineated on the Project site provided in Section 3.4 – Biological Resources.

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

Construction of the Project would involve ground-disturbing activities for grading that could result in sediment discharge in stormwater runoff. Additionally, as discussed in Section 3.9, Hazards and Hazardous Materials, construction would involve the use of oil, lubricants, and other chemicals that could be discharged from leaks or accidental spills. These potential sediment and chemical discharges during construction would have the potential to impact water quality in receiving water bodies. The total area of disturbance for Project construction is approximately 0.3 to 0.6 acre. Therefore, the Project is not expected to need a Stormwater Pollution Prevention Plan per the National Pollutant Discharge Elimination System and California General Construction Permit.

The Project includes horizontal directional drilling under the South Yuba River to install a casing in which the sewer line would be placed to cross under the river channel and associated riparian area. The pipe crossing under the bed and bank of the river would be installed within a 0.5-inch thick steel casing to increase the pipe's durability and strength and protect against future damage or leaks in the vicinity of the river. Engineer's specifications for horizontal directional drilling, and casing and pipe design and installation, would be completed in accordance with recommendations of a site-specific geotechnical investigation prepared for the Project. A Lake and Streambed Alteration Agreement would be obtained, as required, from the California Department of Fish and Wildlife (CDFW) for jack and bore/directional drilling under the river. As part of the permitting requirements with CDFW, a drilling Inadvertent Return Monitoring and Mitigation (Frac-Out) Plan would be required to protect against impacts to the river and riparian area in the unlikely event that drilling fluids (mud) escape to the surface during drilling operations. This plan would provide specific procedures and steps to detect and respond to any inadvertent release of drilling fluids (mud) during horizontal directional drilling under the South Yuba River. Compliance with the terms and conditions of the Lake and Streambed Alteration Agreement and implementation of the approved Frac-Out Plan would ensure that impacts to surface water quality associated with the South Yuba River crossing would be less than significant.

As discussed in Section 3.7 - Geology and Soils, since Project construction would disturb less than 1 acre, a Stormwater Pollution and Prevention Plan would not be required per the National Pollutant Discharge Elimination System and California General Construction Permit. However, Project construction activities would be required to comply with Placer County's Grading Ordinance (Code Section 15.48.630) and Stormwater Quality Ordinance (Code Section 8.28), which identifies requirements to control erosion and

sedimentation and maintain stormwater quality for construction projects and grading through the use of best management practices (BMPs). To ensure that appropriate measures are in place to protect receiving waters in the Project vicinity mitigation measure **MM-GEO-1** requires implementation of a Water Pollution Control Plan and Sediment and Erosion Control Plan that would be prepared and incorporated into engineering plans and specifications for the Project. These plans would include measures to control stormwater drainage, protect water quality, and avoid erosion during construction activities and would be prepared in accordance with the California Stormwater Quality Association's Stormwater Best Management Practices Handbook. BMPs could include straw wattles, silt fences, secondary spill containment requirements, and other measures to avoid and control sediment and pollutant transport as a result of Project construction. The Project includes no new paving and would result in no increase in impervious surface from existing conditions. All roadways disturbed during construction of the proposed Project would be repaired or paved to return them to existing conditions. By complying with terms and conditions of the Lake and Streambed Alteration Agreement, and implementing standard construction requirements and mitigation measure **MM-GEO-1** it is anticipated that the Project would result in no violation of water quality standards or waste discharge requirements set forth by the Central Valley RWQCB or result in the degradation of surface and groundwater quality and impacts would be **less than significant with mitigation**.

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

The Project would not rely on any groundwater sources and would not develop or use a groundwater supply well. The Project would not substantially change the area of impervious surfaces onsite and would not interfere with groundwater recharge. The Project would have **no impact** associated with the potential to impede sustainable groundwater management.

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

i) result in substantial erosion or siltation on or off site;

The Project would result in no change in existing drainage patterns on the Project site. Potential minor and temporary changes in site drainage would occur during construction; please refer to impact discussions 3.7(b) and 3.10(a), which conclude that compliance with permit conditions, Placer County Code, and implementation of mitigation measure **MM-GEO-1** would ensure that impacts would be **less than significant with mitigation**.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

The Project would result in no change in existing drainage patterns on the Project site. The new sewer collection system would be installed within existing paved or dirt roadways and all disturbed areas would be restored to existing conditions. The Project would result in no substantial change in impervious surfaces on the Project site and would not alter the volume and rate of stormwater runoff such that flooding would be expected to occur. Construction would include ground disturbing activities which could result in minor and temporary changes in site drainage during construction activities. Implementation of a site-specific erosion control plan (MM-GEO-1), which would include measures to control stormwater runoff during

construction, would further ensure that the rate or amount of surface runoff would not substantially increase during construction. Impacts would be **less than significant**.

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

As discussed in response to Threshold 3.10(c)(ii), implementation of the Project would result in no change in the existing drainage patterns or impermeable surfaces within the Project site. Existing roadside ditches, culverts and other existing drainage infrastructure would continue to function as it does in the existing condition and would be sufficient in collecting and conveying any surface runoff during Project construction and operation. Further, as discussed in Section 3.10, Hazards and Hazardous Materials, the likelihood of polluted runoff would be minimal as construction and operation of the Project would adhere to applicable laws, regulations, and protocols related to Project design and materials and worker, user, and public safety. Impacts would be **less than significant**.

iv) impede or redirect flood flows?

Text According to the FEMA Flood Hazard Map, the Project site is not located within a flood zone (FEMA 2021) and would not have the potential to impede or redirect flood flows. The Project would have **no impact** and no mitigation measures are required.

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

As discussed above, the Project site is not located within a designated flood hazard area (FEMA 2021). Additionally, the Project site is not located within a tsunami inundation zone and seiches do not pose a hazard to the Project site (DOC 2022). During construction the Project would implement BMPs to ensure flows from the Project site would not release pollutants into downstream receiving waters. Upon completion of construction, the Project would not require the storage of pollutants that, in the event of inundation, could be released. Therefore, **no impact** would result associated with the risk of releasing pollutants within a flood hazard, tsunami, or seiche zone due to Project inundation. No mitigation measures are required.

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

The Project would not rely on any groundwater sources and would not develop or use a groundwater supply well or impede recharge of groundwater sources. As discussed under 3.10(a), the Project would not be expected to result in any violation of water quality standards or waste discharge requirements with implementation of mitigation measure MM-GEO-1 and compliance with permit terms and conditions and Placer County Code and impacts associated with conflict with a water quality control plan would be **less than significant with mitigation**. The Project would have no impact associated with the potential to conflict with or obstruct a sustainable groundwater management plan.

3.11 Land Use and Planning

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

Setting

The Project site is located in the Sugar Bowl Property Owners residential subdivision in Placer County. Surrounding land uses are generally described as a mix of residential, open space, and commercial land uses typically associated with mountain and outdoor recreational uses. As discussed in Section 2, Project Setting and Description the Project site is generally centered on existing roads within the residential subdivision. Zoning applied to developed areas within the subdivision is RS-B-20 (Residential-Single Family - Building Site - 20,000 square foot minimum lot size) and RS-B-20 PD = 2 (Residential-Single Family - Building Site - 20,000 square foot minimum lot size – Planned Development – 2 units per acre). Land use designations applied to lands within the subdivision by the Placer County General Plan include Resorts and Recreation 1, Tourist/Resort Commercial, and Medium Density Residential. Resorts and Recreational and Medium Density Residential designations both allow for residential uses whereas Tourist/Resort Commercial allow for overnight lodging facilities of all types as well as other commercial visitor-serving and resort uses. Designations of Tourist/Resort Commercial are typically applied to major recreational destinations such as ski areas or other types of resorts.

a) Would the project physically divide an established community?

The physical division of an established community typically refers to the construction of a linear feature (such as a major highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community or between a community and outlying area. During construction, the Project would require the temporary partial closures of roads (Corn Lily Lane, Paintbrush Hill Court, Fiddleneck Place, Mule Ears Drive, Corn Lily Lane, Pennyroyal Lane, Aster Court, and Old Donner Summit Road) to install the sewer main. Detours and traffic control measures would allow residents access to individual parcels as necessary and emergency access would be maintained at all times throughout Project construction. Upon completion of construction, these roadways would be returned to service as they are under existing conditions. Thus, the temporary intermittent closures of roads would not physically divide a community. The Project includes no barrier or other component that would act to physically divide an established community and **no impacts** would occur. No mitigation measures are required.

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

The Project involves the installation of a new sewer collection system. Operation and maintenance of the Project would not require a change in zoning or land use designations applicable to the Project site. Compliance with plans, policies and regulations with the purpose of avoiding or mitigating environmental effects is discussed and evaluated throughout this Initial Study. Project implementation would not be in conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **No impacts** would occur as a result of conflict with plans, policies or regulations adopted to avoid or mitigate an environmental effect. No mitigation measures are required.

3.12 Mineral Resources

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

Setting

The Project site supports no mining activities and is not zoned for mineral extraction or preservation. The Project site consists of existing roadways within a developed single-family residential subdivision in an area zoned for residential land uses.

Impact Discussion

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

No Impact. The Placer County General Plan and the California Department of Conservation identify no mineral resources that would be of value to the region or the residents of the state within the Project site. The Project would have **no impact** associated with the loss of availability of any known mineral resources.

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

No Impact. No mineral extraction operations occur within the Project site and the site is within roadways in a developed residential subdivision. The Project area is not designated by the Placer County General Plan

or the California Department of Conservation as a mineral resource recovery site. Therefore, the Project would have **no impact** associated with the loss of availability of any mineral resource recovery sites.

3.13 Noise

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

Setting

The Project site is located in a rural residential area of Placer County and is not near any significant noise sources. Noise sources in the Project site area are typical of residential areas and include vehicle operation, landscaping equipment, construction activities, and other sources typical of rural residential settings. During the winter ski season avalanche control operations at Sugar Bowl Resort and other nearby ski areas generates noise from explosive charges during and following storm events. Noise from snow clearing activities, including standard and rotary plows and other heavy equipment, is also common during and following snow events.

The Project site is approximately 10 miles west of the Truckee Tahoe Airport. The Project is not located within any currently adopted 60, 65 or 70 dBA community noise equivalent level airport noise contours (TTALUC 2016). As such, while the Project area may experience aircraft overflights, noise associated with existing and future aircraft operations in the area is not a substantial contributor to the ambient noise environment.

There are no major sources of groundborne vibration in the Project area. Transportation-related vibration from roadways in the vicinity of the Project site is the primary source of groundborne vibration. Heavy truck traffic can generate groundborne vibration, which varies considerably depending on vehicle type, weight, and pavement

conditions. However, groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the roadway right-of way (Caltrans 2013).

Noise and Vibration Characteristics

Noise

Noise is defined as unwanted sound. Sound may be described in terms of level or amplitude (measured in decibels [dB]), frequency or pitch (measured in hertz [hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the amplitude of sound is the decibel. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted dB (dBA) scale performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear. Several descriptors of noise (noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise, on a community. These descriptors include the energy-equivalent noise level over a given period (L_{eq}), the statistical sound level (L_{xx}, where "xx" is a cumulative percentage of time within the measurement period for which the indicated level is exceeded), the day–night average noise level (L_{dn}), and the CNEL. Table 3.13-1 provides examples of A-weighted noise levels from common sounds. In general, human sound perception is such that a change in sound level of 3 dB is barely noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level.

Table 3.13-1. Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
—	110	Rock band
Jet flyover at 300 meters (1,000 feet)	100	—
Gas lawn mower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kilometers per hour (50 mph)	80	Food blender at 1 meter (3 feet) Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime gas lawn mower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)
Commercial area Heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)
Quiet urban daytime	50	Large business office Dishwasher, next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural night time	20	Bedroom at night, concert hall (background)
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013
Note: dBA = A-weighted decibel.

L_{eq} is a sound energy level averaged over a specified period (typically no less than 15 minutes for environmental studies). L_{eq} is a single numerical value that represents the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour L_{eq} measurement would represent the average amount of energy

contained in all the noise that occurred in that hour. L_{eq} is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors.

Unlike the L_{eq} metrics, L_{dn} and CNEL metrics always represent 24-hour periods, usually on an annualized basis. L_{dn} and CNEL also differ from L_{eq} because they apply a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). "Time weighted" refers to the fact that L_{dn} and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m.–7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m.–10:00 p.m.) is penalized by adding 5 dB, while nighttime (10:00 p.m.–7:00 a.m.) noise is penalized by adding 10 dB. L_{dn} differs from CNEL in that the daytime period is defined as 7:00 a.m.–10:00 p.m., thus eliminating the evening period. L_{dn} and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 dB to 1 dB and, as such, are often treated as equivalent to one another.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as blasting, pile driving, base compaction, and heavy earthmoving equipment.

Several different methods are used to quantify vibration. Peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square amplitude is most frequently used to describe the effect of vibration on the human body and is defined as the average of the squared amplitude of the signal. Decibel notation is commonly used to measure root mean square. The decibel notation acts to compress the range of numbers required to describe vibration.

High levels of vibration may cause physical personal injury or damage to buildings. However, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of vibration can damage fragile buildings or interfere with equipment that is highly sensitive to vibration (e.g., electron microscopes). Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

Sensitive Receptors

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Sensitive receptors in the vicinity of the Project site include residential single-family homes. These sensitive receptors represent the nearest sensitive land uses with the potential to be impacted by construction of the Project.

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

Construction

Development of the Project would generate noise levels associated with the operation of heavy construction equipment and construction-related activities in the Project area. It is anticipated that the Project would be constructed in two phases, beginning in the summer of 2024 and concluding in November of 2026. The construction schedule would avoid the winter high season for the resort and all work would be conducted while the site is free of snow cover. All work is expected to be completed or winterized from October 15 to April 30 of any given construction year in accordance with the Placer County Grading, Erosion and Sediment Control Ordinance. Project construction would involve site preparation, trenching, grading, installation, backfilling and paving, horizontal directional drilling under the South Yuba River, and revegetation.

Construction-generated noise levels would vary depending on the type and number of equipment in use and the specific construction activity. The effects of construction noise largely depends on the type of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment at nearby receptors during the different phases of construction. Construction equipment would vary by phase, but would include operation of a grader, chainsaws, an excavator, bore rig, compactor, water trucks, light trucks, and other construction equipment typical of public utility and infrastructure projects. Noise generated from these pieces of equipment would be intermittent and short-term as typical use is characterized by periods of full-power operation followed by extended periods of operation at lower power, idling, or powered-off conditions. Noise generating work would occur for short periods of time at any one location, as work would progress along the pipeline alignment.

Trenching excavations and chainsaw operation to remove trees would be expected to generate the highest noise levels during construction of the Project. Site preparation equipment and activities would include an excavator, a backhoe and chainsaws. Because this is typically the loudest phase, it was assumed that one excavator, one backhoe, and one chainsaw could be operating simultaneously, generating the loudest anticipated noise levels for the overall construction activities. Noise emission levels from these types of construction equipment are shown in Table 3.13-2.

Table 3.13-2: Noise Levels Generated by Typical Construction Equipment

Equipment Type	Maximum Noise Level (dB L_{max}) at 50 feet[1]	Typical Noise Level (dB L_{eq}) at 50 feet[1,2]
Excavator	81	77
Backhoe	78	74
Chainsaw	90	83
Combined Noise Level at 50 feet	90.8	84.3

Notes: dB= decibels; L_{max} = maximum sound level; L_{eq} = equivalent continuous sound level

[1] Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment.

[2] Assumes typical usage factors.

Source: Federal Transit Administration 2018

Based on the reference noise levels listed in Table 3.13-1 and accounting for typical usage factors for each piece of equipment, onsite construction activities could generate a combined average noise level of approximately 84 dB L_{eq} and 91 dB L_{max} at 50 feet from the Project site boundary.

Placer County Code Section 9.36 (Noise Ordinance) provides that noise generated by temporary construction is exempt from the noise limits set by the ordinance for construction activities occurring between the hours of 6:00 a.m. and 8:00 p.m. Monday through Friday, and 8:00 a.m. and 8:00 p.m. on weekends. The construction activities associated with the Project are anticipated to occur between 7:30 a.m. and 8:00 p.m., Monday through Friday, with limited work potentially occurring on Saturday during daytime hours of 8:00 a.m. to 8:00 p.m. Nighttime construction activities are not anticipated to occur with the Project. Project construction activities would therefore be exempt from provisions of the County's Noise Ordinance. Noise levels generated by Project construction would be typical of smaller utility infrastructure Projects commonly carried out within developed residential areas and would not require blasting, pile driving or other construction activities that would generate unusually high noise levels.

Since elevated noise levels associated with Project construction activities would be intermittent and temporary, it is anticipated that existing nearby sensitive receptors (residents in the subdivision) would not be substantially adversely affected by noise generated Project construction Impacts resulting from construction generated noise would be **less than significant**.

Operation

As discussed in Section 2, Project Description, once Project construction is complete, DSPUD would be responsible for facility operations and maintenance. It is anticipated that DSPUD staff would periodically perform operations and maintenance work on the installed sewer collection system. The new system is expected to generate fewer vehicle trips to perform operations and maintenance than are currently required to maintain and repair existing individual septic systems currently serving parcels that would be hooked up to the new sewer main. Implementation of the Project is intended to improve sewer collection system reliability within the existing residential neighborhood. The Project includes no components that would generate noise during operation. Noise generated by operations and maintenance of the proposed Project would be **less than significant** and no mitigation measures are required.

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

Caltrans has collected groundborne vibration information related to construction activities (Caltrans 2020). Information from Caltrans indicates that continuous vibrations with a PPV of approximately 0.2 inches per second (ips) is considered "annoying." For context, heavier pieces of construction equipment, such as a bulldozer that could be operated during Project construction, generate PPVs of approximately 0.089 ips or less at a reference distance of 25 feet (Caltrans 2020).

Groundborne vibration attenuates rapidly—even over short distances. And when groundborne vibration encounters a building foundation, a coupling loss occurs depending on the mass and design. For typical wood-framed houses, like those near the Project site, this coupling loss is 5 vibration velocity decibels according to FTA guidance (FTA 2018). The attenuation of groundborne vibration as it propagates from source to receptor through intervening soils and rock strata can be estimated with expressions found in FTA and Caltrans

guidance. By way of example, for a backhoe operating on site the estimated vibration velocity level would be 0.11 ips at a distance of 20 feet and thus less than the annoyance threshold recommended by Caltrans. Therefore, vibration-induced annoyance to occupants of nearby existing homes would be **less than significant**.

Construction vibration, at sufficiently high levels, can also present a building damage risk. However, anticipated construction vibration from conventional heavy equipment associated with the Project would not yield levels that surpass this risk. Per Caltrans, the recommended PPV threshold for newer residential structures is 0.5 ips and 0.3 ips for older residential structures—both of which are less stringent than the aforementioned threshold to annoy occupants of such structures; thus vibration damage risk to nearby structures is considered less than significant.

Once operational, the proposed Project would not generate noticeable groundborne vibration and vibration impacts from Project operation would be **less than significant**.

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?

The Project is not within an airport land use plan or within two miles of a public airport or public use airport. Therefore, the Project will have **no impact** and no mitigation measures are required.

3.14 Population and Housing

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING – 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Setting

The Project site is located within the Sugar Bowl Property Owners residential subdivision at the base area of the Sugar Bowl Ski Resort. Many of the homes within the subdivision currently rely on onsite septic systems for collection and treatment of wastewater. No residences exist within the proposed limits of disturbance for installation of the sewer collection system; all work would occur within existing roadways and shoulders, with the exception of the Phase 2A crossing of the South Yuba River.

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Project would include the installation of a new sewer collection system. The proposed collection system would provide connections to 32 existing residences in the Sugar Bowl Property Owners residential subdivision that are currently served by septic systems. The proposed sewer lines would be sized to serve the existing development of the residential community and the Project is not intended to allow for new development outside of the existing subdivision boundaries. No new residential uses, businesses, roads, or other infrastructure that may result in an increase in unplanned population are included as part of the Project. As such, the Project would not induce substantial population growth; **no impacts** would occur and mitigation measures are not required.

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

All improvements and construction would be confined to the Project site boundaries, which generally consist of existing roads and shoulders. The Project would not affect any existing housing or necessitate construction of replacement housing in the area. Therefore, implementation of the Project would result in **no impacts** associated with displacement of people or housing and no mitigation measures are required.

3.15 Public Services

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

Setting

The Truckee Fire Protection District provides fire protection services to the Sugar Bowl Property Owners residential subdivision, and the Placer County Sheriff's Office provides law enforcement services. Mutual aid agreements provide for additional fire protection and law enforcement agencies to assist with services during periods or incidents of high demand.

Educational services are provided to the area by the Tahoe Truckee Unified School District. The nearest schools are the Donner Trail Elementary School located approximately 6.3 miles east of the Project site and Truckee High School located approximately 7 miles east of the Project site.

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

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

As discussed in Section 3.14, Population and Housing, the Project would not induce population growth in the area. As such, the Project would not result in an increase in demand for public services and facilities. All improvements and construction would be confined to areas within the boundaries of the Project or associated with access to the Project site. The Project would result in a temporary increase in people in the Project area during construction but would result in no permanent increase in population in the area or visitation to the Project area and thus would require no new or expanded facilities to support adequate fire or police protection, schools, parks or other public facilities; therefore, the Project would result in **no impact** from physical impacts associated with providing new or modified facilities. No mitigation measures are required.

3.16 Recreation

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

Setting

The Project site is located in the Sugar Bowl Property Owners residential subdivision within Placer County. According to the Placer County General Plan, the Project site carries land use designations of Resorts and Recreation 1, Tourist/Resort Commercial, and Medium Density Residential. Recreational resources in the vicinity of the Project site include the Sugar Bowl Ski Resort and lands within the Tahoe National Forest.

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

Though the surrounding area and portions of the Project site provide opportunities for public recreational uses, the proposed new sewer collection system would not result in increased demand on recreational facilities as the collection system would service existing residences and would not result in an increase in the population or visitor use of the Project area. The Project would not result in the construction of new homes, businesses, or recreational facilities. As such, implementation of the Project would not induce any long-term population growth or increase the use of existing recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **No impacts** to recreational facilities would occur and no mitigation measures are required.

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?

The Project does not include or require the construction or expansion of recreational facilities. Therefore, **no impacts** would occur and no mitigation measures are required.

3.17 Transportation

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

Setting

Vehicular access to the Project site and Sugar Bowl Property Owners Subdivision is provided via Interstate 80, located approximately 2.5 miles north, Donner Pass Road and Sugar Bowl Road or Old Donner Summit Road. The Village Gondola located off Donner Pass Road also provides pedestrian access to the site from Donner Pass Road when in operation during ski season.

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

As discussed in Section 3.9, Hazards and Hazardous Materials and 3.11, Land Use and Planning, intermittent closures of Corn Lily Lane, Paintbrush Hill Court, Fiddleneck Place, Mule Ears Drive, Corn Lily Lane, Pennyroyal Lane, Aster Court, and Old Donner Summit Road could be required to install collection pipelines in the road sections. The nearest transit facility is a bus stop along Donner Pass Road, approximately .5 mile north of the Project site. Project implementation, including the temporary roadway closures, would not conflict with operation of the bus stop or impede use of bicycle or pedestrian facilities. Access for bicycles and pedestrians would be maintained around the work area throughout Project construction on neighborhood streets. As such, the Project would not impede access, plans, programs, or policies related to these facilities. Additionally, the Project is not expected to generate additional vehicle trips over existing conditions in the operational condition. While DSPUD staff and contractors would periodically perform operations and maintenance work on the installed sewer collection system, it is anticipated that fewer vehicle trips would be required to perform operations and maintenance on the proposed sewer main than are currently required to maintain and repair existing individual septic systems currently serving parcels that would be hooked up to the new sewer main. As such, the Project would not result in an increase in permanent traffic. Impacts would be **less than significant** and no mitigation measures are required.

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

The Project is not a land use or transportation project, and therefore neither Section 15064.3(b)(1) nor Section 15064.3(b)(2) of the CEQA Guidelines apply. Instead, the Project would be categorized under Section 15064.3(b)(3) qualitative analysis. The current CEQA Guidelines do not establish significance thresholds for analyzing transportation impacts under this Section and state that a qualitative analysis of construction traffic may be appropriate for many projects. The CEQA Guidelines identify no significance threshold for transportation impacts from the construction phase of a project.

Additional traffic would be temporarily generated during Project construction as a result of construction personnel commuting to the site and vendor and materials deliveries. Trips generated by Project construction would occur seasonally over the 24-month Project construction period. Section 15064.3(b)(3) recognizes that lead agencies may not be able to quantitatively estimate VMT for every project type. For many projects, a qualitative analysis of construction traffic may be appropriate. This is because construction related trips are temporary and would cease upon Project completion and vehicle trips would return to pre-construction conditions. While DSPUD staff and contractors would periodically perform operations and maintenance work on the installed sewer collection system, as stated in 3.17(a), it is anticipated that fewer vehicle trips would be generated compared to the existing conditions on site.

Measures to reduce the VMT generated by workers and trucks are limited, and there are no thresholds or significance criteria for temporary, construction related VMT. It is estimated that construction would require approximately 20 worker vehicle trips per day as well as an estimated 20 truck trips for off hauling throughout the construction period and approximately 20 truck trips for delivery of material over the 13-month construction period. Workers would typically be from the North Tahoe/Truckee region or would stay in lodging near the Project site to reduce daily commute time and distance. The increase in VMT associated with Project construction would be temporary and would therefore not cause a significant impact.

The Project is intended to serve the existing residential community and would not result in land uses that would increase VMT. Operation and maintenance of the Project is anticipated to reduce vehicle trips from existing conditions since the wastewater collection system would replace older septic systems that frequently need pumping and repairs. As such, the Project is not anticipated to result in an increase in VMT in the operational condition. Therefore, the Project would not conflict or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be **less than significant** and no mitigation measures are required.

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

The Project would not include any new public roadway design features, nor would it alter roadway geometry. During construction, all truck drivers would adhere to California Vehicle Code regulations pertaining to licensing, size, weight, and load of vehicles operated on highways and local roads; safe operation of vehicles; and the transport of any hazardous materials. As such, Project-related construction traffic would not increase hazards due to incompatible uses. The Project does not entail constructing new public roads or realigning existing roads, so the Project would not increase traffic hazards due to geometric design features and incompatible uses would not occur. There would be **no impacts** associated with this criterion and no mitigation measures are required.

d) Would the project result in inadequate emergency access?

As state in section 3.17 (a) above, the Project could require intermittent road closures of Corn Lily Lane, Paintbrush Hill Court, Fiddleneck Place, Mule Ears Drive, Corn Lily Lane, Pennyroyal Lane, Aster Court, and Old Donner Summit Road to install the new sewer collection system. However, detours and traffic control measures would allow access to individual parcels as necessary and emergency access would be maintained at all times throughout Project construction. Moreover, DSPUD requires the contractor to provide a traffic control plan that will include provisions for advance notification to residents regarding any access restrictions to individual parcels and roads within the subdivision as well as maintaining emergency access. Use of all affected roads would return to existing conditions upon completion of Project construction. Thus, implementation of the Project would not result in inadequate emergency access and impacts would be **less than significant.**

3.18 Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) 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	☐	☐	☐	☒
b) 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.	☐	☒	☐	☐

Setting

The cultural context for the project region is described in Section 3.5, Cultural Resources.

Impact Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) 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)?

No Impact. As discussed in Section 3.5 Cultural Resources, the Dudek Cultural Resources Inventory Report prepared for the Project found that the Project site does not contain any resources listed or eligible for listing in a register of historical resources at the local or state level besides the Overland Emigrant Trail. As discussed in Section 3.5, outreach to Native American Tribes in accordance with AB 52 identified no tribal cultural resources in or near the Project site. Therefore, the Project would be expected to have **no impact** on any known tribal cultural resources.

b) 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 Resource 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. The presence of tribal cultural resources (TCRs) is generally identified by California Native American Tribes through the process of consultation. Under AB 52, a TCR must have tangible, geographically defined properties that could be impacted by implementation of a project. To initiate formal consultation under AB 52 a California Native American Tribe is required to provide a written request to be notified of any projects that require consultation under AB 52. To date DSPUD has received no formal requests under Public Resources Code section 21080.3.1 for notification of projects subject to CEQA from California Native American tribes traditionally and culturally affiliated with the Project area.

The Cultural Resources Assessment prepared for the Project included a record search of the NAHC's Sacred Lands File, which was received and dated July 28, 2021. The results of the Sacred Lands File search were negative for the presence of any Native American cultural resources within the half-mile search area. The NAHC provided a list of Native American tribes culturally affiliated with the location of the Project site and recommended contacting them for further information. DSPUD provided formal notification to all contacts listed on the NAHC Sacred Lands File search that are traditionally or culturally affiliated with the geographic area of the Project. One response was received from Anna M. Starkey, Cultural Regulatory Specialist with the United Auburn Indian Community. Ms. Starkey's response deferred to the Washoe Tribe for consultation on the Project and provided a draft mitigation measure for unanticipated discoveries of Tribal Cultural Resources. To date no response has been received from the Washoe Tribe.

As discussed in Section 3.5, the likelihood of discovering unanticipated cultural resources during Project construction is considered low. In the unlikely event that Tribal Cultural Resources are discovered during Project construction mitigation measure **MM-TCR-1** would ensure the discovery would be evaluated and that appropriate management measures would be applied if a significant resource is identified. This would ensure that impacts to tribal cultural resources would be **less than significant with mitigation**.

MM-TCR-1: Unanticipated Tribal Cultural Resources. If potential Tribal Cultural Resources (TCRs) or human remains are discovered during construction activities, all work shall cease within 100 feet of the find (based on the apparent distribution of cultural resources). Examples of potential TCRs include midden soil, artifacts, chipped stone, exotic (non-native) rock, or unusual amounts of baked clay, shell, or bone.

A qualified cultural resources specialist and Native American Representative from the traditionally and culturally affiliated Native American Tribe(s) will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. Culturally appropriate treatment that preserves or restores the cultural character and integrity of a TCR may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, construction monitoring of further construction activities by Tribal representatives of the traditionally and culturally affiliated Native American Tribe, and/or returning objects to a location within the Project area where they will not be subject to future impacts.

If human remains are discovered during construction activities, the County Coroner and Native American Heritage Commission shall be contacted immediately. Upon determination by the County Coroner that the

find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendant(s) who will work with the Project proponent to define appropriate treatment and disposition of the burials.

Following a review of the find and consultation with appropriate experts, the authority to proceed may be accompanied by the addition of development requirements which provide for protection of the site and/or additional measures necessary to address the unique or sensitive nature of the site. The treatment recommendations made by the cultural resource specialist and the Native American Representative will be documented in the Project record. Any recommendations made by these experts that are not implemented, must be documented and explained in the Project record. Work in the area(s) of the cultural resource discovery may only proceed after authorization is granted by DSPUD following coordination with cultural resources experts and tribal representatives as appropriate.

3.19 Utilities and Service Systems

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

Setting

Utility services are available throughout the Sugar Bowl residential community. DSPUD provides water service to the Soda Springs/Donner Summit area, including the Sugar Bowl Resort and Village area. DSPUD owns and operates its sole water source, Lake Angela, as well as all related facilities including the Lake Angela dam and water delivery infrastructure. Lake Angela is fed by snow melt and spring sources. Wastewater collection and treatment is also provided by DSPUD to customers in the Sugar Bowl Village and Soda Springs area. DSPUD's wastewater treatment plant was upgraded in 2015 and treats wastewater to produce recycled water that meets or exceeds Title 22 drinking water standards and can be recycled to use for snowmaking. DSPUD's wastewater treatment plant currently treats up to 0.40 MGD and has capacity to treat up to 0.48 MGD. Capacity is available to serve up to 209 additional single-family residences or equivalent dwelling units (EDUs).

Impact Discussion

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

Less Than Significant with Mitigation. The Project would not change the land uses within the Project site, with the exception of adding the sewer collection system extensions into the existing roadways of Old Donner Summit Road, Pennyroyal Lane, Mule Ears Drive, Aster Court, Corn Lily Lane, Fiddleneck Place, and Paint Brush Hill Court.

The Project would not introduce any new residential, commercial, or industrial land uses that could generate population or employment growth; no additional staff would be required to operate the expanded sewer collection system. The proposed sewer system would be operated and maintained by DSPUD. The Project itself would expand wastewater collection infrastructure and would allow for up to 32 additional single-family residential service connections to the existing DSPUD sewer collection and wastewater treatment system. DSPUD's wastewater treatment plant currently has adequate excess treatment capacity to accommodate the additional wastewater that would be generated by the additional connections that would result from the Project and no improvements to the wastewater treatment plant would be required.

This Project would not increase the occupancy capacity of the existing residences that would be served by the sewer system. The Project would not directly or indirectly lead to an increase in the permanent or temporary residential population within the community and would not increase commercial or recreational activities. Thus, the Project would not increase demand for water supply, electric power, natural gas or telecommunication facilities.

Following construction, all disturbed areas would be returned to their existing condition and no long-term changes in drainage patterns or runoff would occur with Project implementation and no changes to existing drainage infrastructure would be required to accommodate any change in stormwater runoff. The construction contractor would be required to implement a Water Pollution Control Plan and Sediment and Erosion Control Plan prepared to Placer County specifications. These plans would include measures to control stormwater runoff, protect water quality, and avoid erosion during construction activities.

The environmental effects of constructing and operating the proposed sewer collection system are evaluated throughout this Initial Study. With implementation of the mitigation measures identified within this Initial Study, the Project would not result in any significant unavoidable adverse environmental effects. Less than Significant with Mitigation.

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

No Impact. As discussed in response 3.19(a), the Project would not introduce any new land uses that could generate population or employment growth, increase the occupancy capacity of existing residences, or increase commercial or recreational activities in the Project area. The Project would expand the existing sewer collection system to serve existing residential parcels and would generate no additional demand for water supply other than minimal water required during construction. Therefore, there would be no impact

associated with lack of available water supply during normal, dry, and multiple dry years and no mitigation measures are required.

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

No Impact. As discussed in response 3.19(a), the Project is proposed by DSPUD, the wastewater service provider in the Project area, and would expand wastewater collection infrastructure and allow for up to 32 additional single-family residential service connections to the existing DSPUD sewer collection and wastewater treatment system. DSPUD's wastewater treatment plant currently has adequate capacity to accommodate the increase in wastewater that would be generated by the additional service connections resulting from the Project and no improvements to the wastewater treatment plant would be required. The Project would alleviate current issues related to failing or inadequate wastewater treatment provided by individual onsite septic systems serving some residential parcels. No impact associated with DSPUD's capacity to provide wastewater treatment services would result with implementation of the Project.

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

No Impact. Construction of the proposed sewer collection system would generate typical construction solid waste materials such as packaging waste materials, food waste, asphalt and concrete waste, lumber, and soils. Construction-generated solid waste would be temporary and would cease once construction is completed. Solid waste generated by Project construction would be properly disposed of at designated landfill facilities with permitted capacity to accept construction waste. The Eastern Regional Landfill in Truckee is the closest landfill facility to the Project site and has adequate permitted capacity to accept construction waste. Operation of the Project would not generate any additional solid waste compared to existing conditions. Solid waste generated by the Project would not exceed State or local standards, or the capacity of local infrastructure. No impact.

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

No Impact. As discussed in response 3.19(d), small quantities of solid waste materials would be generated during Project construction and would be disposed of at existing permitted landfill facilities. Upon completion of construction, operation of the Project would not generate solid waste beyond existing conditions. Solid waste generated by the Project would be transported to and disposed of at designated landfill facilities in compliance with federal, state, and local regulation. No impact.

3.20 Wildfire

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

Setting

The Sugar Bowl residential subdivision community is located in a forested area within the Sierra Nevada Mountain range and is considered a wildland urban interface area. The Project site is located within a Very High FHSZ within a State Responsibility Area (CalFire 2023). The region is highly susceptible to wildfire, with the vegetation and topography being key contributing factors to this risk. Primary ingress and egress for the Project site is provided via Old Donner Summit Road, Sugar Bowl Road, Donner Pass Road and Interstate 80.

As discussed in Section 3.9, Hazards and Hazardous Materials, the Truckee Fire Protection District has adopted a CWPP that provides a framework and wildfire mitigation roadmap to identify and prioritize future wildfire protection projects. The CWPP as been developed to be consistent with federal fuel reduction policies, a fire-adapted community plan, state community fire protection policies, and local ordinances. The goal is to foster a community wide collaborative approach to reduce wildfire risk and hazards to life, property, and natural resources. The CWPP identifies the Sugar Bowl Village area as 'intermix' in relation to its wildland urban interface classification (Truckee Fire 2023).

Ordinance 02-2012 of the Truckee Fire Protection District sets forth defensible space requirements for all areas within the District. The requirements of Ordinance 02-2012 are applied in addition to defensible space

requirements of Public Resources Code Section 4291. The Truckee Fire Protection District performs free inspections of properties within the District to promote compliance with defensible space requirements.

Impact Discussion

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

Less than Significant Impact. The Project would require work within the existing roadways of the Project area including Old Donner Summit Road, Pennyroyal Lane, Mule Ears Drive, Aster Court, Corn Lily Lane, Fiddleneck Place, and Paint Brush Hill Court. These are all residential roads that primarily serve the 57 single-family residences in the subdivision and the Sugar Bowl Village area. Mule Ears Drive connects to Old Donner Summit Road, which provide access to Donner Pass Road. Donner Pass Road provides access to I-80 approximately 3.25 miles west of the Project site.

As discussed in Section 3.9(f), roads within the Project site would be subject to partial and intermittent closure to vehicle traffic during Project construction activities and detours and traffic control would be implemented to provide access to all parcels throughout construction and emergency access would be maintained at all times. DSPUD requires the contractor to provide a traffic control plan that will include provisions for advance notification to residents regarding any access restrictions to individual parcels and roads within the subdivision as well as maintaining emergency access to all residences. Any such closure would also be coordinated with the Truckee Fire Protection District to ensure that traffic control plans include provisions for adequate emergency access to all parts of the Sugar Bowl residential subdivision. Notification would also be provided to the Placer County Sheriff's Office. Upon completion of the Project, roads would be returned to their pre-construction condition. Implementation of the traffic control plan would ensure that appropriate access for emergency responders and evacuation purposes would be maintained at all times during Project construction. Impacts associated with impairment of an emergency response or evacuation plan would be **less than significant**.

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

Less than Significant Impact with Mitigation. As noted above, the Project site is within a Very High FHSZ (CalFire 2023), which denotes an area that contains dense vegetation and areas of slopes with limited accessibility for emergency response. As noted in the Setting section above, the Project site is subject to compliance with defensible space regulations contained in Truckee Fire Protection District's Ordinance 02-2012 and Public Resources Code Section 4291 and the CWPP provides a framework for wildfire mitigation protection projects such as fuel reduction. Thus, while the site is in a designated Very High FHSZ, actions have been taken to minimize the fire risk in and surrounding the subdivision.

Roadways would be returned to their existing condition upon completion of construction and operation of the sewer collection system would result in no new sources of ignition and no changes in conditions on the Project site that would exacerbate wildfire risks. The sewer collection system would be located underground and would serve an existing residential community; therefore, it would not expose adjacent land, vegetation, or structures to any new potential sources of wildfire ignition. Typical operations and maintenance of the sewer collection system would not pose a substantial risk of fire ignition and all operations and

maintenance work would be carried out in accordance with existing District procedures for fire safety. The Project would not increase the residential population or generate new employment or recreation opportunities in the Project area that would be expected to increase the level of human activity or risk of human-caused fire ignition in the Project area. Thus, upon completion the Project would not exacerbate risk of uncontrolled wildfire or associated pollutants.

Project construction would be conducted in accordance with local and state regulations governing fire prevention and safety. Chapter 33 of the California Fire Code (CFC) outlines general fire safety precautions during construction and demolition that are intended to maintain minimum levels of fire protection and limit the spread of fire (California Fire Code 2022). However, Project construction would temporarily introduce potential sources of fire ignition from equipment operation and other construction and demolition activities, which could temporarily increase the risk of wildfire ignition and represent a potentially significant impact to the environment and surrounding development and residents. Mitigation measure **MM-FIRE.1** requires that Project plans and specifications include a Fire Prevention Plan for construction activities. The Fire Prevention Plan would require that fire safe practices be followed, and that basic fire suppression equipment is maintained on site at all times to reduce the risk of fire associated with construction activities. Through compliance with existing codes and implementation of the Fire Prevention Plan as required by mitigation measure **MM-FIRE.1**, risks associated with an elevated risk of wildfire ignition during Project construction would be **less than significant with mitigation incorporated.**

MM-FIRE-1: To minimize the risk of accidental ignition of surrounding wildlands, plans and specifications shall include a Fire Prevention Plan. The construction contractor shall abide by the requirements of the Fire Prevention Plan throughout construction activities on the Project site. Measures may include but are not limited to fire suppression equipment requirements; guidelines for activities such as soldering, welding and blasting; designating a fire supervisor on site; rules for smoking onsite, requirements for parking and equipment and materials storage and storage areas; restrictions on certain activities during red flag conditions; and designating a fire patrol person as necessary during red flag conditions.

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

No Impact. As discussed in response to Threshold 3.20(a), the Project would include the installation of underground sewer mains in roadways within a developed residential subdivision. The sewer collection system would be operated and maintained by DSPUD consistent with the District's fire-safe operational practices and would not be expected to increase risk of wildfire ignition. As such, the Project does not include and does not require the installation or maintenance of associated infrastructure that would exacerbate fire risk. **No impact.**

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

No Impact. The Project would install an underground sewer collection system and would return the site to existing conditions upon completing Project construction. The Project or drainage of the Project site that would result in elevated risk of post-fire flooding/adverse drainage impacts or landslides/slope instability. The Project would result in no substantial changes in site topography with potential to create unstable

slopes or changes in existing drainage conditions that would have potential to increase risks of physical hazards in the event that the Project area is affected by a wildfire. Thus, the Project would have **no impact** associated with exposing people or structures to risks related to post-fire events, such as landslides and flooding. No mitigation measures are required.

3.21 Mandatory Findings of Significance

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

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?***

As discussed in Section 3.4, Biological Resources, the Project would have a less than significant impact with mitigation incorporated to special status plant and wildlife species and sensitive natural communities. The Project would have a less than significant impact to federally protected wetlands, migratory or native wildlife species. The Project has the potential to adversely affect western bumbe bee, bats and migratory birds and raptors. With implementation of mitigation measures **MM-BIO-1**, **MM-BIO-2** and **MM-BIO-3**, which

require pre-construction surveys and habitat assessments to determine the presence of nesting bees, birds and bats and protective measures should active nests or roosting sites be identified, impacts to special-status wildlife species would be avoided and impacts would be less than significant.

As discussed in Section 3.5, Cultural Resources, potential impacts to historical and archaeological resources would be reduced to a level below significance with incorporation of mitigation measure **MM-CUL-1** and mitigation measure **MM-CUL-2**.

As discussed in Sections 3.7 Geology and Soils, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, and 3.20 Wildfire, impacts that could degrade the quality of the environment would be reduced to less than significant with implementation of the mitigation measures identified in each of those sections. Impacts would be less than significant with incorporation of mitigation measures.

b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future projects.)

As discussed throughout this Initial Study, the Project would not result in substantial changes in the environmental resource areas considered, including aesthetics, agriculture and forestry, air quality, cultural, energy, greenhouse gas emissions, hazards and hazardous material, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, wildfire, and utilities and service systems. The Project would either have no impact or a less than significant impact on these resources and impacts would generally be associated with temporary construction activities. Where a less than significant impact would occur, the effect would be limited to the direct effects of the Project within the Project site and would not be expected to combine with the effects from other projects in the region, thus these effects would not be cumulatively considerable.

The Project has the potential to result in indirect adverse effects to special status plant species and to adversely affect soils and water quality in the Project area. This Initial Study identifies several mitigation measures to ensure that the Project's effects to such resources are avoided or minimized. Thus, the Project-specific direct impacts were found to be less than significant with mitigation incorporated, and the identified mitigation measures are sufficient to ensure that the Project's incremental effects are minimized or avoided and would not be cumulatively considerable. Further, other development and redevelopment projects in the region would be subject to similar mitigation requirements and compliance with local, state, and federal regulations which have been adopted with the intent of protecting environmental resources.

In conclusion, where the Project has the potential to contribute to significant cumulative impacts in the Project region, impacts of the Project would be reduced with implementation of mitigation measures identified in this Initial Study such that they would not be cumulatively considerable when considered with other Projects in the region.

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

Sections 3.1 through 3.20 of this Initial Study provide analysis of the Project's potential environmental impacts, including adverse effects on human beings. Section 3.3, Air Quality, finds that the Project would

not expose individuals within the Project area to substantial adverse health effects; Section 3.9 Hazards and Hazardous Materials finds that the Project would not expose individuals within the Project area to substantial adverse hazards; Section 3.13, Noise, finds that the Project would not expose individuals within the Project area to substantial adverse noise effects; and Section 3.20 Wildfire finds that the Project would not expose individuals within the Project area to substantial adverse effects associated with wildfire hazards. The analysis in these sections demonstrates that the proposed Project would not be detrimental to the health, safety, and general welfare of people residing or working in the vicinity and would not be detrimental or injurious to property or improvements in the Project area, and that the Project is consistent with applicable policies and requirements of the Placer County General Plan, the Truckee Fire Protection District CWPP, and Placer County Code. Impacts would be less than significant with mitigation measures identified throughout this Initial Study.

4 References and Preparers

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4.2 List of Preparers

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Appendix A

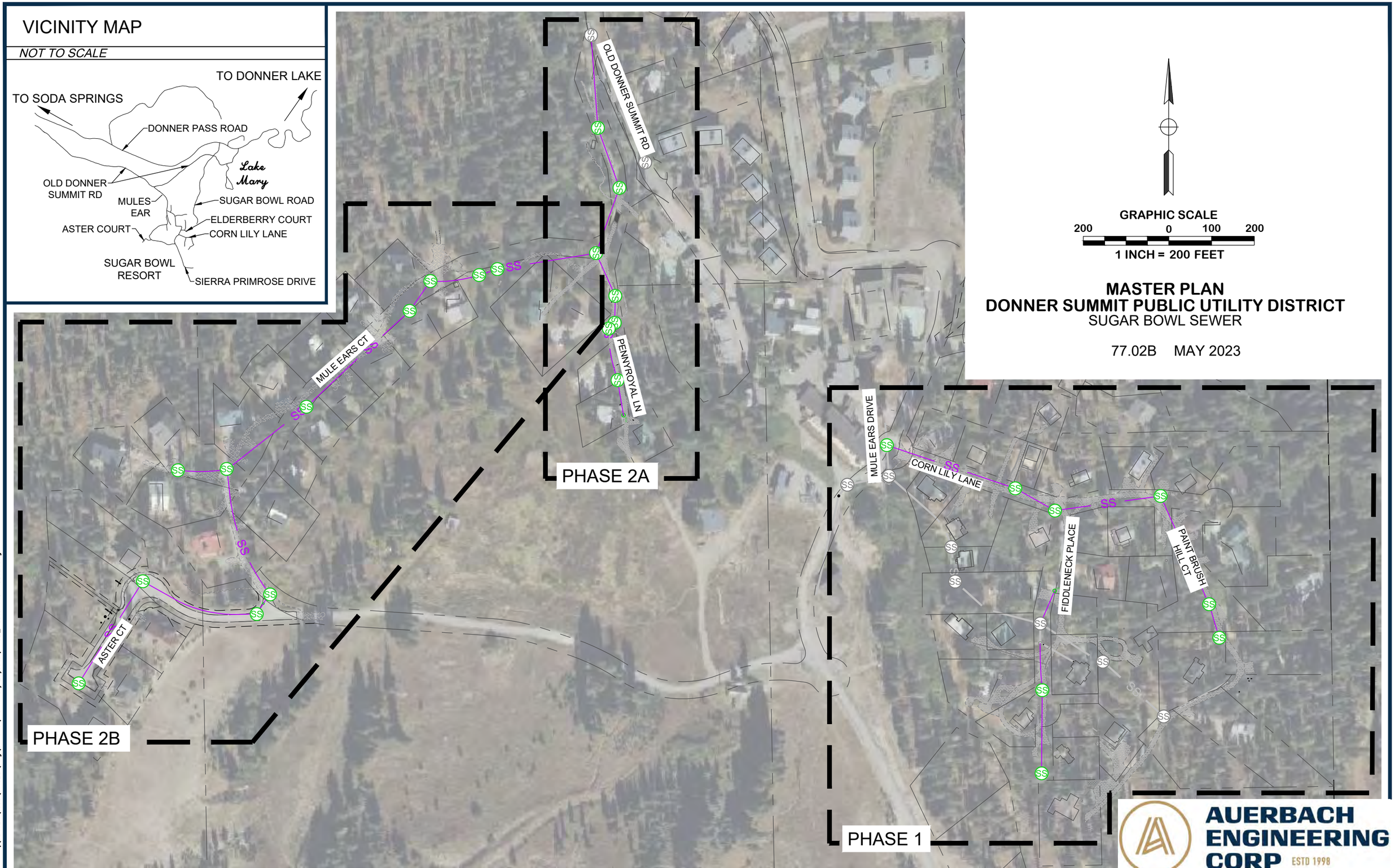
A – Project Exhibits

Master Plan

Phase 2A 90% Plans

VICINITY MAP

NOT TO SCALE



GRAPHIC SCALE

200 0 100 200

1 INCH = 200 FEET

MASTER PLAN
DONNER SUMMIT PUBLIC UTILITY DISTRICT
SUGAR BOWL SEWER

77.02B MAY 2023

AUERBACH ENGINEERING CORP ESTD 1998

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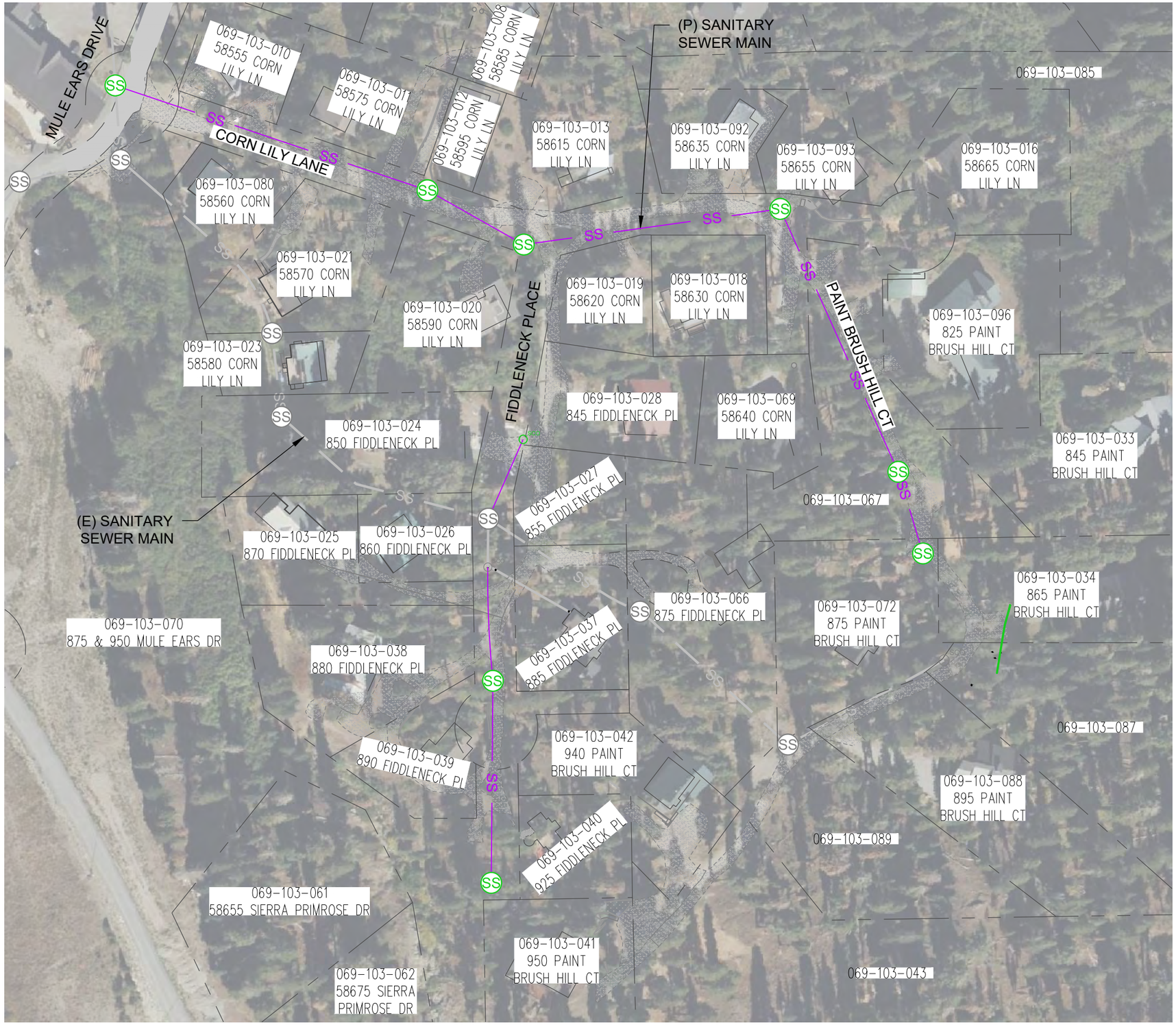

LEGEND

- AC PAVING
- DIRT ROAD
- MAPPED AQUATIC RESOURCES
- PARCEL BOUNDARY
- SS — EXISTING SANITARY SEWER MAIN
- SS — EXISTING SANITARY SEWER MANHOLE
- SCO — EXISTING SANITARY SEWER CLEANOUT
- SS — PROPOSED SANITARY SEWER MANHOLE
- SCO — PROPOSED END OF LINE SANITARY SEWER CLEANOUT
- SS — PROPOSED SANITARY SEWER MAIN

GRAPHIC SCALE

100 0 50 100

1 INCH = 100 FEET

PHASE 1 EAST VILLAGE
DONNER SUMMIT PUBLIC UTILITY DISTRICT
SUGAR BOWL SEWER

77.02B MAY 2023

AUERBACH ENGINEERING CORP ESTD 1998

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104-020-003
640 MULE EARS DR

069-020-001
701 MULE EARS CT

069-320-069

069-020-027

104-020-002
620 MULE EARS DR

OLD DONNER SUMMIT ROAD

069-320-008
710 MULE EARS CT

069-102-013
710, 720 & 730
MULE EARS CT

069-320-006

069-320-007

PENNYROYAL LANE

069-102-012
785 PENNYROYAL LN

069-102-025
750 PENNYROYAL LN

069-102-017
760 PENNYROYAL LN

SS

SCO

CONNECT TO (E)
SSWR MANHOLE
INV. ELEV. 6880.97'

SOUTH FORK YUBA
CREEK CROSSING

069-102-009
720 PENNYROYAL LN

069-320-071

069-102-008
730 PENNYROYAL LN

069-102-023
730, 743, 755, 757, 759 & 910
MULE EARS DR

LEGEND

- AC PAVING
- DIRT ROAD
- MAPPED AQUATIC RESOURCES
- PROPOSED SANITARY SEWER CLEANOUT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER MAIN
- PROPOSED SANITARY SEWER MAIN
- PROPOSED SANITARY SEWER STEEL CASING PIPE
- PARCEL BOUNDARY
- EXISTING CULVERT

GRAPHIC SCALE
80 0 40 80
1 INCH = 80 FEET

PHASE 2A
DONNER SUMMIT PUBLIC UTILITY DISTRICT
SUGAR BOWL SEWER

77.02B MAY 2023

AUERBACH ENGINEERING CORP ESTD 1998

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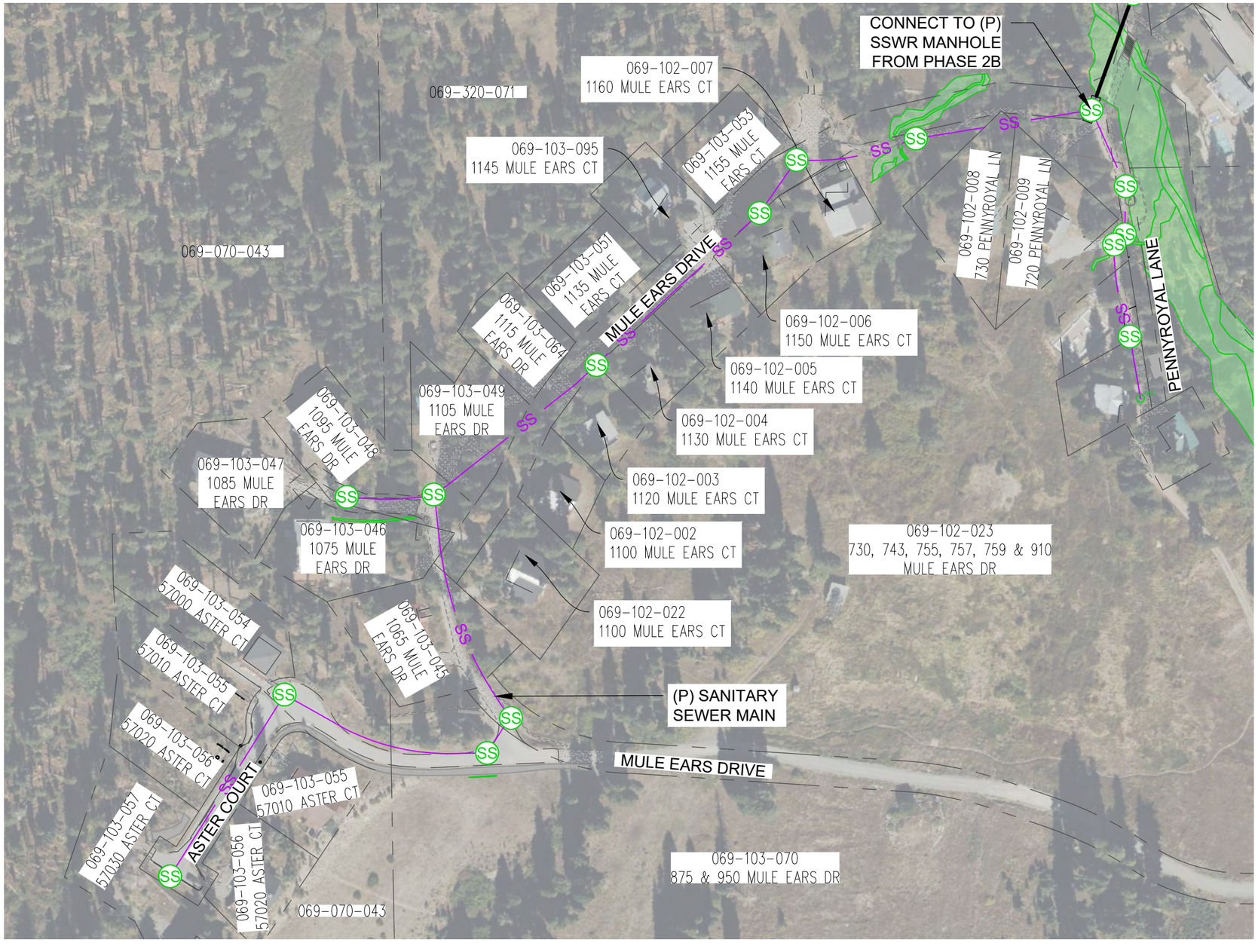

LEGEND

- AC PAVING
- DIRT ROAD
- MAPPED AQUATIC RESOURCES
- PROPOSED SANITARY SEWER CLEANOUT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER MAIN
- PROPOSED SANITARY SEWER MAIN
- PROPOSED SANITARY SEWER STEEL CASING PIPE
- PARCEL BOUNDARY
- EXISTING CULVERT

GRAPHIC SCALE

150 0 75 150

1 INCH = 150 FEET

PHASE 2B
DONNER SUMMIT PUBLIC UTILITY DISTRICT
SUGAR BOWL SEWER

77.02B MAY 2023

AUERBACH ENGINEERING CORP ESTD 1998

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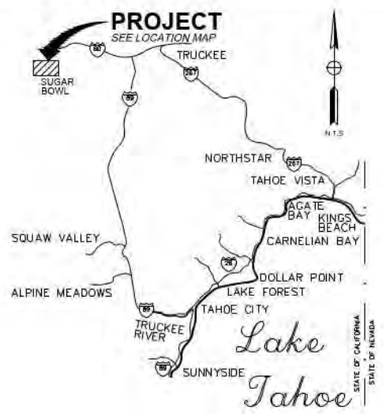
IMPROVEMENT PLANS FOR DONNER SUMMIT PUBLIC UTILITY DISTRICT SUGAR BOWL SEWER PHASE 2A

NORDEN PLACER COUNTY CALIFORNIA

VICINITY MAP



ENDORSEMENTS

THESE PLANS HAVE BEEN PREPARED UNDER THE DIRECT SUPERVISION OF WALTER R. AUERBACH, P.E.

WALTER R. AUERBACH — DATE
RCE NO. C34303
EXP: 9-30-23

ACCEPTED FOR CONSTRUCTION OF SANITARY SEWER:

DONNER SUMMIT PUBLIC UTILITY DISTRICT — DATE

RECORD DRAWINGS NOTE

ALL INFORMATION SHOWN ON THESE PLANS HAS BEEN PREPARED BY, OR UNDER DIRECTION OF, THE UNDERSIGNED ENGINEER. ADJUSTMENTS MADE IN THE FIELD DURING CONSTRUCTION ARE INCLUDED HEREIN AND ARE BASED UPON FIELD OBSERVATIONS MADE UNDER THE DIRECTION OF OR BY THE UNDERSIGNED AND/OR INFORMATION RECEIVED FROM THE PROJECT OWNER, PROJECT CONTRACTORS AND PUBLIC AGENCIES WHEN THE ENGINEER IS ADVISED IN WRITING OF SUCH CHANGE. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, CHANGES TO THESE PLANS NOT AUTHORIZED BY THE ENGINEER.

DATE — ENGINEER SIGNATURE (STAMP OR SEAL)

INSTRUCTIONS TO CONTRACTOR

INSTRUCTIONS TO CONTRACTORS

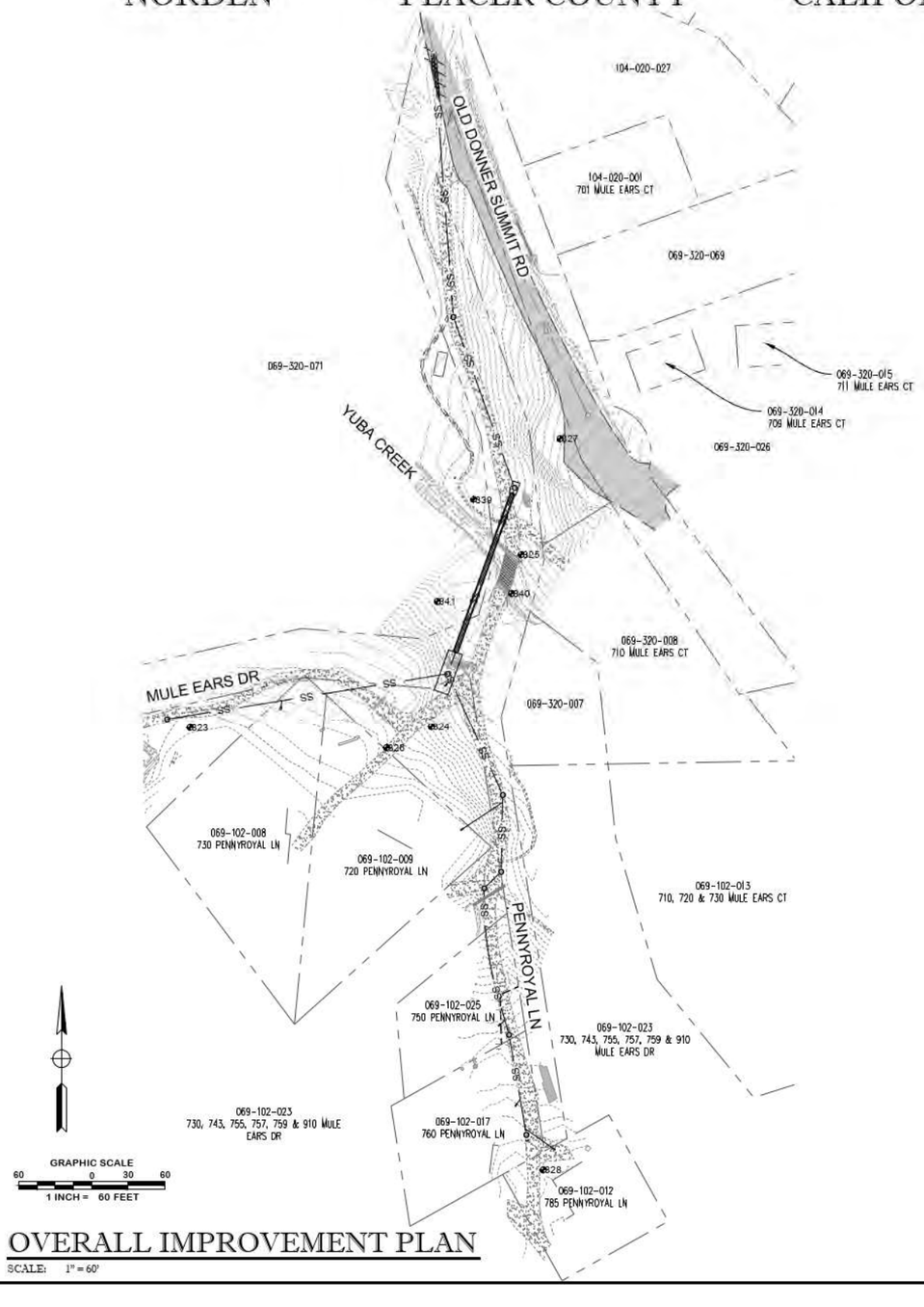
48 HOUR NOTICE REQUIRED PRIOR TO COMMENCING WORK

BEFORE COMMENCING WORK, ALL PLANS, SCHEDULES, AND PROGRAMS MUST BE SUBMITTED AND APPROVED IN CONFORMANCE WITH THE REQUIREMENTS OF THE PLACER COUNTY GENERAL SPECIFICATIONS LATEST EDITION, AND THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS DATED 2018. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL NOTIFY THE PLACER COUNTY COMMUNITY DEVELOPMENT RESOURCE AGENCY, ENGINEERING AND SURVEYING DIVISION, CONSTRUCTION INSPECTION OFFICE 48 HOURS IN ADVANCE OF THE TIME OF COMMENCEMENT. CALL AUBURN (530) 745-7558, LAKE TAHOE (530) 581-6227

BASIS OF BEARING

THE CALIFORNIA STATE PLANE COORDINATE SYSTEM ZONE II NAD83 (1991.35 CA HPGN)

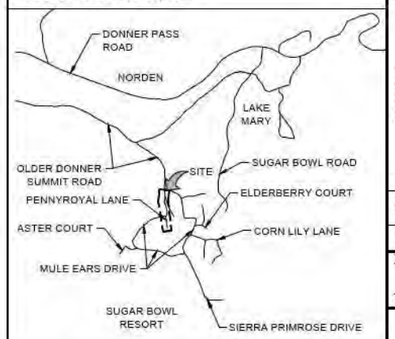
	NORTHING	EASTING	ELEVATION	DESCRIPTION
323	2241417.03	7031393.44	6920.62	tp 323 60d cap
324	2241417.48	7031591.79	6911.01	tp 324 60d cap
325	2241559.02	7031665.77	6901.93	tp 325 1/2rb cap
326	2241400.26	7031554.91	6916.09	cntrl-326-60d/whskr
327	2241654.19	7031697.58	6909.00	tp-327
328	2241053.42	7031683.69	6938.34	tp-328
339	2241604.43	7031626.64	6896.61	tp-339 cap
340	2241527.34	7031657.82	6896.69	tp-340 whskr
341	2241520.69	7031596.84	6899.69	tp-341 cap



OVERALL IMPROVEMENT PLAN

SCALE: 1" = 60'

LOCATION MAP



CONTACT INFORMATION

OWNER:
DONNER SUMMIT PUBLIC UTILITY DISTRICT
ATTN: STEVEN PALMER, P.E.
P.O. BOX 610
SODA SPRINGS, CA 95728
(530) 426-3456

ENGINEER:
AUERBACH ENGINEERING CORP.
ATTN: WALTER R. AUERBACH, P.E.
P.O. BOX 5399
TAHOE CITY, CA 96145
(530) 581-1116

WATER/SEWER
DONNER SUMMIT PUBLIC UTILITY DISTRICT
ATTN: STEVEN PALMER, P.E.
P.O. BOX 610
SODA SPRINGS, CA 95728
(530) 426-3456

ELECTRICAL
PG&E
ATTN: BUILDING AND RENOVATION SERVICE CENTER
P.O. BOX 24047
FRESNO, CA 93779-4047
(877) 743-7782

TELEPHONE
AT&T
ATTN: JASON PARNHAM
2700 WATT AVENUE, #3473-05
SACRAMENTO, CA 95821
(916) 484-2388

FIRE
TRUCKEE FIRE PROTECTION DISTRICT
ATTN: STEVE KESSMANN
10049 DONNER PASS ROAD
TRUCKEE, CA 96161
(530) 582-7855

SEPTIC
NAVO & SONS
ATTN: ARMANDO GRAJEDA
4930 ENERGY WAY
RENO, NV 89502
(775) 823-7727

SHEET INDEX

THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT (USA)" AT (800) 642-2444 TWO (2) DAYS MINIMUM TO FOURTEEN (14) DAYS MAXIMUM PRIOR TO COMMENCING EXCAVATION.

BY	REVISIONS	REV DATE

RECORD DRAWING

DATE — ENGINEER INITIAL

REGISTERED PROFESSIONAL ENGINEER WALTER R. AUERBACH No. C34303 Exp. 9/30/23 CIVIL STATE OF CALIFORNIA

AUERBACH ENGINEERING CORP
CIVIL ENGINEERING • LAND SURVEYING • ENVIRONMENTAL PLANNING

DONNER SUMMIT PUBLIC UTILITY DISTRICT
SUGAR BOWL SEWER PHASE 2A
COVER SHEET
PLACER COUNTY CALIFORNIA
NORDEN

0 1
BAR IS ONE INCH ON ORIGINAL DRAWING

PROJECT NUMBER:	77.02B
SURVEY BY:	AEC
SURVEY DATE:	AUGUST 2021
DESIGN BY:	CN/CH/JF
DRAFTING BY:	AV
CHECKED BY:	CA/WA
DATE:	JULY 6, 2023
SCALES: 1" = 60' HORIZONTAL / VERTICAL	G1
SHEET:	1 of 10

90% IMPROVEMENT PLANS

J:\77.02B\DWG\FINAL SHEETS\PHASE 2A\77.02B_2A_G1.DWG

PLACER COUNTY GENERAL NOTES:

1. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE REQUIREMENTS OF THE PLACER COUNTY GENERAL SPECIFICATIONS DATED APRIL, 2018. ALL REFERENCES TO STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SHALL REFER TO THE 2010 EDITION OF THE STANDARD SPECIFICATIONS. ATTENTION IS ALSO DIRECTED TO THE STANDARD PLATES CONTAINED IN THE PLACER COUNTY LAND DEVELOPMENT MANUAL AND THE CURRENT EDITION OF THE CALTRANS STANDARD PLANS, WHICH, WHEN APPLICABLE, ARE INCLUDED IN THESE DRAWINGS AND/OR REFERENCED BY PLATE OR STANDARD PLAN NUMBER. CONTRACTOR IS RESPONSIBLE TO HAVE AVAILABLE A CURRENT SET OF PLACER COUNTY GENERAL SPECIFICATIONS WITH PLATES, CALTRANS STANDARD SPECIFICATIONS, AND CALTRANS STANDARD PLANS.

2. COUNTY, DEPARTMENT OR ENGINEER, AS USED ON THESE PLANS AND NOTES, REFERS TO THE DIRECTOR OF THE PLACER COUNTY ENGINEERING AND SURVEYING DIVISION AND/OR DEPARTMENT OF PUBLIC WORKS (DPW) OR AN AUTHORIZED AGENT APPOINTED BY THE DIRECTOR.

3. PUBLIC SAFETY AND TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH COUNTY REQUIREMENTS AND AS DIRECTED BY THE ENGINEER. SAFE VEHICULAR AND PEDESTRIAN ACCESS SHALL BE PROVIDED AT ALL TIMES DURING CONSTRUCTION.

4. A REGISTERED CIVIL ENGINEER OR LICENSED LAND SURVEYOR SHALL DO ALL FIELD STAKING. THE OWNER SHALL PROVIDE ONE SET OF CONSTRUCTION CONTROL STAKES; ANY ADDITIONAL STAKING NECESSARY SHALL BE PROVIDED BY THE ENGINEER / SURVEYOR AT THE EXPENSE OF THE CONTRACTOR. ALL STAKING SHALL BE DONE PER SECTION 5_1.07 PLACER COUNTY GENERAL SPECIFICATIONS.

5. THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, THEY ARE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF ALL UNDERGROUND FACILITIES WHERE SUCH FACILITIES MAY POSSIBLY CONFLICT WITH THE PLACEMENT OF THE IMPROVEMENTS SHOWN ON THESE PLANS. CALL "UNDERGROUND SERVICE ALERT" AT 811 OR 800_227-2600 TWO (2) DAYS MINIMUM TO FOURTEEN (14) DAYS MAXIMUM BEFORE ANY EXCAVATION IS STARTED.

6. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION AND PROTECTION OF EXISTING SURVEY AND PROPERTY CORNER MONUMENTS THAT EXIST AT THE TIME OF CONSTRUCTION IN THE AREA WHERE CONSTRUCTION ACTIVITIES OCCUR. MONUMENTS DISTURBED, OR LOST, DUE TO CONSTRUCTION ACTIVITIES WILL REQUIRE THAT THE CONTRACTOR HAVE THEM REPLACED, IN KIND, BY A LICENSED CALIFORNIA LAND SURVEYOR, WHO WILL BE REQUIRED TO FILE WITH THE COUNTY EITHER A CORNER RECORD OR A RECORD OF SURVEY, WHICHEVER WILL MEET THE REQUIREMENTS OF THE LAND SURVEYOR'S ACT, SECTION 8771(B) AND (C).

7. ALL EXISTING ASPHALT SURFACES SHALL BE SAWCUT OR GROUND TO A DEPTH OF AT LEAST 0.20-FOOT A DISTANCE OF ONE FOOT MINIMUM BEYOND THE LIMITS OF DISTURBANCE TO A NEAT, STRAIGHT LINE AND REMOVED. ANY EXPOSED ASPHALT SHALL BE SEALED WITH HOT EMULSION PRIOR TO PAVING. THE EXPOSED BASE MATERIAL SHALL BE GRADED AND RECOMPACTED PRIOR TO PAVING.

8. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DUST CONTROL PER SECTION 14-9.02, CALTRANS STANDARD SPECIFICATIONS.

9. NOT USED

10. NO CONSTRUCTION SHALL BE PERFORMED WITHOUT A COUNTY APPROVED SEDIMENT AND EROSION CONTROL PLAN TO PREVENT SOIL EROSION. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS CONTAINED IN THE "EROSION AND SEDIMENT CONTROL GUIDELINES FOR DEVELOPING AREAS OF THE SIERRA FOOTHILLS AND MOUNTAINS", OCTOBER, 1991, OR OTHER APPROPRIATE GUIDELINES, SUCH AS THE CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA) CONSTRUCTION BMP HANDBOOK. APPLICANT AND/OR CONTRACTOR SHALL SECURE ANY NECESSARY STATE OF CALIFORNIA COVERAGE AS NEEDED UNDER THE STATE'S CONSTRUCTION GENERAL PERMIT FOR STORM WATER DISCHARGES UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES).

11. INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF ANY EROSION OR SILTATION ENTERING THE STORM DRAIN SYSTEM, NATURAL DRAINAGE COURSES AND/OR INTRUDING UPON ADJACENT ROADWAYS AND PROPERTIES. WINTERIZATION AND EROSION CONTROL SHOWN ON THESE PLANS IS INTENDED AS A GUIDE. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED IN THE FIELD AND APPROVED BY THE ENGINEER. THIS RESPONSIBILITY SHALL APPLY THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BECOME STABILIZED AND SHALL NOT BE LIMITED TO WET WEATHER PERIODS.

12. AFTER STRIPPING THE DEBRIS, ANY EXISTING LOOSE FILL, UNSUITABLE SOIL, SILTY SAND DEPOSITS, OR DISTURBED NATURAL SOILS SHALL BE EXCAVATED AND PROPERLY DISPOSED OF TO THE SATISFACTION OF THE ENGINEER.

13. THE CONTRACTOR SHALL REMOVE ALL ROAD MARKINGS, PAVEMENT MARKERS, AND OTHER DELINEATION THAT ARE IN CONFLICT WITH THE DELINEATION SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL LAY OUT ALL PAVEMENT MARKINGS FOR APPROVAL BY THE ENGINEER. AFTER APPROVAL, THE CONTRACTOR SHALL APPLY ALL PAINTED MARKINGS AND THERMOPLASTIC PAVEMENT MARKINGS WITHIN COUNTY RIGHT_OF_WAY AS WELL AS ALL ON-SITE PAINTED OR THERMOPLASTIC MARKINGS.

14. PERMANENT TRAFFIC SIGNS SHALL CONFORM TO THE CALIFORNIA MUTCD TRAFFIC SIGN STANDARDS FOR "STANDARD" SIZE, CHARACTER DIMENSIONS AND LETTER STROKE WIDTH. ALL STOP SIGNS SHALL BE 30" MINIMUM SIZE OF HIGH INTENSITY GRADE SHEETING.

15. HOT MIX ASPHALT (HMA) SHALL CONFORM TO SECTION 39 OF THE PLACER COUNTY GENERAL SPECIFICATIONS AND THE FOLLOWING: FOR AREAS BELOW 1000' ELEVATION; TYPE A, ½" MAXIMUM, WITH PG 64-10; FOR AREAS BETWEEN 1000' AND 3500' ELEVATION; TYPE A, ½" MAXIMUM, WITH PG 64-16; FOR AREAS ABOVE 3500' ELEVATION, TYPE A, ½" MAXIMUM, WITH PBA 6B OR PG 64-28. IF EXISTING PAVEMENT IS RHMA-G OR OGFC, PAVING REPAIRS SHALL BE INSTALLED WITH THOSE MATERIALS. UNLESS OTHERWISE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER, HMA SHALL BE PLACED IN ACCORDANCE WITH SECTION 39-3 "METHOD CONSTRUCTION PROCESS" OF THE CALTRANS STANDARD SPECIFICATIONS. ALL HMA PLACED, WHETHER NEW ROADWAY OR OVERLAY, SHALL BE MATCHED TO GRADE WITH AN AGGREGATE BASE SHOULDER. THIS SHOULDER BACKING SHALL BE A MINIMUM OF 1' WIDE OR MATCH THE PROJECT PLANS, WHICHEVER IS GREATER.

PLACER COUNTY GENERAL NOTES:

16. THE UPPER 8" OF AGGREGATE BASE SHALL BE CLASS 2, ¾" MAXIMUM GRADING. WHERE THE BASE THICKNESS EXCEEDS 8", THE DEPTH BELOW 8" MAY BE CLASS 2, 1 ½" MAXIMUM GRADING. AGGREGATE BASE SHALL CONFORM TO SECTION 26 OF THE COUNTY GENERAL SPECIFICATIONS.

17. NOT USED.

18. THE CONTRACTOR MUST IMMEDIATELY REINSTALL ANY TRAFFIC SIGNS REMOVED IN THE COURSE OF CONSTRUCTION. ANY SIGNS LOST OR DAMAGED BY THE CONTRACTOR SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

19. THE COUNTY MAY REQUIRE THE CONTRACTOR TO UNCOVER ANY IMPROVEMENTS THAT HAVE BEEN COMPLETED WITHOUT PROPER COUNTY INSPECTION AND/OR APPROVAL. IF THE INSTALLATION IS FOUND NOT TO MEET COUNTY STANDARDS OR PREVIOUSLY APPROVED ALTERNATIVES SHOWN ON THE PLANS, THE CONTRACTOR SHALL REMOVE AND REPLACE SUCH IMPROVEMENTS AT THE CONTRACTOR'S EXPENSE.

20. UNBALANCED EARTHWORK QUANTITIES MAY REQUIRE A SEPARATE GRADING PERMIT FOR THE OFF-SITE FACILITY IF EXPORT/IMPORT EXCEEDS 250 CUBIC YARDS AS REQUIRED BY THE COUNTY'S GRADING ORDINANCE. IF EXCESS MATERIAL WILL BE PLACED ON SITE, THEN THE PROJECT ENGINEER SHALL SUBMIT A REVISION TO THE PLANS SHOWING WHERE THE EXCESS MATERIAL WILL BE PLACED ON SITE.

21. NOT USED.

22. NOT USED.

23. ONLY THE APPROXIMATE LOCATIONS OF THE EXISTING SANITARY SEWER AND OTHER UTILITIES HAVE BEEN SHOWN. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS IN THE FIELD AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER IF SAID LOCATION(S) IS SIGNIFICANTLY DIFFERENT FROM THAT SHOWN ON THIS PLAN.

24. NOT USED.

25. GEOTECHNICAL ENGINEERING REPORT TITLED, "GEOTECHNICAL ENGINEERING REPORT SUGAR BOWL PROPERTY OWNERS SEWER PLAN - PHASE 1 AND 2 DATED SEPTEMBER 23, 2021, PREPARED BY NV5. IT SHALL BE THE CONTRACTOR RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE GEOTECHNICAL REPORT, VISIT THE SITE, AND MAKE THEIR OWN INTERPRETATIONS WITH REGARD TO MATERIALS, METHODS, AND EQUIPMENT NECESSARY TO PERFORM THE WORK REQUIRED FOR THIS PROJECT.

OWNER'S NOTES

1. ALL GRADING AND PAVING WORK SHALL CONFORM TO THE RECOMMENDATIONS CONTAINED IN THE PLACER COUNTY GRADING ORDINANCE AND THE PROJECT PLANS AND SPECIFICATIONS AS WELL AS THE RECOMMENDATIONS IN THE GEOTECHNICAL ENGINEERING REPORT.
2. THE BENCH MARK VERTICAL DATUM, AND CONTROL POINTS FOR THE PROJECT ARE PRESENTED ON SHEETS G1.
3. THE ENGINEER ASSUMES NO RESPONSIBILITY BEYOND THE ADEQUACY OF HIS DESIGN CONTAINED HEREIN.
4. THE FOLLOWING STANDARDS AND SPECIFICATIONS ARE REQUIREMENTS APPLICABLE TO THIS PROJECT AND SHALL BE MAINTAINED EXCEPT AS EXPLICITLY MODIFIED OR SUPPLEMENTED BY THESE PLANS OR AT THE DIRECTION OF THE DISTRICT ENGINEER. ALL REFERENCE STANDARDS AND SPECIFICATIONS ARE THE LATEST EDITIONS.
   A. DONNER SUMMIT PUBLIC UTILITY DISTRICT (DSPUD)
   B. PLACER COUNTY
   C. SUGAR BOWL HOME OWNERS ASSOCIATION (SBHOA)

   THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATING THE WORK WITH EACH OF THE ABOVE ENTITIES.
7. SHOULD IT APPEAR THAT THE WORK TO BE COMPLETED, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT AUERBACH ENGINEERING CORP. FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY. PHONE: (530) 581-1118.
8. CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IF AUERBACH ENGINEERING CORP. IS TO PROVIDE THE CONSTRUCTION STAKES, THE NUMBER AND LOCATION OF STAKES REQUIRED SHALL BE DETERMINED BEFORE THE CONSTRUCTION BEGINS AND SHALL BE AGREED UPON BY AUERBACH ENGINEERING CORP., THE OWNER, AND THE CONTRACTOR. ALL STAKING REQUESTS TO AUERBACH ENGINEERING CORP. SHOULD BE SUBMITTED A MINIMUM OF 72 HOURS PRIOR TO ACTUAL NEED. ANY ADDITIONAL STAKING OR RESTAKING WILL ONLY BE DONE AS DIRECTED AND AUTHORIZED BY THE OWNER OR HIS AUTHORIZED AGENT. DSPUD SHALL BE NOTIFIED OF COMPLETED STAKING AND VERIFIED BY AUERBACH ENGINEERING CORP. PRIOR TO BEGINNING CONSTRUCTION.
9. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HAVE BEEN ESTABLISHED BY FIELD OBSERVATION OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF THE UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THESE PLANS. THE CONTRACTOR SHALL EXPOSE AND VERIFY ELEVATIONS OF EXISTING UTILITIES AND CLEARANCES OF UTILITY CROSSINGS AT LEAST 48 HOURS IN ADVANCE OF PIPELINE EXCAVATIONS.
10. OBSTRUCTIONS INDICATED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH WITH THE APPROPRIATE AGENCIES. NEITHER THE OWNER NOR THE ENGINEER ASSUMES RESPONSIBILITY THAT THE OBSTRUCTIONS INDICATED WILL BE THE OBSTRUCTIONS ENCOUNTERED.
11. CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS FOR THE DEPARTMENT OF ENGINEERING AND SURVEYING, AMBULANCE, POLICE AND FIRE DEPARTMENTS.
12. CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS.
13. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
14. ALL MOBILE CONSTRUCTION EQUIPMENT, INCLUDING ELECTRICAL GENERATORS AND COMPRESSORS, UTILIZED DURING CONSTRUCTION SHALL BE PROPERLY MAINTAINED AND TUNED-UP. AS PRACTICAL, LOW EMISSION EQUIPMENT SHALL BE USED ONSITE. LOW SULFUR FUEL FOR CONSTRUCTION EQUIPMENT SHALL BE USED.
15. TEMPORARY POWER IF REQUIRED SHALL UTILIZE EXISTING POWER SERVICES OR CLEAN FUEL GENERATORS RATHER THAN TEMPORARY POWER GENERATORS.
16. EXISTING TOPOGRAPHY BASED ON A TOPOGRAPHIC SURVEY PROVIDED BY AUERBACH ENGINEERING CORPORATION, DATED AUGUST 2021.
17. THE CONTRACTOR SHALL KEEP DETAILED RECORDS AND AS-BUILTS SHOWING ALL MODIFICATIONS MADE TO THESE PLANS. THESE RECORDS AND AS-BUILTS SHALL BE PROVIDED TO THE ENGINEER UPON PROJECT COMPLETION FOR USE IN PREPARING RECORD DRAWINGS.
18. ALL TEST PITS SHALL BE RE-EXCAVATED, AND BACKFILLED AND COMPACTED PER THE GRADING ORDINANCE UNDER THE SUPERVISION OF THE ENGINEER.
19. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH ALL WARRANTIES OR GUARANTEES PROVIDED BY ANY SUPPLIER, DISTRIBUTOR, OF MANUFACTURER OF MATERIALS OR SUPPLIES USED IN THE CONSTRUCTION OF THE IMPROVEMENTS INDICATED IN THESE PLANS. THESE WARRANTIES OR GUARANTEES SHALL BE PROVIDED IN ADDITION TO ANY WARRANTIES OR GUARANTIES SEPARATELY REQUIRED BY THE OWNER FROM THE CONTRACTOR.
20. NO BURNING OF CONSTRUCTION DEBRIS OR OTHER ILLEGAL MATERIALS IS ALLOWED.
21. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN THAT INCLUDES, AT A MINIMUM, TRAFFIC ROUTING DURING PHASES OF THE CONSTRUCTION, SPECIFIC HOURS OF CONSTRUCTION, IDENTIFY POTENTIAL ROAD CLOSURES AND EMERGENCY VEHICLE ACCESS.
22. THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING STREETS, SURROUNDING LANDSCAPE AND OTHER IMPROVEMENTS WITH SMOOTH TRANSITIONS AND AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES, LOW SPOTS OR HAZARDOUS CONDITIONS. THE EXTENT OF TRANSITION IS TO BE DETERMINED BY THE ENGINEER.
23. <u>CONSTRUCTION NOISE:</u> THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION VEHICLES OR EQUIPMENT, FIXED OR MOBILE, OPERATED WITHIN CLOSE PROXIMITY OF A RESIDENTIAL DWELLING SHALL BE EQUIPPED WITH PROPERLY OPERATING AND MAINTAINED MUFFLERS AT ALL TIMES DURING PROJECT CONSTRUCTION. IT IS THE OWNER'S RESPONSIBILITY TO OBTAIN THE SERVICES OF A QUALIFIED ACOUSTICAL PROFESSIONAL TO VERIFY PROPER EQUIPMENT MUFFLERS IF CONCERNS RELATING TO THE ISSUE ARISE.

   CONSTRUCTION NOISE EMANATING FROM ANY CONSTRUCTION ACTIVITIES FOR WHICH A BUILDING PERMIT OR GRADING PERMIT IS REQUIRED IS PROHIBITED ON SUNDAYS AND FEDERAL HOLIDAYS, AND SHALL ONLY OCCUR:

   A. MONDAY THROUGH FRIDAY, 7:30 AM TO 5:30 PM
   B. SATURDAYS, 7:30 AM TO 5:30 PM WITH 72-HOUR PRIOR NOTIFICATION AND PERMISSION GRANTED BY SBHOA DESIGN REVIEW BOARD REPRESENTATIVE.

   ADVISORY COMMENT: ESSENTIALLY, QUIET ACTIVITIES, WHICH DO NOT INVOLVE HEAVY EQUIPMENT OR MACHINERY, MAY OCCUR AT OTHER TIMES. WORK OCCURRING WITHIN AN ENCLOSED BUILDING, SUCH AS A HOUSE UNDER CONSTRUCTION WITH THE ROOF AND SIDING ON, CAN OCCUR AT OTHER TIMES AS WELL. THE PLANNING DIRECTOR IS AUTHORIZED TO WAIVE THE TIME FRAMES BASED ON SPECIAL CIRCUMSTANCES, SUCH AS ADVERSE WEATHER CONDITIONS.

OWNER'S NOTES CONTINUED

23. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY RESULT FROM ANY AND ALL WORK IN CONNECTION WITH CONSTRUCTION.
24. DURING GRADING OPERATIONS THE CONTRACTOR SHALL TEMPORARILY DEWATER ZONES OF SEEPAGE OCCURRING FROM FRACTURES, USING A SYSTEM OF DITCHES DIRECTING WATER INFLOWS TO SUMPS WHERE WATER CAN BE REMOVED BY PUMPS AND TREATED WITH BMP'S TO PROTECT WATER QUALITY.
25. GRADING ACTIVITIES SHALL BE PROHIBITED DURING THE WINTER MONTHS, UNLESS APPROVED BY THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD. EXPOSED GRADED AREAS SHALL BE PROTECTED DURING THE WINTER MONTHS USING APPROPRIATE METHODS.
26. STRAW BALES, WADDLES, OR SIMILAR DEVICES USED FOR EROSION CONTROL SHALL BE CERTIFIED AS WEED-FREE UNLESS MATERIALS COLLECTED ON-SITE, SUCH AS PINE NEEDLES, ARE USED.
27. DURING DEMOLITION AND CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL LIMIT THE AMOUNT OF DAILY CONSTRUCTION EQUIPMENT TRAFFIC BY STAGING HEAVY CONSTRUCTION EQUIPMENT AND VEHICLES ON THE PROJECT SITE AT THE END OF EACH WORKDAY RATHER THAN REMOVING THEM.
28. EMERGENCY ACCESS DURING ALL CONSTRUCTION ACTIVITIES SHALL BE MAINTAINED TO TRUCKEE FIRE DEPARTMENT SPECIFICATIONS.
29. IF AT ANY TIME DURING THE COURSE OF EXECUTING THE PROPOSED PROJECT, EVIDENCE OF SOIL AND/OR GROUNDWATER CONTAMINATION WITH HAZARDOUS MATERIAL IS ENCOUNTERED, THE APPLICANT SHALL IMMEDIATELY STOP THE PROJECT AND CONTACT ENVIRONMENTAL HEALTH SERVICES HAZARDOUS MATERIALS SECTION. THE PROJECT SHALL REMAIN STOPPED UNTIL THERE IS RESOLUTION OF THE CONTAMINATED PROBLEM TO THE SATISFACTION OF ENVIRONMENTAL HEALTH SERVICES AND TO CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD.
30. THE DISCHARGE OF FUELS, OILS, OR OTHER PETROLEUM PRODUCTS, CHEMICALS, DETERGENTS, CLEANERS, OR SIMILAR CHEMICALS TO THE SURFACE OF THE GROUND OR TO DRAINAGE WAYS ON, ADJACENT TO, THE SITE IS PROHIBITED.
31. WORK IN PUBLIC STREETS, ONCE STARTED, SHALL BE PERFORMED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO WATER CUSTOMERS, ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC. THE CONSTRUCTION OF WATER AND STREET IMPROVEMENTS SHALL ALLOW FOR THE PERPETUATION OF ALL EXISTING LEGAL ACCESSES AND EXISTING DRIVEWAYS.
32. ALL ROADSIDE DITCHES AND SHOULDERS SHALL BE RECONSTRUCTED TO ORIGINAL GRADES AND CONDITIONS.
33. TEMPORARY CONSTRUCTION FENCING: THE CONTRACTOR SHALL INSTALL A 4' TALL BRIGHTLY COLORED (USUALLY YELLOW OR ORANGE) SYNTHETIC MESH MATERIAL FENCE (OR AN EQUIVALENT APPROVED BY THE ENGINEER) AT THE FOLLOWING LOCATIONS PRIOR TO ANY CONSTRUCTION EQUIPMENT BEING MOVED ON-SITE OR ANY CONSTRUCTION ACTIVITIES TAKING PLACE.

    AT THE LIMITS OF CONSTRUCTION OUTSIDE THE DRIPLINE OF ALL TREES 6" DBH (DIAMETER AT BREAST HEIGHT), OR 10" DBH AGGREGATE FOR MULTI-TRUNK TREES WITHIN 50' OF ANY GRADING, ROAD IMPROVEMENTS, UNDERGROUND UTILITIES OR OTHER DEVELOPMENT ACTIVITY, IDENTIFIED AQUATIC RESOURCES AS SHOWN ON PLANS, OR AS OTHERWISE SHOWN ON THE PLANS.

REV	DATE	REVISIONS	BY

RECORD DRAWING

DATE ENGINEER INITIAL

REGISTERED PROFESSIONAL ENGINEER WALTER R. AUERBACH No. C34303 Exp. 9/30/23 CIVIL STATE OF CALIFORNIA

AUERBACH ENGINEERING CORP
CIVIL ENGINEERING • LAND SURVEYING • ENVIRONMENTAL PLANNING

DONNER SUMMIT PUBLIC UTILITY DISTRICT

SUGAR BOWL SEWER PHASE 2A

NOTES, ABBREVIATIONS, AND LEGEND

NORDEN PLACER COUNTY CALIFORNIA

0 1
BAR IS ONE INCH ON ORIGINAL DRAWING

PROJECT NUMBER:	77.02B
SURVEY BY:	AEC
SURVEY DATE:	AUGUST 2021
DESIGN BY:	CN/CH/JF
DRAFTING BY:	AV
CHECKED BY:	CA/WA
DATE:	JULY 6, 2023
SCALES: HORIZONTAL / VERTICAL	G2
SHEET:	2 of 10

90% IMPROVEMENT PLANS

J:\77.02B\DWG\FINAL SHEETS\PHASE 2A\77.02B_2A_G2.DWG

SEWER NOTES:

1. NOT USED.

2. GRAVITY SEWER MAIN PIPING MATERIAL: GRAVITY SEWER MAIN PIPING SHALL BE COMPOSED OF THE FOLLOWING MATERIAL: POLYVINYL CHLORIDE (PVC). ALTERNATIVE PIPE MATERIALS MAY BE PROPOSED BY THE CONTRACTOR AND WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. PROHIBITED PIPE MATERIALS INCLUDE, BUT ARE NOT LIMITED TO: VITRIFIED CLAY PIPE (VCP), CAST IRON (CI), STEEL, ASBESTOS-CEMENT PIPE (AC)

3. PVC PIPE THE MATERIAL TYPE, NOMINAL DIAMETER, AND WALL THICKNESS DIMENSION RATIO (SDR) OF THE PIPE, APPURTENANCES, AND FITTINGS TO BE FURNISHED SHALL BE IN ACCORDANCE WITH THE APPLICABLE ASTM DESIGNATION AND AS SHOWN ON THE PLANS. PIPE AND FITTINGS SHALL CONFORM TO ASTM D3034, SDR 26 OR GREATER FOR NOMINAL DIAMETERS 4 INCH THROUGH 15 INCH.

   A. IDENTIFICATION: EACH LENGTH OF PIPE SHALL, AT A MINIMUM, BE CLEARLY MARKED SUCH THAT THE ASTM DESIGNATION, NOMINAL PIPE SIZE, PIPE STIFFNESS, RESIN CELL CLASSIFICATION, MANUFACTURER'S NAME AND MANUFACTURER'S PRODUCTION CODE WITH THE DATE OF MANUFACTURE CAN BE READILY IDENTIFIED.

3. GRAVITY SEWER FITTINGS

   A. PVC FITTINGS. ASTM D3034, SDR 26 WITH INTEGRAL BELL GASKETED JOINTS. GASKETS SHALL CONFORM TO ASTM F477.

   B. TRANSITION COUPLINGS. CORROSION RESISTANT CONSTRUCTION WITH FUSION BONDED EPOXY COATED IRON. COAL TAR EPOXY COAT ALL EXPOSED FERROUS BOLTS. POLYETHYLENE WRAP ALL TRANSITION COUPLINGS BEFORE BACKFILL. PVC RIGID TRANSITION COUPLINGS WILL BE ALLOWED. FERNCO TYPE FLEX COUPLINGS WILL NOT BE ACCEPTED UNLESS OTHERWISE APPROVED BY THE ENGINEER.

   C. SERVICE CONNECTIONS SHALL CONSIST OF PVC FITTINGS AND RUBBER GASKETED FULL LINE WYES AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM D3034.

4. FLEXIBLE COUPLINGS SHALL BE BOND SEAL, FERNCO, INDIANA SEAL, OR OTHER APPROVED COUPLING. RIGID COUPLINGS SHALL BE PVC ROMAC, BOND SEAL ANTI SHEAR, FERNCO ANTI SHEAR, INDIANA SEAL ANTI SHEAR OR OTHER APPROVED COUPLING. BURIED COUPLINGS SHALL BE EXTRA HEAVY, WITH STAINLESS STEEL BOLTS AND NUTS, AND SHALL BE PAINTED WITH TWO COATS OF BITUMASTIC PAINT AFTER INSTALLATION.

5. CLEANOUTS: PVC CLEANOUTS: PVC BODY WITH PVC THREADED PLUG. INCLUDE PVC SEWER PIPE FITTING AND RISER TO CLEANOUT OF SAME MATERIAL AS SEWER PIPING.

6. WARNING TAPE: NON-DETECTIBLE UNDERGROUND UTILITY WARNING TAPE: MINIMUM 0.5 MIL-THICK, MINIMUM 6 INCHES WIDE RESISTANT TO ALL KNOWN ALKALIS, ACIDS, CHEMICAL REAGENTS, AND SOLVENTS LIKELY TO BE ENCOUNTERED IN THE SOIL. THE TAPE SHALL BE VIVID OPAQUE, COLORED IN SAFETY PRECAUTION GREEN, AND IMPRINTED WITH "SEWER LINE" (OR SOME VARIATION) IN BLACK INK ALONG ITS ENTIRE LENGTH.

7. LOCATOR WIRE: SEWER PIPE TRACER WIRE SHALL BE NO. 12 STRANDED COPPER WIRE WITH BLUE THWN-2 INSULATION. TRACER WIRE SHALL BE TAPED TO THE PIPE AS INDICATED IN THE DRAWINGS. ALL WIRE SPLICES SHALL BE MADE USING A SPLIT BOLT CONNECTOR WRAPPED WITH AQUA-SEAL AND ELECTRICAL TAPE.

8. PIPE DISTRIBUTION: EACH SECTION OF PIPE SHALL BE DELIVERED IN THE FIELD AS NEAR AS PRACTICABLE TO THE PLACE WHERE IT IS TO BE INSTALLED; PIPES SHALL BE DISTRIBUTED ALONG THE SIDE OF TRENCH OPPOSITE THE SPOIL BANK WITHIN EASY REACH OF THE INSTALLING CREW. WHERE IT IS NECESSARY TO MOVE THE PIPE LONGITUDINALLY ALONG THE TRENCH, IT SHALL BE DONE IN SUCH A MANNER AS NOT TO DAMAGE THE PIPE. PIPE SHALL NOT BE ROLLED OR DRAGGED ON THE GROUND, NOR DROPPED INTO THE TRENCH. DURING LOADING, TRANSPORTATION, AND UNLOADING, EVERY PRECAUTION SHALL BE TAKEN TO PREVENT DAMAGE TO THE PIPE. NO PIPE SHALL BE DROPPED FROM THE CARS OR TRUCKS OR ALLOWED TO ROLL DOWN SLIDES WITHOUT PROPER RETAINING ROPES. EACH PIPE SHALL REST ON SUITABLE PADS, STRIPS, SKIDS OR BLOCKS DURING TRANSPORTATION AND INSTALLATION AND SHALL BE SECURELY WEDGED OR TIED IN PLACE. PADDING SHALL BE USED ON CAR OR TRUCK STAKES, SKIDS, ETC., TO PREVENT DAMAGE TO THE PIPE DURING TRANSPORTATION AND HANDLING.

   A. ANY PIPE DAMAGE SHALL BE REPLACED.

9. PIPE LAYING: THE PIPE SHALL BE LAID IN STRICT CONFORMITY TO THE PRESCRIBED LINE AND GRADE FREE OF SAGS AND HIGH POINTS. THREE (3) CONSECUTIVE POINTS ON THE SAME RATE OF SLOPE SHALL BE USED AT ALL TIME TO DETECT ANY VARIATION FOR A STRAIGHT GRADE. IN CASE ANY DISCREPANCY IS DISCOVERED, THE WORK SHALL BE STOPPED AND THE DISCREPANCY IMMEDIATELY REPORTED TO THE ENGINEER. EACH PIPE LENGTH SHALL BE CHECKED FOR CONFORMANCE TO PRESCRIBED LINE AND GRADE.

   B. MINIMUM PIPE DEPTH SHALL BE 36" FOR MAINS AND LATERALS UNLESS APPROVED BY THE ENGINEER.

10. PIPE LAYING PROCEDURE:

   A. TRENCH PREPARATION. PLACE PIPELINE TO LINE AND GRADE ONLY AFTER THE TRENCH HAS BEEN DEWATERED AND BEDDING PREPARED. MUD, SILT, GRAVEL AND OTHER FOREIGN MATERIAL SHALL BE KEPT OUT OF THE PIPE AND OFF THE JOINTING SURFACES.

   B. SURVEY LINE AND GRADE. CONSTANTLY CHECK LINE AND GRADE BY USE OF LASER OR LEVEL. IMMEDIATELY CORRECT PIPE PLACEMENT OUTSIDE THE ALLOWABLE TOLERANCES. MAKE ADJUSTMENTS TO THE PIPELINE BY SCRAPING OR FILLING BEDDING MATERIAL SO THAT THE PIPE IS IN FULL CONTACT WITH BEDDING. RETAIN PIPE IN ITS FINAL POSITION BY MECHANICAL MEANS UNTIL SUFFICIENT BACKFILL HAS BEEN COMPLETED TO ADEQUATELY HOLD THE PIPE IN PLACE.

11. PIPE PLACEMENT. COMMENCE PIPE PLACEMENT AT THE LOWEST POINT AND PROCEED IN AN UPHILL DIRECTION. PLACE PIPE WITH BELL END IN THE UPGRADE POSITION. PLUG OPEN PIPE ENDS AS NECESSARY TO KEEP DIRT AND DEBRIS OUT OF THE PIPE. DO NOT STORE TOOLS, RAGS, OR LUBRICANT IN THE PIPE AT ANY TIME. REMOVE ALL DIRT AND FOREIGN MATERIALS FROM PIPE IMMEDIATELY.

12. ALLOWABLE VARIATION FROM PLAN LINE AND GRADE. THE FINAL POSITION OF THE PIPE SHALL BE TO THE PLAN LINE AND GRADE. VARIATION SHALL NOT EXCEED ±0.03 FEET VERTICALLY. THE HORIZONTAL ALIGNMENT SHALL NOT VARY FROM PLAN ALIGNMENT BY MORE THAN 0.1 FEET. UPON COMPLETION OF PIPELINE PLACEMENT A FULL CIRCLE OF LIGHT SHALL BE VISIBLE BETWEEN CONSECUTIVE MANHOLES.

13. JOINTS. PREPARE AND INSTALL JOINTS IN ACCORDANCE WITH THE PUBLISHED RECOMMENDATIONS OF THE MANUFACTURER. MARK OR VERIFY THAT PIPE ENDS ARE MARKED, INDICATING INSERTION STOP POSITION, AND TO ENSURE THAT PIPE IS INSERTED INTO PIPE OR FITTING BELLS TO THIS MARK. PUSH SPIGOT INTO BELL USING METHODS RECOMMENDED BY THE MANUFACTURER, KEEPING PIPE TRUE TO LINE AND GRADE. PROTECT THE END OF THE PIPE DURING HOMING AND DO NOT USE EXCESSIVE FORCE THAT MAY RESULT IN OVER-ASSEMBLED JOINTS OR DISLODGED GASKETS. IF FULL ENTRY IS NOT ACHIEVED, DISASSEMBLE AND CLEAN THE JOINT AND REASSEMBLE. USE ONLY LUBRICANT SUPPLIED OR RECOMMENDED FOR USE BY THE PIPE MANUFACTURER. DO NOT EXCEED MANUFACTURER'S RECOMMENDATIONS FOR ANGULAR "JOINT DEFLECTION" (AXIAL ALIGNMENT).

14. WATERLINE CROSSINGS. SEWER LINES SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE STATE OF CALIFORNIA, DIVISION OF DRINKING WATER, CRITERIA FOR THE SEPARATION OF WATER MAINS AND SANITARY SEWERS. DO NOT BACKFILL UNTIL INSPECTED AND APPROVED BY THE OWNER.

15. WATERSTOPS. USE APPROVED WATERSTOPS ON ALL PIPES ENTERING STRUCTURES SUCH AS MANHOLES. VISIBLE SEEPAGE AROUND JOINTS INTO STRUCTURES SHALL BE CAUSE FOR REJECTION.

16. BACKFILL. BACKFILL IN ACCORDANCE WITH PLANS.

SEWER NOTES CONTINUED:

16. TESTING OF SANITARY SEWER FACILITIES: THE FOLLOWING TESTS WILL BE REQUIRED FOR ALL SANITARY SEWER FACILITIES CONNECTED TO THE DISTRICT'S SANITARY SEWER SYSTEM. TESTING SHALL NOT BE PERMITTED UNTIL ALL EXCAVATION, BACKFILLING, AND GRADING, IN THE IMMEDIATE AREA OF THE SANITARY SEWER FACILITY HAS BEEN COMPLETED.

   A. GRAVITY PIPELINES: ALL SECTIONS SHALL BE TESTED EITHER HYDROSTATICALLY OR WITH AN AIR TEST. IN NO CASE SHALL THE REQUIRED MINIMUM BACKFILL BE LESS THAN 30 IN ABOVE THE TOP OF THE PIPE BEFORE TESTING.

      1) HYDROSTATIC TEST - MAIN: SECTION OF PIPELINE SHALL BE PREPARED BY PLUGGIN THE UPPER SIDE OF DOWNSTREAM MANHOLE AND ALL OPENINGS IN UPSTREAM MANHOLE EXCEPT DOWNSTREAM OPENING. MINIMUM 5-FT TEST HEAD SHALL BE APPLIED TO THE UPSTREAM END OF THE PIPELINE. WHERE GRADES ARE SLIGHT, TWO OR MORE SECTIONS BETWEEN SSMH'S CAN BE TESTED AT ONCE. WHERE GRADES ARE STEEP, AND EXCESSIVE TEST HEADS WOULD RESULT, TEST TEES THE FULL SIZE OF THE SEWER MAIN SHALL BE INSTALLED AT INTERMEDIATE POINTS SO THE MAX HEAD WILL NOT EXCEED 15FT. THE ALLOWABLE LEAKAGE IN THE TEST SECTION SHALL NOT EXCEED 350 GAL PER MILE PER DAY PER INCH DIAMETER OF PIPE. IF TEST HEAD ABOVE 5FT, THE ALLOWABLE LEAKAGE WILL BE INCREASED AT THE RATE OF 80 GAL FOR EACH FT OF INCREASED HEAD. TEST SECTIONS FAILING TEST SHALL BE REPAIRED OR RECONSTRUCTED AS NECESSARY AND RETESTED.

      2) HYDROSTATIC TEST - LATERAL: CONSISTS OF PLUGGING DOWNSTREAM END OF BUILDING LATERAL, PLACING A SECTION OF PIPE IN THE VERTICAL BRANCH OF THE BUILDING CLEANOUT AND FILLING THE TEST SECTION WITH WATER. AT LEAST 8 VERTICAL FT OF WATER MEASURED FROM HIGHEST POINT OF PIPELINE TO THE TOP OF THE WATER COLUMN ON THE UPSTREAM CLEANOUT RISER SHALL BE USED FOR THE TEST. IN PIPLINES WITH MINIMAL FALL, CLEANOUT RISERS MAY NEED TO BE TEMPORARILY EXTENDED ABOVE GROUND TO ACHIEVE 8 FT STATIC WATER LEVEL. IN NO CASE SHALL VERTICAL DISTANCE FROM LOWEST POINT OF THE PIPELINE TEST SECTION TO THE WATER SURFACE IN THE CLEANOUT RISER EXCEED 15 FT. ADDITIONAL CLEANOUTS MAY HAVE TO BE INSTALLED IN STEEP PIPELINES AND PIPELINES TESTED IN SECTIONS. THE WATER LEVEL IN THE PIPELINE SHALL REMAIN CONSTANT FOR 5 MINUTES FOR A 4 INCH OR 6 INCH LATERAL. IF LOSS OCCURS, PIPELINE MAY BE RETESTED ONE TIME. IF A SECOND FAILURE OCCURS, THIS CONSTITUTES A FAILURE AND REPAIRS ARE TO BE DONE BEFORE RETESTING.

      3) AIR TEST: AIR TESTING MAY BE USED IN LIEU OF HYDROSTATIC. LENGTH OF TEST LIMITED TO LENGTH BETWEEN ADJACENT MANHOLES. PRESSURIZE THE TEST SECTION TO 4PSI AND HOLD ABOVE 3.5PSI FOR NOT LESS THAN 5 MINUTES. ADD AIR IF NECESSARY TO KEEP PRESSURE ABOVE 3.5PSI. AT THE END OF THE 5 MIN PERIOD, NOTE THE PRESSURE AND BEGIN THE TIMED PERIOD. IF PRESSURE DROPS 0.5PSI IN LESS THAN THE TIME GIVEN IN THE FOLLOWING TABLE, THE SECTION SHALL NOT HAVE PASSED THE TEST. IF THE TIME FOR THE 0.5PSI PRESSURE DROP IS 125 PERCENT OR LESS THAN TIME GIVEN IN TABLE, THE LINE SHALL BE RE-PRESSURIZED TO 3.0 PSI AND TEST REPEATED. FOR 8 IN AND SMALLER PIPE, IF THE PRESSURE DROPS LESS THAN 0.5PSI AFTER THE INITIAL PRESSURIZATION AND AIR IS NOT ADDED, THE SECTION SHALL HAVE PASSED. IF THE TEST IS NOT PASSED, THE LEAK SHALL BE FOUND, REPAIRED, AND RETESTED.

LATERAL SIZE:	4	6	8	10	12	15
MINIMUM TIME (SEC):	122	184	245	306	367	460

   B. MANDREL TESTING: INSTALLED PIPE SHALL BE TESTED TO INSURE THAT VERTICAL DEFLECTIONS FOR PLASTIC PIPE DO NOT EXCEED MAXIMUMS. FOR PIPE UP TO AND INCLUDING 12-INCH 5% MAXIMUM ALLOWED. THE MAXIMUM AVERAGE ID SHALL BE EQUAL TO THE AVERAGE OD MINUS TWO TIMES THE MINIMUM WALL THICKNESS PER ASTM STANDARDS. DEFLECTION TESTS SHALL BE PERFORMED NOT SOONER THAN 30 DAYS AFTER COMPLETION OF PLACEMENT AND COMPACTION OF BACKFILL. PIPE SHALL BE BALLED AND FLUSHED, AND CLEANED PRIOR TO TESTING. MANDREL SHALL BE PULLED THROUGH THE PIPE BY HAND TO ENSURE THAT MAXIMUM ALLOWABLE DEFLECTIONS HAVE NOT BEEN EXCEEDED. IF THE MANDREL FAILS TO PASS, THE PIPE WILL BE DEEMED TO BE OVER DEFECTED. PRIOR TO USE, MANDREL SHALL BE APPROVED BY THE ENGINEER OR DISTRICT. ANY OVER DEFLECTED PIPE SHALL BE UNCOVERED AND, IF NOT DAMAGED, REINSTALLED. DAMAGED PIPE SHALL BE REMOVED AND REPLACED.

17. DONNER SUMMIT PUBLIC UTILITY DISTRICT USES TRUCKEE SANITATION DISTRICT STANDARD SPECIFICATIONS AND STANDARD DRAWINGS. WHERE A CONFLICT MAY EXIST WITH THESE SEWER NOTES, THE TRUCKEE SANITATION DISTRICT STANDARD SPECIFICATIONS AND STANDARD DRAWINGS SHALL TAKE PRECEDENCE.

LEGEND

EXISTING

- AC PAVING
- DIRT ROAD
- EDGE OF PAVEMENT
- PROPERTY LINE
- OHE — OVERHEAD ELECTRIC
- UGU — UNDERGROUND UTILITY
- OHU — OVERHEAD UTILITY
- G — GAS LINE
- W — WATER LINE
- SS — SEWER LINE
- STORM DRAIN CULVERT
- JOINT UTILITY POLE
- SANITARY SEWER MANHOLE
- ELECTRIC BOX
- TELEVISION BOX
- WATER METER
- WATER VALVE
- SIGN
- TREE (SIZE VARIES)
- INDEX CONTOUR W/ ELEV
- INTERMEDIATE CONTOUR
- GRADE BREAK
- FLOWLINE
- ROCK OR BOULDER
- TREE (SIZE & TYPE VARIES)
- BENCHMARK

PROPOSED

- AC PAVING
- SS — SANITARY SEWER MAIN
- SANITARY SEWER LATERAL
- SANITARY SEWER MANHOLE
- SCO — SANITARY SEWER CLEANOUT

DEMO & EROSION CONTROL

- EXISTING TO BE DEMOLISHED
- SAWCUT
- FIBER ROLL
- XX — CONSTRUCTION FENCE
- INDIVIDUAL TREE PROTECTION
- TREE TO BE REMOVED
- CONSTRUCTION ENTRANCE
- STOCKPILE / STAGING AREA
- REVEGETATION AREA
- BIOLOGICAL AND AQUATIC RESOURCES

ABBREVIATIONS

AB/A.B.	AGGREGATE BASE -OR- ANCHOR BLOCK
AC/A.C.	ASPHALT CONCRETE -OR- ACRE
ACP	ASBESTOS CEMENT PIPE
AE	ANCHORAGE EASEMENT
APN	ASSESSORS PARCEL NUMBER
APPROX	APPROXIMATE
ARV/VRV	AIR/VACUUM RELEASE VALVE
ASPH	ASPHALT
BC	BEGIN CURVE
BFP	BACK FLOW PREVENTER
BFV	BUTTERFLY VALVE
BM	BENCH MARK
BMPs	BEST MANAGEMENT PRACTICES
BOP	BOTTOM OF PIPE
BOV	BLOW-OFF VALVE
BVC	BEGINNING VERTICAL CURVE
BW	BOTTOM OF WALL
CATV	CABLE TELEVISION
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CNG	COMPRESSED NATURAL GAS
CO	CLEAN OUT
COMM	COMMUNICATIONS
CONC	CONCRETE
CONST	CONSTRUCT
CONT	CONTINUED
CPLG	COUPLING
CR	CURB RETURN
CT	COURT
CULV	CULVERT
CY	CUBIC YARDS
DBH	DIAMETER AT BREAST HEIGHT
DE	DRAINAGE EASEMENT
DEMO	DEMOLITION
DET	DETAIL
DI	DROP INLET
DIAM	DIAMETER
DIP	DUCTILE IRON PIPE
DOC	DOCUMENT
DR	DRIVE
DS	DOUBLE SERVICE
E	EAST -OR- ELECTRICAL
(E)	EXISTING
EC	END CURVE -OR- EROSION CONTROL
ECE	ELECTRIC & COMMUNICATION EASEMENT
ECR	END CURB RETURN
EG	EXISTING GRADE - OR GROUND
ELEV	ELEVATION
ELL	ELBOW
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
ESMT	EASEMENT
ETE	ELECTRIC & TELEPHONE EASEMENT
EX	EXISTING
EXIST	EXISTING
EVA	EMERGENCY VEHICLE ACCESS
EVC	END OF VERTICAL CURVE
F	FIRE
FCA	FLANGED COUPLING ADAPTER
FES	FLARED END SECTION
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOWLINE -OR- FLANGE
FLA	FLANGE
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT
G	GAS
GA	GAUGE
GB	GRADE BREAK
GR	GRATE
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
H	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
HT	HEIGHT
HWY	HIGHWAY
INV	INVERT ELEVATION
IOD	IRREVOCABLE OFFER OF DEDICATION
IP	IRON PIPE
JP	JOINT POLE
JT	JOINT TRENCH
LF/L.F.	LINEAR FOOT -OR- LINEAR FEET
LP	LOW POINT
LS	LUMP SUM
LT	LEFT
LTRL	LATERAL
LVC	LENGTH VERTICAL CURVE
MAX	MAXIMUM
MB	MACHINE BOLTS
MCA	MECHANICAL COUPLING ADAPTER
(MH)	EXISTING MANHOLE
MHW	MEAN HIGH WATER
MIN	MINIMUM
MPE	MULTI-PURPOSE EASEMENT
N	NORTH
(N)	NEW
NIC	NOT IN CONTRACT
NT	NO TAG
NTS	NOT TO SCALE
OC/O.C.	ON CENTER
OHE	OVERHEAD ELECTRIC
OHU	OVERHEAD UTILITY
OMPI	OPEN METAL PIPE INLET
P	POWER
(P)	PROPOSED
PC	POINT OF CURVE -OR- PROPERTY CORNER
PCC	PORTLAND CEMENT CONCRETE
PDE	PRIVATE DRAINAGE EASEMENT
PE	PLAIN END
PERF	PERFORATED
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
POJ	PUSH ON JOINT
POT	POINT OF TANGENT
PP	POWER POLE -OR- PERFORATED PIPE
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS -OR- RESTRAINED
RB	REBAR
RC	RELATIVE COMPACTION
RD	ROAD
RCP	REINFORCED CONCRETE PIPE
RET	RETAINING
RFCA	RESTRAINED FLANGED COUPLING ADAPTER
RL	RESTRAINED LENGTH
RMJ	RESTRAINED MECHANICAL JOINT
RPO	RESTRAINED PUSH ON JOINT
RR	RAILROAD
RT	RIGHT
ROW	RIGHT OF WAY
S	SOUTH -OR- SLOPE
SCE	STABILIZED CONSTRUCTION ENTRANCE
SCH	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SHLD	SHOULDER
SHT	SHEET
SGLS	SINGLE SERVICE
SS	SANITARY SEWER
SSCO/SCO	SANITARY SEWER CLEANOUT
SSE	SNOW STORAGE EASEMENT
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SW	SIDEWALK
T	TELEPHONE
TB	THRUST BLOCK
TBC	TOP BACK OF CURB
TELE	TELEPHONE
TH	TOWNHOMES
TOP	TOP OF PIPE
TOS	TOP OF SLOPE
TP	TELEPHONE POLE
TRANS	TRANSFORMER
TSC	TOP OF STONE COLUMN
TSCW	TOP OF STONE COLUMN WALL
TSW	TOP OF SEAT WALL
TV	CABLE TELEVISION
TW	TOP OF WALL
TWL	TOP OF WALL
(TYP)	TYPICAL
UGE	UNDERGROUND ELECTRIC
V	VERTICAL
VE	VISIBILITY EASEMENT
W	WEST -OR- WATER
W/	WITH
WE	WATERLINE EASEMENT
WL	WATERLINE
WM	WATER METER
WSP	WELDED STEEL PIPE
WSS	WATER SAMPLING STATION
WV	WATER VALVE
XC	CROSS-COUNTRY

REV	DATE	REVISIONS	BY

RECORD DRAWING

DATE ENGINEER INITIAL

REGISTERED PROFESSIONAL ENGINEER WALTER R. AUERBACH No. C34303 Exp. 9/30/23 CIVIL STATE OF CALIFORNIA

AUERBACH ENGINEERING CORP
CIVIL ENGINEERING • LAND SURVEYING • ENVIRONMENTAL PLANNING

DONNER SUMMIT PUBLIC UTILITY DISTRICT

SUGAR BOWL SEWER PHASE 2A

PLACER COUNTY CALIFORNIA

NOTES, ABBREVIATIONS, AND LEGEND

NORDEN

0 1
BAR IS ONE INCH ON ORIGINAL DRAWING

PROJECT NUMBER:	77.02B
SURVEY BY:	AEC
SURVEY DATE:	AUGUST 2021
DESIGN BY:	CN/CH/JF
DRAFTING BY:	AV
CHECKED BY:	CA/WA
DATE:	JULY 6, 2023

SCALES: HORIZONTAL VERTICAL

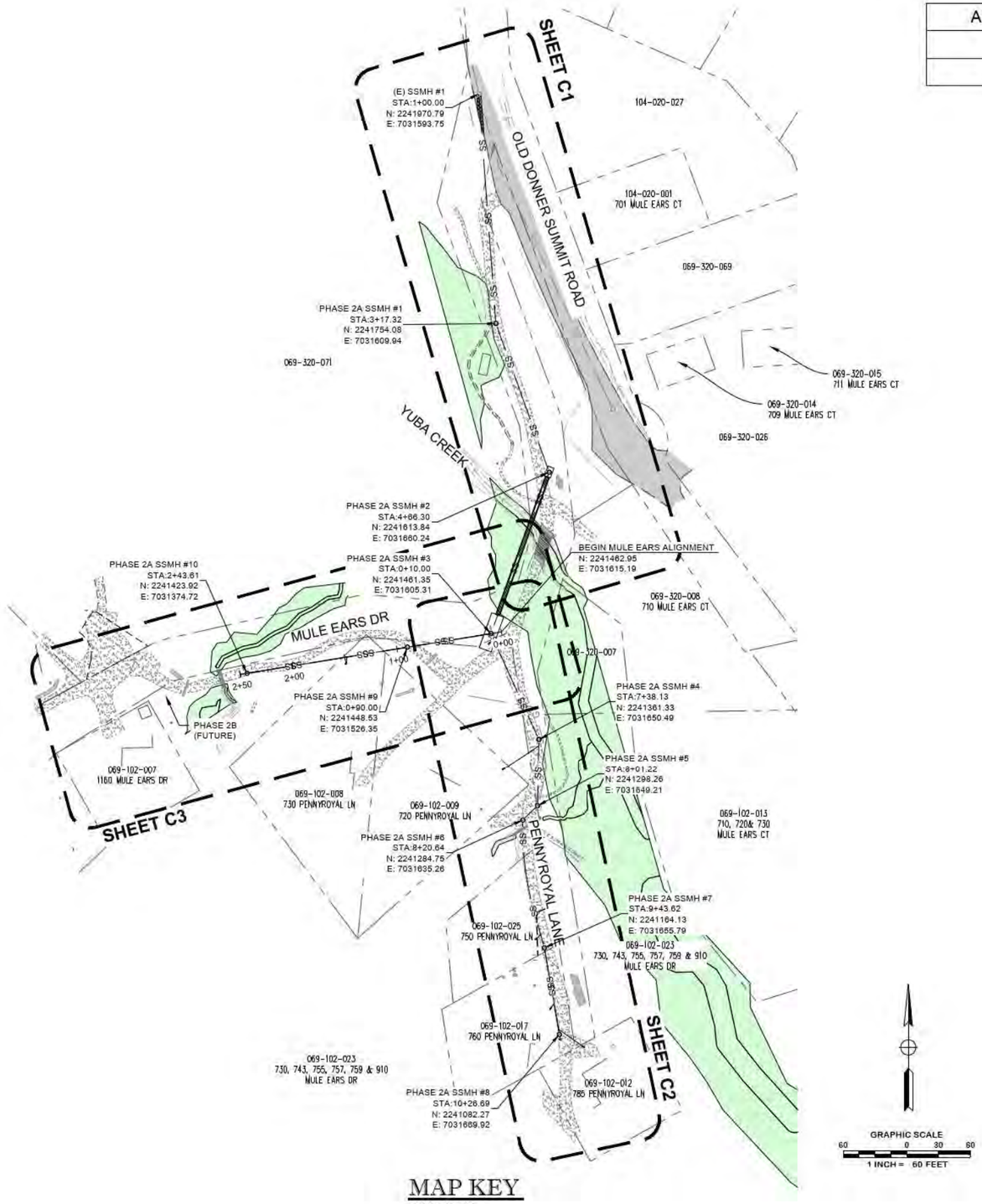
G3

SHEET: 3 of 10

90% IMPROVEMENT PLANS

J:\77.02B\DWG\FINAL SHEETS\PHASE 2A\77.02B_2A_G3.DWG

ALIGNMENT NAME	STREET
PHASE 2A-1	PENNYROYAL LN
PHASE 2A-2	MULE EARS DRIVE



MAP KEY

SCALE: 1" = 60'

RECORD DRAWING

DATE ENGINEER INITIAL

REGISTERED PROFESSIONAL ENGINEER
WALTER R. AUERBACH
No. C34303
Exp. 9/30/23
CIVIL
STATE OF CALIFORNIA

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SUGAR BOWL SEWER PHASE 2A

SHEET MAP KEY

NORDEN PLACER COUNTY CALIFORNIA

BAR IS ONE INCH ON ORIGINAL DRAWING

PROJECT NUMBER:	77.02B
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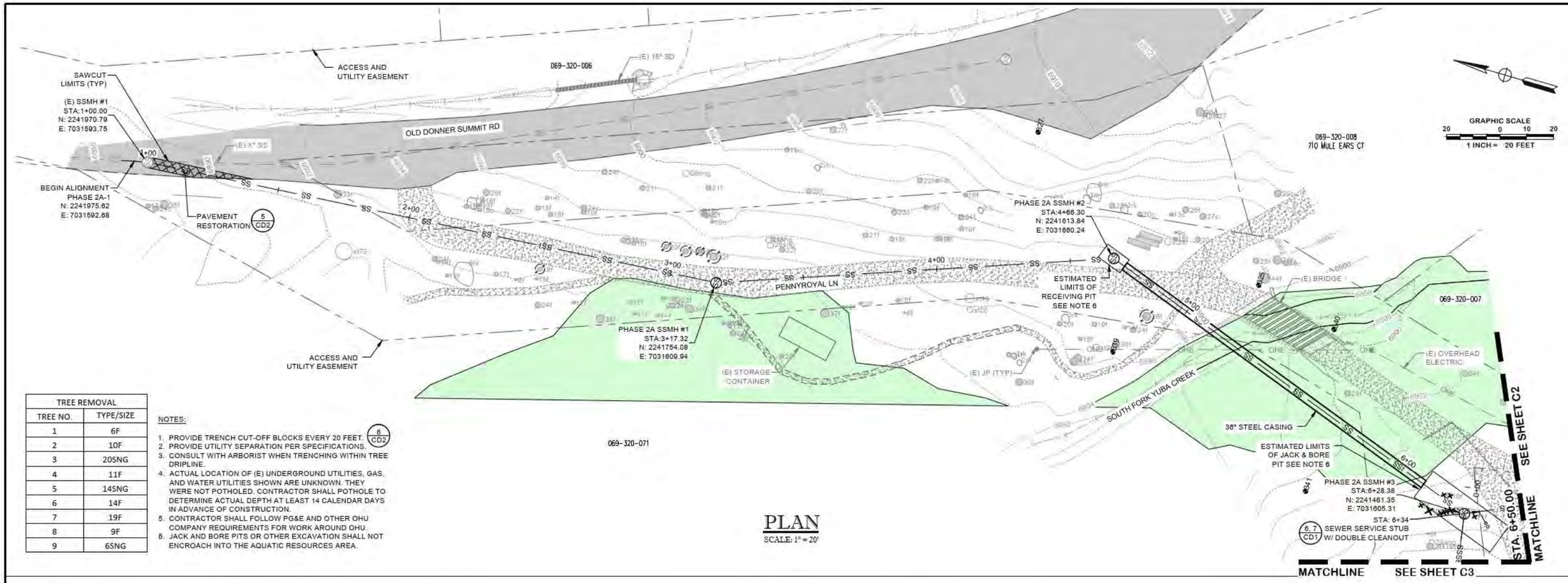
SURVEY DATE:	AUGUST 2021
DESIGN BY:	CN/CH/JE
DRAFTING BY:	AV
CHECKED BY:	CA/WA
DATE:	JULY 6, 2023
SCALES: 1" = 80' HORIZONTAL / VERTICAL	G4
SHEET:	4 of 11

90% IMPROVEMENT PLANS

J:\77.02B\DWG\FINAL SHEETS\PHASE 2A\77.02B_2A_G4.DWG

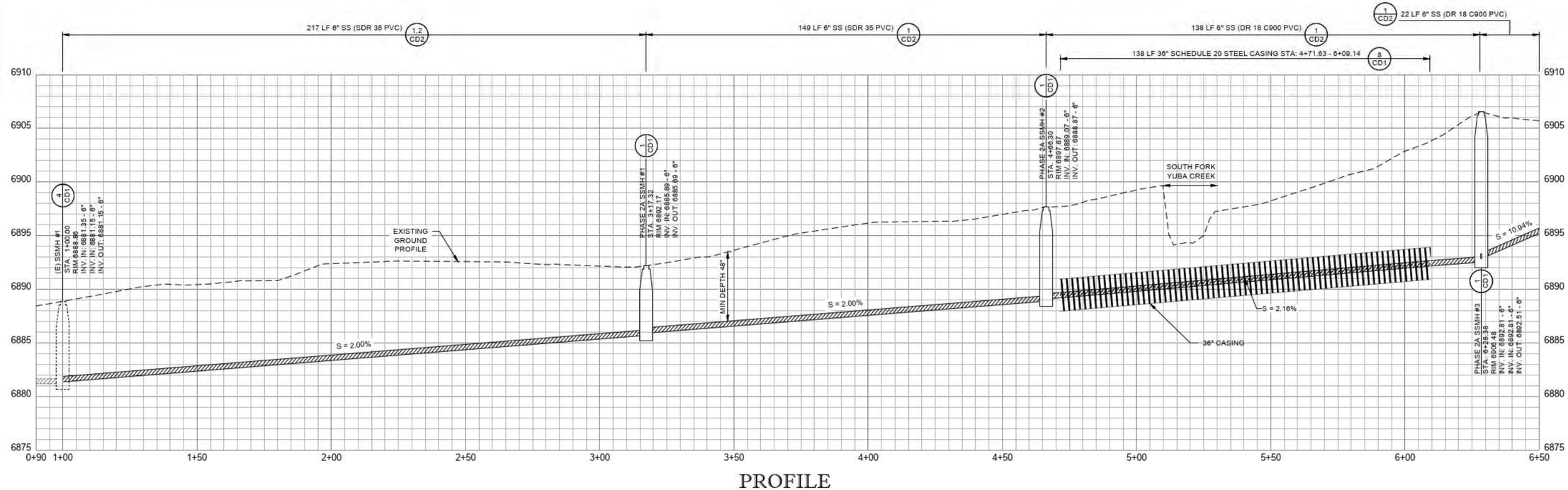


TREE REMOVAL	
TREE NO.	TYPE/SIZE
1	6F
2	10F
3	20SNG
4	11F
5	14SNG
6	14F
7	19F
8	9F
9	6SNG

NOTES:

1. PROVIDE TRENCH CUT-OFF BLOCKS EVERY 20 FEET. 6 CD2
2. PROVIDE UTILITY SEPARATION PER SPECIFICATIONS.
3. CONSULT WITH ARBORIST WHEN TRENCHING WITHIN TREE DRIPLINE.
4. ACTUAL LOCATION OF (E) UNDERGROUND UTILITIES, GAS, AND WATER UTILITIES SHOWN ARE UNKNOWN. THEY WERE NOT POTHOLED. CONTRACTOR SHALL POTHOLE TO DETERMINE ACTUAL DEPTH AT LEAST 14 CALENDAR DAYS IN ADVANCE OF CONSTRUCTION.
5. CONTRACTOR SHALL FOLLOW PG&E AND OTHER OHU COMPANY REQUIREMENTS FOR WORK AROUND OHU.
6. JACK AND BORE PITS OR OTHER EXCAVATION SHALL NOT ENCROACH INTO THE AQUATIC RESOURCES AREA.

PLAN
SCALE: 1" = 20'



PROFILE
SCALE: 1" = 20' (H) 1" = 5' (V)

REV	DATE	REVISIONS	BY

RECORD DRAWING

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DONNER SUMMIT PUBLIC UTILITY DISTRICT

SUGAR BOWL SEWER PHASE 2A

PENNYROYAL LN STA 0+00 - 6+50

NORDEN PLACER COUNTY CALIFORNIA

0 1
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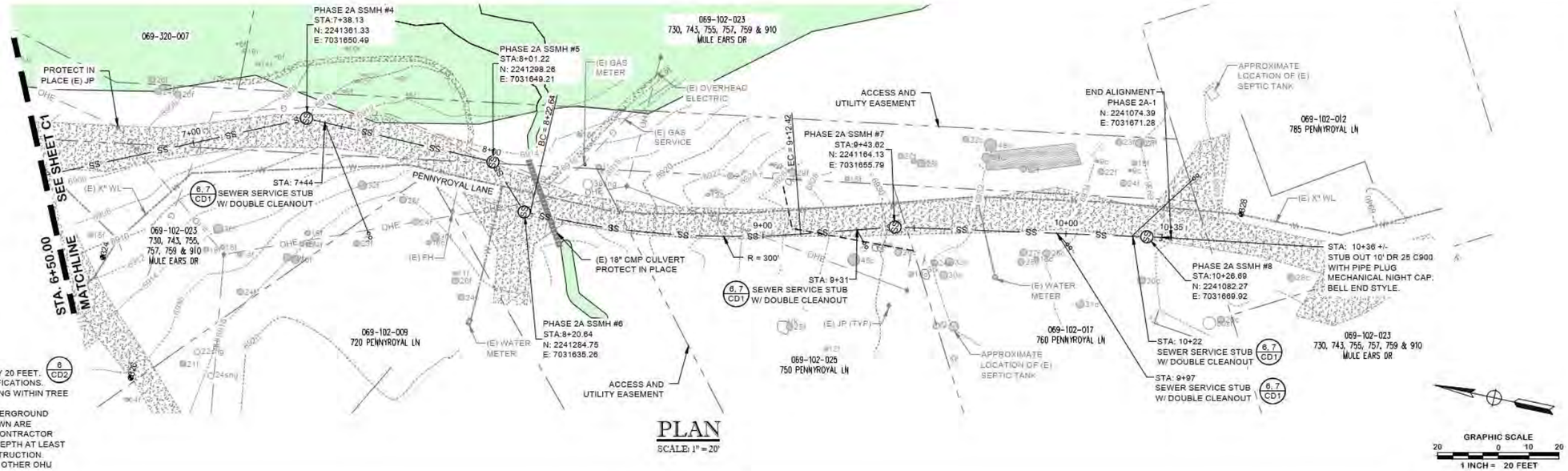
DRAFTING BY:	AV
CHECKED BY:	CA/WA
DATE:	JULY 6, 2023
SCALES: 1" = 20' HORIZONTAL, 1" = 20' VERTICAL	C1
	SHEET: 5 of 11

90% IMPROVEMENT PLANS

J:\77.02B\DWG\FINAL SHEETS\PHASE 2A\77.02B_2A_C1.DWG

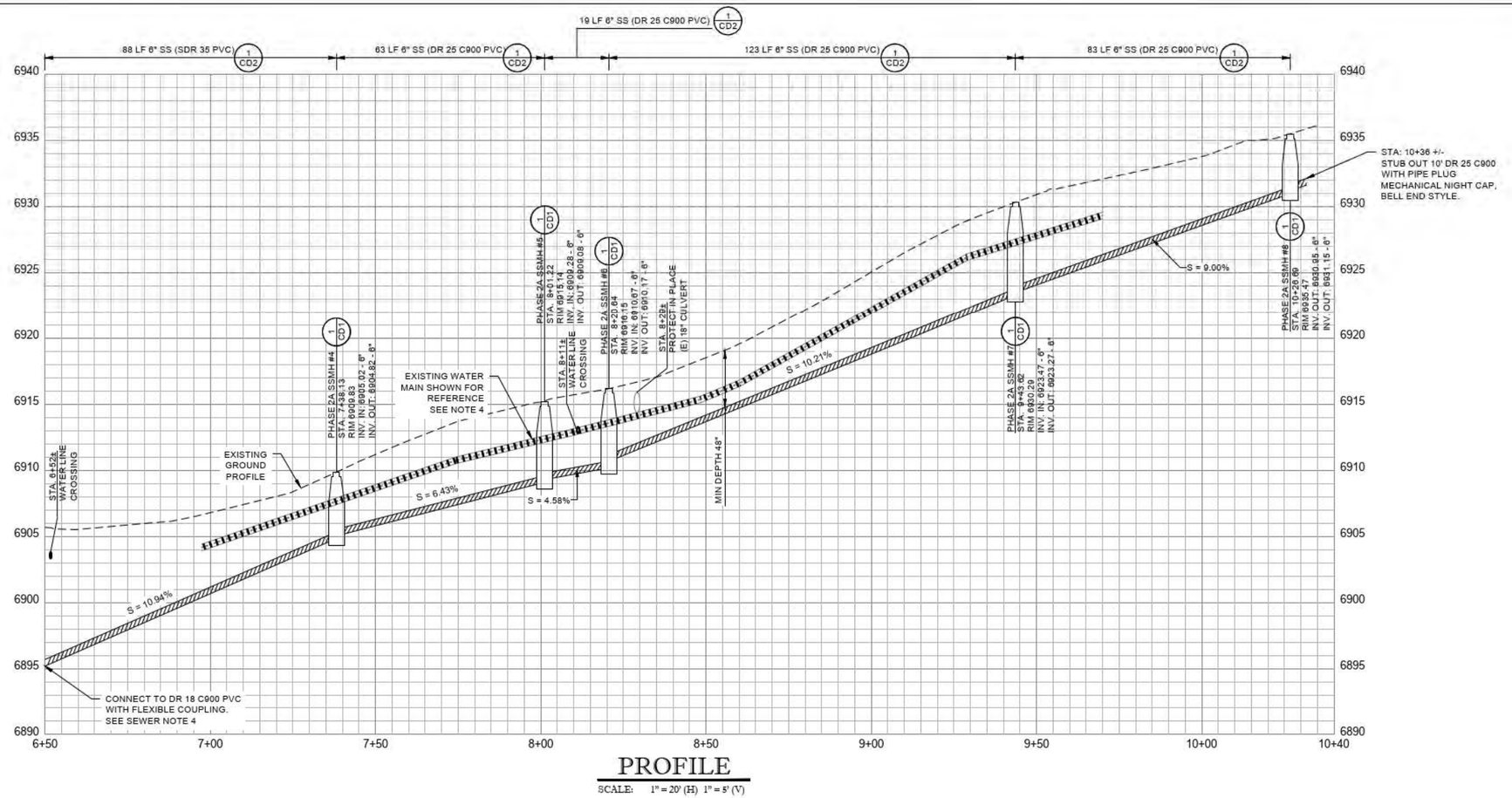


PLAN

SCALE: 1" = 20'

NOTES:

1. PROVIDE TRENCH CUT-OFF BLOCKS EVERY 20 FEET. (6 CD2)
2. PROVIDE UTILITY SEPARATION PER SPECIFICATIONS.
3. CONSULT WITH ARBORIST WHEN TRENCHING WITHIN TREE DRIPLINE.
4. ACTUAL DEPTH AND LOCATION OF (E) UNDERGROUND UTILITIES, GAS AND WATER UTILITIES SHOWN ARE UNKNOWN. THEY WERE NOT POTHOLED. CONTRACTOR SHALL POTHOLE TO DETERMINE ACTUAL DEPTH AT LEAST 14 CALENDAR DAYS IN ADVANCE OF CONSTRUCTION.
5. CONTRACTORS SHALL FOLLOW PG&E AND OTHER OHU COMPANY REQUIREMENTS



PROFILE

SCALE: 1" = 20' (H) 1" = 5' (V)

REV	DATE	REVISIONS	BY

RECORD DRAWING

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SUGAR BOWL SEWER PHASE 2A

PENNYROYAL LN STA 6+50 - 10+27

NORDEN PLACER COUNTY CALIFORNIA

0 1 BAR IS ONE INCH ON ORIGINAL DRAWING

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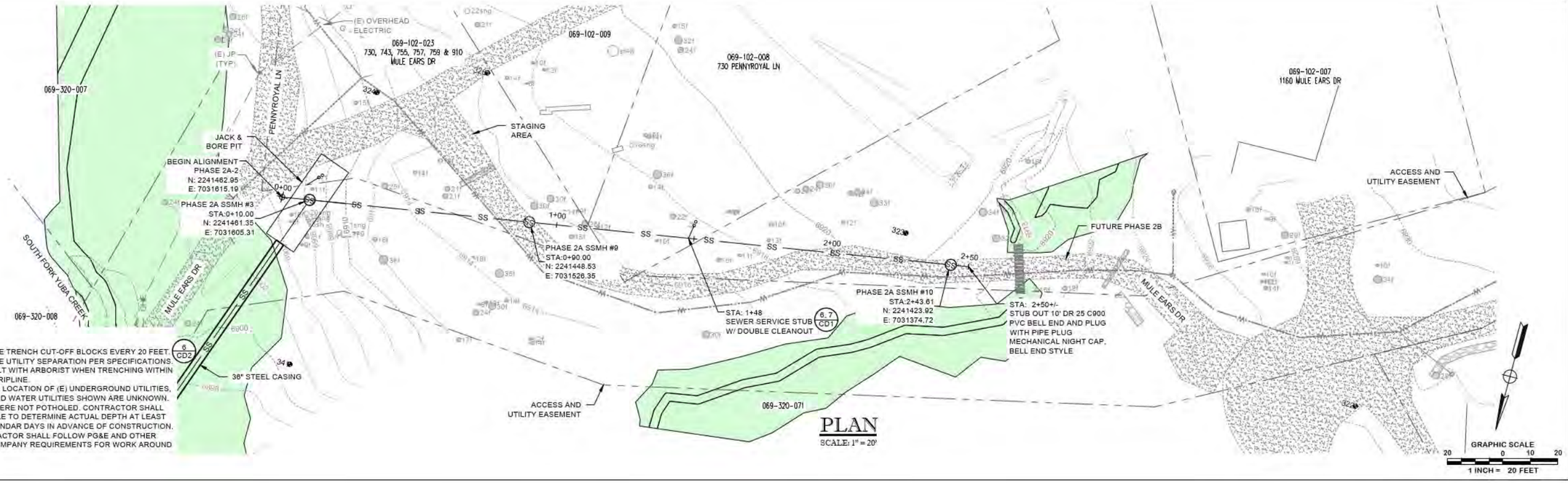
DRAFTING BY:	AV
CHECKED BY:	CA/WA
DATE:	JULY 6, 2023
SCALES: 1" = 20' HORIZONTAL	C2
1" = 20' VERTICAL	SHEET: 6 of 11

90% IMPROVEMENT PLANS

J:\77.02B\DWG\FINAL SHEETS\PHASE 2A\77.02B_2A_C2.DWG

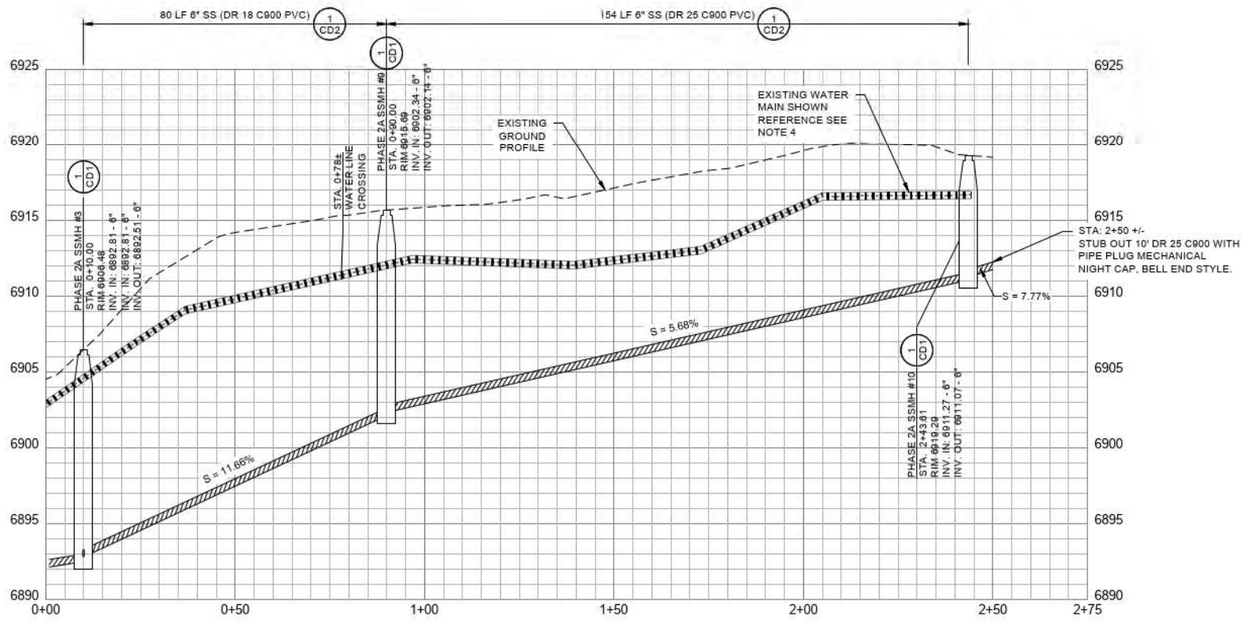


NOTES:

1. PROVIDE TRENCH CUT-OFF BLOCKS EVERY 20 FEET.
2. PROVIDE UTILITY SEPARATION PER SPECIFICATIONS
3. CONSULT WITH ARBORIST WHEN TRENCHING WITHIN TREE DRIPLINE.
4. ACTUAL LOCATION OF (E) UNDERGROUND UTILITIES, GAS, AND WATER UTILITIES SHOWN ARE UNKNOWN. THEY WERE NOT POTHOLED. CONTRACTOR SHALL POTHOLE TO DETERMINE ACTUAL DEPTH AT LEAST 14 CALENDAR DAYS IN ADVANCE OF CONSTRUCTION.
5. CONTRACTOR SHALL FOLLOW PG&E AND OTHER OHU COMPANY REQUIREMENTS FOR WORK AROUND OHU.

PLAN

SCALE: 1" = 20'



PROFILE

SCALE: 1" = 20' (H) 1" = 5' (V)

REV	DATE	REVISIONS	BY

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DATE ENGINEER INITIAL

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DONNER SUMMIT PUBLIC UTILITY DISTRICT

SUGAR BOWL SEWER PHASE 2A

MULE EARS DR STA. 0+00 - 2+50

NORDEN PLACER COUNTY CALIFORNIA

0 1
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SURVEY DATE:	AUGUST 2021
DESIGN BY:	CN/CH/JF
DRAFTING BY:	AV
CHECKED BY:	CA/WA
DATE:	JUNE 23, 2023

SCALES:
1" = 20' HORIZONTAL
1" = 20' VERTICAL

C3

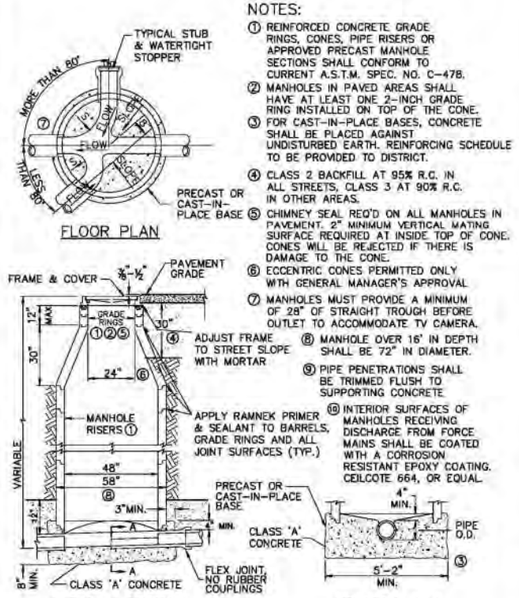
SHEET: 7 of 11

90% IMPROVEMENT PLANS

J:\77.02B\DWG\FINAL SHEETS\PHASE 2A\77.02B_2A_C3.DWG

1 TYPE 'A' MANHOLE

N.T.S.

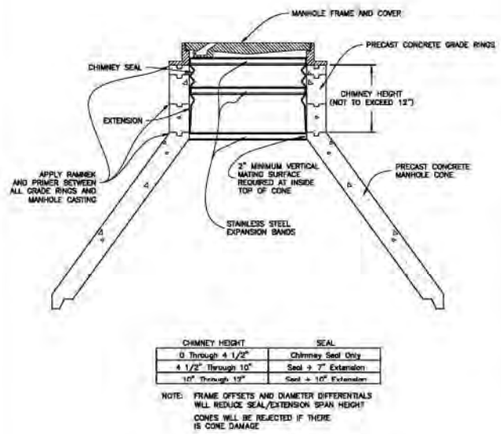


NOTES:

1. REINFORCED CONCRETE GRADE RINGS, CONES, PIPE RISERS OR APPROVED PRECAST MANHOLE SECTIONS SHALL CONFORM TO CURRENT A.S.T.M. SPEC. NO. C-478.
2. MANHOLES IN PAVED AREAS SHALL HAVE AT LEAST ONE 2-INCH GRADE RING INSTALLED ON TOP OF THE CONE.
3. FOR CAST-IN-PLACE BASES, CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH. REINFORCING SCHEDULE TO BE PROVIDED TO DISTRICT.
4. CLASS 2 BACKFILL AT 95% R.C. IN ALL STREETS, CLASS 3 AT 90% R.C. IN OTHER AREAS.
5. CHIMNEY SEAL REQ'D ON ALL MANHOLES IN PAVEMENT. 2" MINIMUM VERTICAL MATING SURFACE REQUIRED AT INSIDE TOP OF CONE. CONES WILL BE REJECTED IF THERE IS DAMAGE TO THE CONE.
6. ECCENTRIC CONES PERMITTED ONLY WITH GENERAL MANAGER'S APPROVAL
7. MANHOLES MUST PROVIDE A MINIMUM OF 28" OF STRAIGHT TROUGH BEFORE OUTLET TO ACCOMMODATE TV CAMERA.
8. MANHOLE OVER 16' IN DEPTH SHALL BE 72" IN DIAMETER.
9. PIPE PENETRATIONS SHALL BE TRIMMED FLUSH TO SUPPORTING CONCRETE
10. INTERIOR SURFACES OF MANHOLES RECEIVING DISCHARGE FROM FORCE MAINS SHALL BE COATED WITH A CORROSION RESISTANT EPOXY COATING. CEILCOTE 664, OR EQUAL.

2 INTERNAL MANHOLE CHIMNEY SEAL

N.T.S.



CHIMNEY HEIGHT	SEAL
0 Through 4 1/2"	Chimney Seal Only
4 1/2" Through 10"	Seal + 7" Extension
10" Through 12"	Seal + 10" Extension

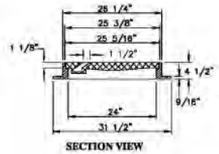
NOTE: FRAME OFFSETS AND DIAMETER DIFFERENTIALS WILL REDUCE SEAL/EXTENSION SPAN HEIGHT

CONES WILL BE REJECTED IF THERE IS CONE DAMAGE

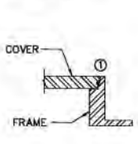
3 MANHOLE COVER AND FRAME

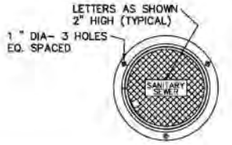
N.T.S.

STANDARD TAPERED FRAME & COVER

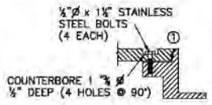


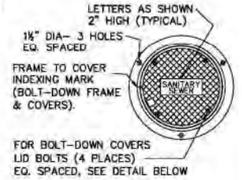
① MANHOLE LID 1/4" x 1/8" DEEP MACHINE GROOVE COVER RIM FOR "O" RING. 1/4" NEOPRENE #N-439"O" RING IN LID. MATING SURFACES OF FRAME & COVER MACHINED. GREASE "O" RING LIGHTLY ON FINAL ASSEMBLY "O" RING MUST BE IN COVER.





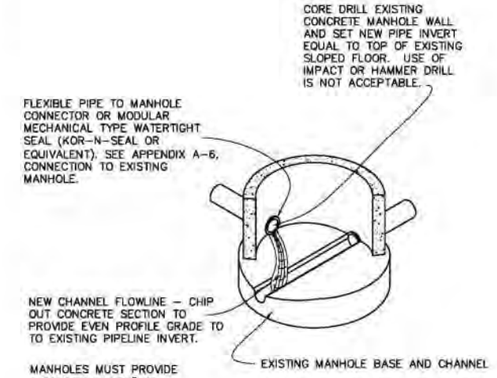
BOLT-DOWN FRAME & COVER TO BE USED ONLY WHEN REQUIRED BY DISTRICT





4 PIPE CONNECTION TO EXISTING MANHOLE

N.T.S.



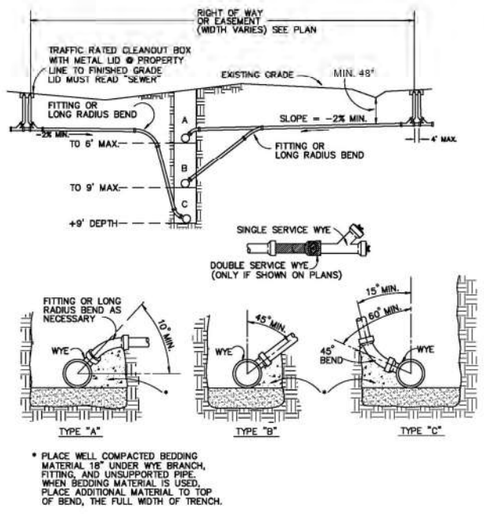
ALL INTERIOR CONCRETE SURFACES OF DROP MANHOLES AND MANHOLES RECEIVING FORCE MAIN DISCHARGE SHALL BE FURNISHED WITH A CORROSIONS RESISTANT EPOXY COATING. CEILCOTE 664, OR APPROVED EQUAL.

5 NOT USED

N.T.S.

6 SEWER LATERAL PROFILE VIEW

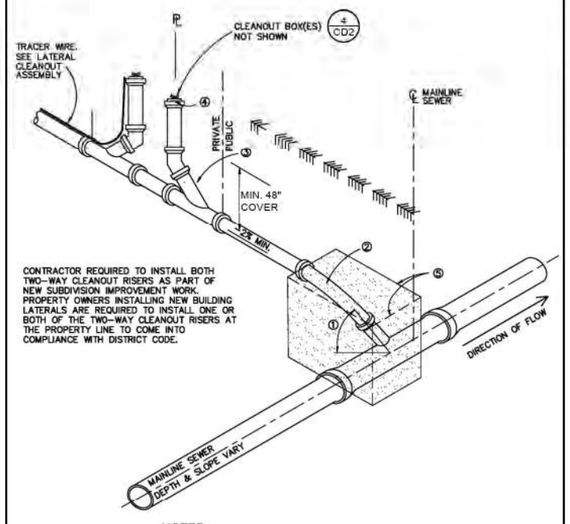
N.T.S.



* PLACE WELL COMPACTED BEDDING MATERIAL 18" UNDER WYE BRANCH, FITTING, AND UNSUPPORTED PIPE. WHEN BEDDING MATERIAL IS USED, PLACE ADDITIONAL MATERIAL TO TOP OF BEND, THE FULL WIDTH OF TRENCH.

7 SEWER LATERAL ISOMETRIC VIEW

N.T.S.

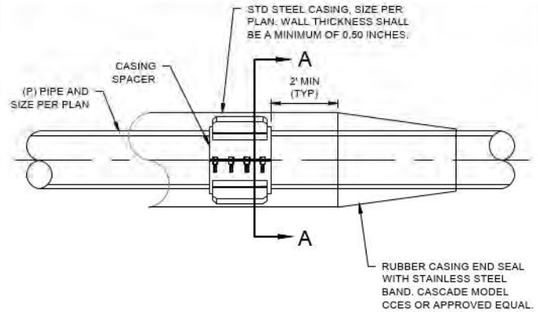


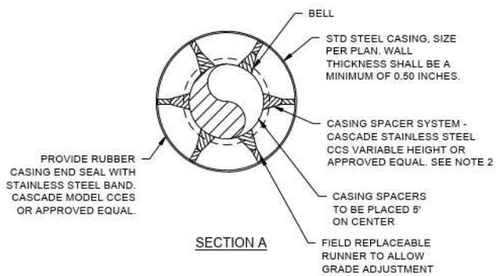
NOTES:

1. 10" MIN. FOR WYE LATERAL CONNECTION
2. FITTING OR LONG RADIUS BEND
3. SERVICE WYE WITH PIPE EXTENSION TO GRADE
4. WATERTIGHT END PLUG (EASILY REMOVABLE)
5. PLACE WELL COMPACTED BEDDING MATERIAL 18" UNDER WYE BRANCH, FITTING, AND UNSUPPORTED PIPE. WHEN BEDDING MATERIAL IS USED, PLACE ADDITIONAL MATERIAL TO TOP OF BEND, THE FULL WIDTH OF TRENCH.

8 CASING DETAIL

N.T.S.





SECTION A

NOTES:

1. INSTALL CASING SPACERS AND END SEALS PER MANUFACTURER SPECIFICATIONS.
2. SEWER PIPE SLOPE SHALL BE ACHIEVED INSIDE THE CASING WITH VARIABLE HEIGHT CASING SPACERS OR OTHER PRE-APPROVED CARRIER PIPE SHALL BE CONSTRUCTED TO SLOPE PER PLAN INSIDE CASING. CASING WILL NEED TO BE INSTALLED SLOPED TO ACHIEVE.

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SUGAR BOWL SEWER PHASE 2A

CIVIL DETAILS

NORDEN PLACER COUNTY CALIFORNIA

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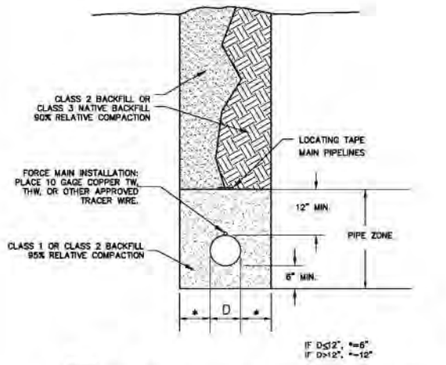
SCALES: HORIZONTAL	CD1
VERTICAL	SHEET: 8 of 11

90% IMPROVEMENT PLANS

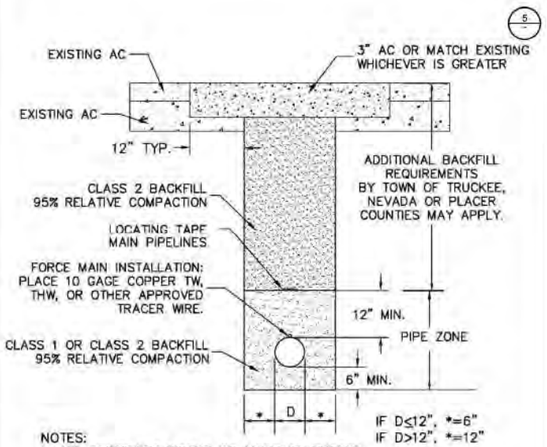
J:\77.02B\DWG\FINAL SHEETS\PHASE 2A\77.02B_PH2A_CD1.DWG



NOTES:
1. ALL SEWAGE WORKS TO MEET OR EXCEED TRUCKEE SANITARY DISTRICT CODE REQUIREMENTS.
2. D = PIPE DIAMETER.
3. TRENCH BRACING OR SHORING AS REQ'D BY THE "CONSTRUCTION SAFETY ORDER", STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS.

1 TYPICAL SEWER TRENCH (NON-TRAFFIC)

N.T.S.



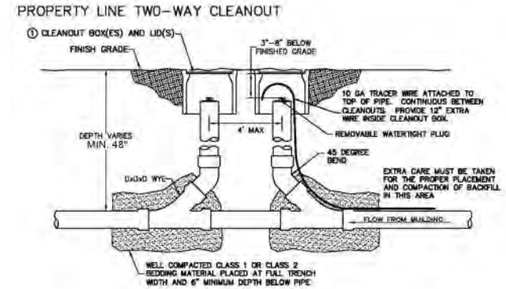
NOTES:
1. ALL SEWERAGE WORKS TO MEET OR EXCEED TRUCKEE SANITARY DISTRICT CODE REQUIREMENTS
2. D = PIPE DIAMETER
3. TRENCH BRACING OR SHORING AS REQ'D BY THE "CONSTRUCTION SAFETY ORDERS", STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS.
4. SAWCUT OR GRIND EX. PAVEMENT A MINIMUM OF ONE (1) FOOT BEYOND EACH SIDE OF THE LONGITUDINAL OR TRANSVERSE EXCAVATION.

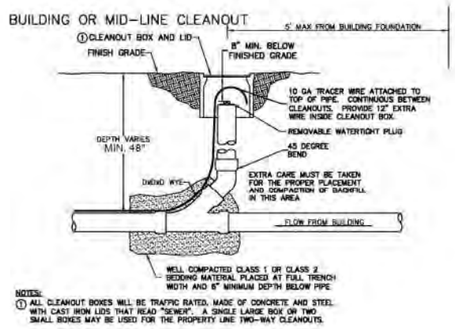
2 TYPICAL SEWER TRENCH (EXISTING ROAD)

N.T.S.

3 NOT USED

N.T.S.

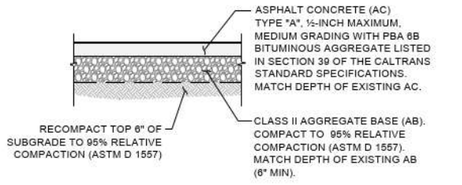




NOTES:
① ALL CLEANOUT BOXES WILL BE TRAFFIC RATED, MADE OF CONCRETE AND STEEL WITH CAST IRON LIDS THAT READ "SEWER". A SINGLE LARGE BOX OR TWO SMALL BOXES MAY BE USED FOR THE PROPERTY LINE TWO-WAY CLEANOUTS.

4 LATERAL CLEANOUT ASSEMBLY

N.T.S.

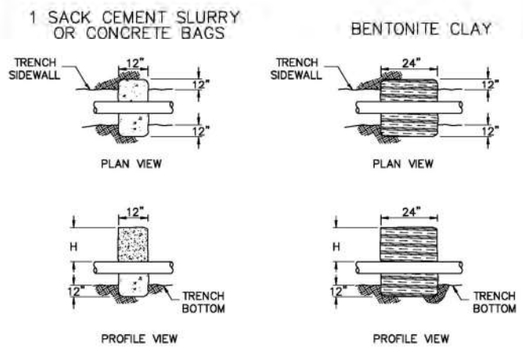


AC SECTION

NOTES:
1. SEAL ALL EXISTING AC AT SAWCUTS WITH ASPHALTIC EMULSION.
2. CONTRACTOR TO REFERENCE THE NV5 GEOTECHNICAL REPORT REQUIREMENTS FOR PAVING, BASE, AND SUBGRADE PREPARATION AND INSPECTION.

5 AC PAVEMENT TO MATCH EXISTING

N.T.S.



H = 12" ABOVE SEASONAL HIGH GROUNDWATER TABLE (36" MIN.)

6 TRENCH CUT-OFF BLOCKS

N.T.S.

7 NOT USED

N.T.S.

8 NOT USED

N.T.S.

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SUGAR BOWL SEWER PHASE 2A

CIVIL DETAILS

NORDEN PLACER COUNTY CALIFORNIA

0 1
BAR IS ONE INCH ON ORIGINAL DRAWING

PROJECT NUMBER:	77.02B
SURVEY BY:	AEC
SURVEY DATE:	AUGUST 2021
DESIGN BY:	CN/CH/JF
DRAFTING BY:	AV
CHECKED BY:	CA/WA
DATE:	JULY 6, 2023
SCALES: HORIZONTAL	CD2
VERTICAL	SHEET: 9 of 11

90% IMPROVEMENT PLANS

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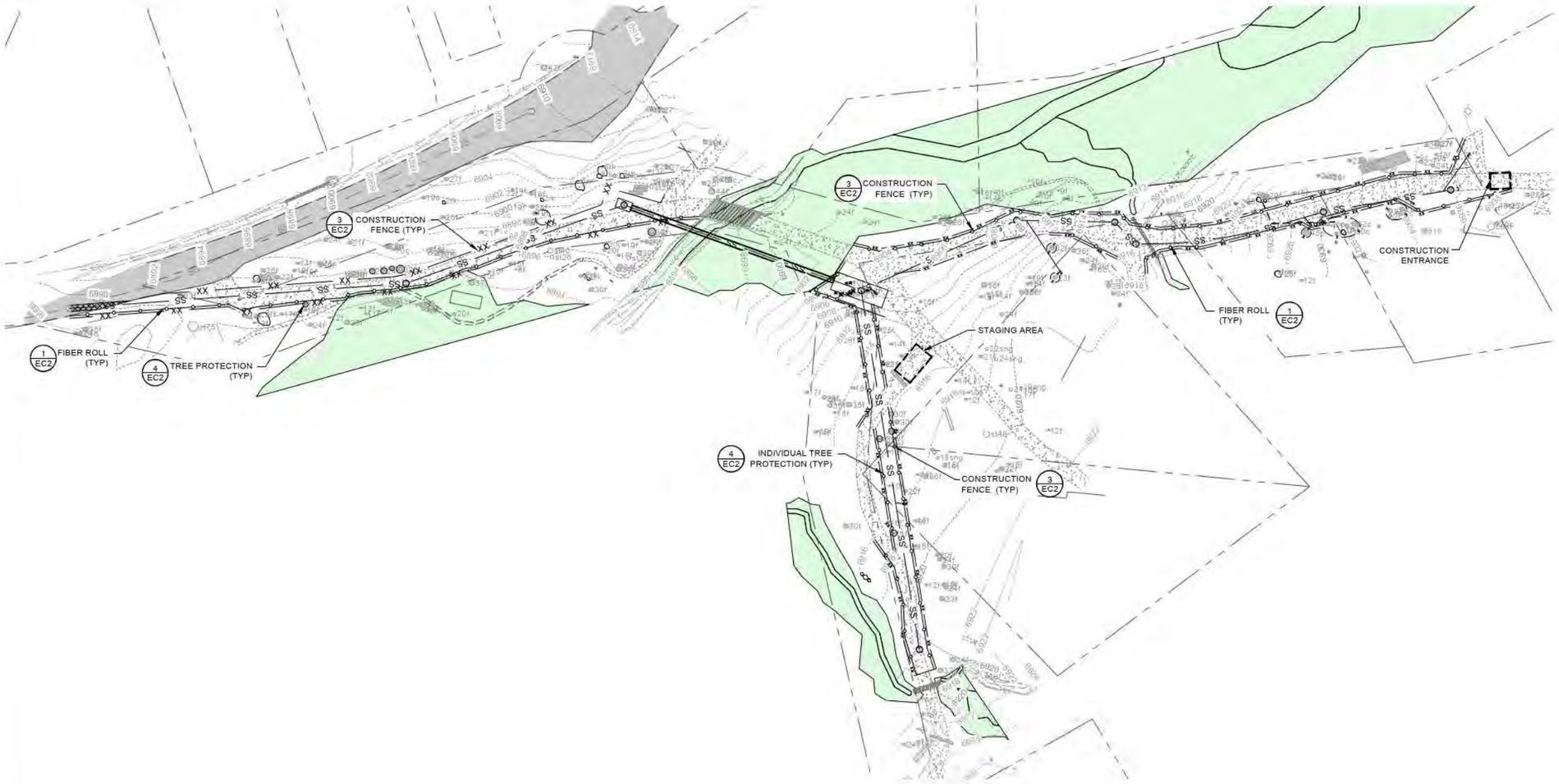

LEGEND

- GROUP TREE PROTECTION
- INDIVIDUAL TREE PROTECTION
- FIBER ROLL
- CONSTRUCTION FENCING
- CONSTRUCTION ENTRANCE
- STAGING AREA
- TREE REMOVAL

NOTES:
1. CONTRACTOR SHALL CONSULT WITH AN ARBORIST REGARDING TREES NOT MARKED FOR REMOVAL. THE ARBORIST SHALL DETERMINE IF TREES NOT MARKED FOR REMOVAL WILL REMAIN HEALTHY WHERE ADJACENT TO IMPROVEMENTS.

GRAPHIC SCALE
40 0 20 40
1 INCH = 40 FEET

REV	DATE	REVISIONS	BY

RECORD DRAWING

DATE ENGINEER INITIAL

REGISTERED PROFESSIONAL ENGINEER WALTER R. AUERBACH No. C34303 Exp. 9/30/23 CIVIL STATE OF CALIFORNIA

AUERBACH ENGINEERING CORP
CIVIL ENGINEERING • LAND SURVEYING • ENVIRONMENTAL PLANNING

DONNER SUMMIT PUBLIC UTILITY DISTRICT

SUGAR BOWL SEWER PHASE 2A

EROSION CONTROL PLAN

NORDEN PLACER COUNTY CALIFORNIA

0 1
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DATE:	JULY 6, 2023
SCALES 1" = 40' HORIZONTAL	EC1
VERTICAL	SHEET 10 of 11

90% IMPROVEMENT PLANS

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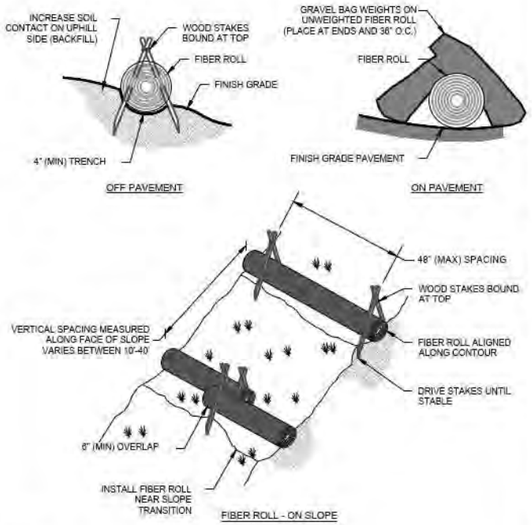
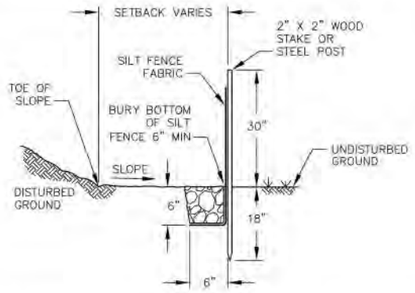


NOTES:
1. FIBER ROLL SHALL HAVE BIODEGRADABLE NETTING.

1 FIBER ROLL

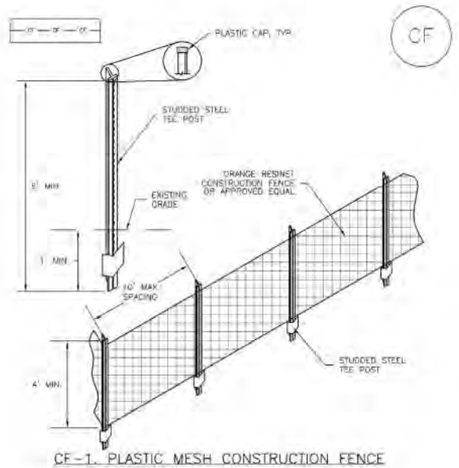
N.T.S.



NOTES:
1. DO NOT USE IN STREAMS, CHANNELS, DRAIN INLETS, OR ANYWHERE FLOW IS CONCENTRATED. DO NOT USE TO DIVERT FLOW.
2. THE MAXIMUM LENGTH OF SLOPE DRAINING TO ANY POINT ALONG THE SILT FENCE SHALL BE 200'.
1. SILT FENCE FABRIC SHALL BE WOVEN POLYPROPYLENE, WIDTH = 36" MIN, TENSILE STRENGTH = 100 LB MIN.
2. THE FOLLOWING CRITERIA IS RECOMMENDED FOR SELECTION OF THE FABRIC EQUIVALENT OPENING SIZE (EOS):
   A. IF 50% OR LESS OF THE SOIL, BY WEIGHT, WILL PASS THE US. STANDARD SIEVE NO. 200, SELECT THE EOS TO RETAIN 85% OF THE SOIL. THE EOS SHALL NOT BE FINER THAN EOS70.
   B. FOR ALL OTHER SOIL TYPES, THE EOS SHALL BE NO LARGER THAN THE OPENINGS IN THE US. STANDARD SIEVE NO. 70 EXCEPT WHERE DIRECT DISCHARGE TO A STREAM, LAKE, OR WETLAND WILL OCCUR, THEN THE EOS SHALL BE NO LARGER THAN STANDARD SIEVE NO. 100.
5. CONNECTION/JOINING OF SILT FENCES SHALL BE COMPLETED BY TIGHTLY OVERLAPPING THE ENDS OF THE ROLLS A MINIMUM OF 12" OR BY OVERLAPPING THE END POSTS AND SECURING THE TWO POSTS TOGETHER TIGHTLY WITH PLASTIC WIRE TIES AND/OR STEEL BAILING WIRE (9 GAUGE OR HEAVIER).
6. STAKES SHALL BE SPACED AT 8'—0" MAX AND SHALL BE POSITIONED ON DOWNSLOPE SIDE OF FENCE.
7. STAPLES USED TO FASTEN THE FENCE FABRIC TO THE STAKES SHALL BE NOT LESS THAN 1.25" LONG AND SHALL BE FABRICATED FROM 15 GAUGE OR HEAVIER WIRE. PLASTIC WIRE TIES AND/OR STEEL BAILING WIRE (9 GAUGE OR HEAVIER) MAY BE SUBSTITUTED. NOT LESS THAN 4 STAPLES/TIES SHALL BE USED ON EACH STAKE.
8. THE LAST 8' OF FENCE SHALL BE TURNED UPSLOPE.
9. SILT FENCES SHALL BE LEFT IN PLACE, REGULARLY INSPECTED, AND MAINTAINED UNTIL THE UPSLOPE AREA IS PERMANENTLY STABILIZED.
10. SEDIMENT SHALL BE REMOVED BEFORE THE SEDIMENT ACCUMULATION REACHES ONE—THIRD OF THE BARRIER HEIGHT.

2 SILT FENCE

N.T.S.



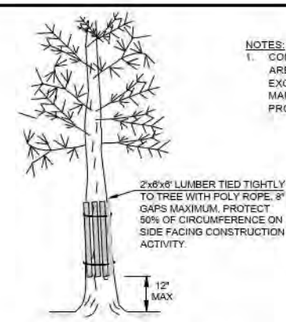
CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

3 CONSTRUCTION FENCING

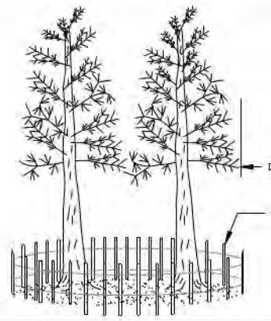
N.T.S.



NOTES:
1. CONTRACTOR SHALL CONSULT WITH AN ARBORIST WHEN TRENCHING AND EXCAVATING AROUND TREES IN ORDER TO MAINTAIN TREE HEALTH AND ROOT PROTECTION.

4 INDIVIDUAL TREE PROTECTION

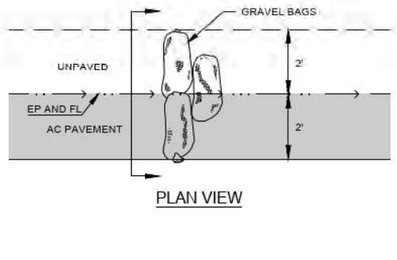
N.T.S.



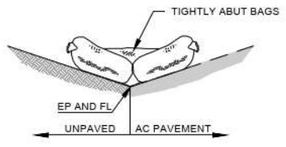
NOTES:
1. THE RADIUS FROM TREE TRUNK FOR VEGETATION PROTECTION OF GROUP TREES SHALL BE 1' RADIUS FOR EVERY 1" OF DBH UNLESS OTHERWISE APPROVED BY AN ARBORIST FOR EACH TREE TO BE PROTECTED.
2. CONTRACTOR SHALL CONSULT WITH AN ARBORIST WHEN TRENCHING AND EXCAVATING AROUND TREES IN ORDER TO MAINTAIN TREE HEALTH AND ROOT PROTECTION.

5 GROUP TREE PROTECTION

N.T.S.



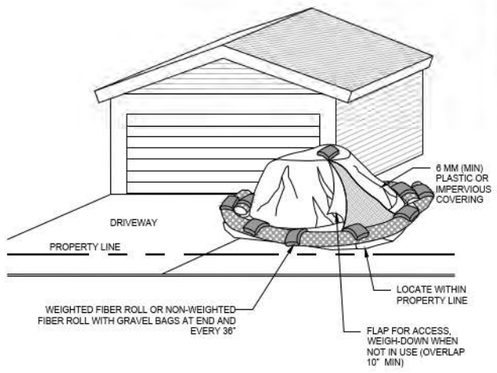
PLAN VIEW



SECTION

6 DRAINAGE SWALE CHECK DAM

N.T.S.



NOTES:
1. LOCATE STOCK AND/OR SPOIL PILES AWAY FROM DRAINAGE COURSES, DRAIN INLETS OR CONCENTRATED FLOWS OF STORMWATER.
2. ALL STOCK AND/OR SPOIL PILE PERIMETERS SHALL BE PROTECTED WITH TEMPORARY LINEAR SEDIMENT BARRIERS.
3. COVER ALL STOCK AND/OR SPOIL PILES WITH 6 MM PLASTIC, CANVAS TARP OR IMPERVIOUS COVER TO PREVENT WIND AND RAIN EROSION. EVENLY SPACE WEIGHTS (GRAVEL BAGS) ON COVER TO KEEP IN PLACE DURING WIND.
4. CONDUCT REGULAR INSPECTIONS OF STOCK AND/OR SPOIL PILES DURING AND AFTER RAIN EVENTS
5. VERY LARGE STOCK AND/OR SPOIL PILES MAY REQUIRE SILT FENCE IN LIEU OF FIBER ROLLS.
6. REMOVE SPOIL PILES FROM CONSTRUCTION SITE AS SOON AS POSSIBLE.
7. STOCK/SPOIL PILES MUST BE STORED WITHIN THE APPROVED STAGING AREA.

7 STOCKPILE MANAGEMENT

N.T.S.

REVEGETATION / RESTORATION NOTES:

1. PRIOR TO CONSTRUCTION REMOVE AND STOCKPILE TOPSOIL FROM AREA TO BE DISTURBED.
2. UPON COMPLETION OF SEWER LINE, APPLY WOOD CHIPS TO A DEPTH OF 2-INCHES OVER ENTIRE TREATMENT AREA.
3. DECOMPACT AND MIX WOOD CHIPS INTO THE SOIL TO A DEPTH OF 12-INCHES.
4. TOPSOIL SHALL BE REAPPLIED OVER THE THE DECOMPACTED AREA AND RAKED INTO THE TOP 2-INCHES OF TILLED MATERIAL.
5. FERTILIZER (BIOSOL OR APPROVED EQUAL) SHALL BE APPLIED AT A RATE OF 1,500 POUNDS PER ACRE.
6. SEED MIX SHALL BE APPLIED AND LIGHTLY RAKED INTO THE TOP 1/4-INCH OF SOIL.
7. PINE NEEDLE MULCH SHALL BE HAND APPLIED TO A DEPTH OF 2-INCHES.
8. ALL DISTURBED COMPACTED CLASS II AGGREGATE BASE SHALL BE REPAIRED AND OR REPLACED TO A MINIMUM DEPTH OF 6" AND COMPACTED TO 95% AND SHALL BLEND IN COLOR AND CHARACTER WITH THE WHOLE OF THE ACCESSIBLE PARKING PAD AND SHOULDER/DRIVE.

Species	Per/Ann	%
Amica Mollis	P	1*
Bachelor Button	A	5
Black-eyed Susan	P	5
Buckwheat Sulfur	P	6
Candytuft	A	3
Catchfly	A	2
Cinquefoil	P	1*
Columbine, red & blue (Sierra Source)	P	1*
Coreopsis Lanceleaf	P	4
Coreopsis Plains	A	4
Flax, blue	P	6
Flax, scarlet	A	3
Geum	P	2
Gilia, golden & scarlet	A	2
Indian Blanketflower	P/A	6
Iris missouriensis	P	6
Keckellia	P	2
Lomatium	P	3
Lupine Blend	P	5
Moneyflower Lewis	P	1
Penstemon Blend	P	6
Poppy, California	A	8
Poppy, Flanders	A	4
Primrose, yellow	P	1
Shasta Daisy	P	3
Showy Goldeneye	P	4
Snow in Summer	P	1
Wallflower	A	5
	* up to 1%	100

SUCCESS CRITERIA:
1. YEAR ONE: 30% VEGETATIVE COVER, 98% MULCH COVER, NO BARE AREAS GREATER THAN 9 SF.
2. MANAGEMENT RESPONSE: RESEED, REMULCH, OR FULL RETREATMENT AS NEEDED.
3. MONITORING SHALL BE DONE THE YEAR FOLLOWING TREATMENT. MONITORING SHALL BE DONE DURING THE HEIGHT OF THE GROWING SEASON WHEN GRASSES HAVE SET SEED. TYPICALLY, THIS WILL OCCUR IN JUNE-JULY DEPENDING ON SNOW MELT AND OTHER CLIMATE FACTORS.
4. MONITORING SHALL OCCUR ONCE. FOLLOWING MONITORING, IF SUCCESS CRITERIA ARE NOT MET, RETREATMENT PER 'MANAGEMENT RESPONSE' SECTION OF SUCCESS CRITERIA TABLE WILL BE REQUIRED AND ADDITIONAL MONITORING WILL BE REQUIRED THE FOLLOWING YEAR, UNTIL THE SUCCESS CRITERIA ARE MET.

8 REVEGETATION/RESTORATION NOTES

N.T.S.

EROSION CONTROL NOTES:

1. THE SITE SHALL BE WINTERIZED FROM OCTOBER 15TH TO MAY 1ST.
2. REMOVAL OF NATIVE VEGETATION SHALL BE MINIMIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITH A 3-INCH LAYER OF MULCH OR COVERED WITH AN EROSION CONTROL BLANKET.
3. TEMPORARY EROSION CONTROL MEASURES AND DETAILS AS SHOWN ON THIS PLAN ARE SUGGESTED MINIMUM METHODS OF CONTROLLING EROSION DURING CONSTRUCTION. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES AS DICTATED BY FIELD CONDITIONS TO CONTROL EROSION AND SEDIMENTATION.
4. IF INCLEMENT WEATHER IS FORECAST, CONTRACTOR SHALL TAKE NECESSARY STEPS TO PROTECT AREAS DISTURBED BY CONSTRUCTION FROM EROSION AND/OR SUBSEQUENT DISCHARGE OF EARTHEN MATERIALS FROM THE SITE.
5. ALL TEMPORARY EROSION CONTROL FEATURES SHALL BE INSPECTED WEEKLY AND PRIOR TO INCLEMENT WEATHER AND CORRECTIVE ACTION TAKEN AS NECESSARY TO INSURE PROPER FUNCTION.
6. ALL AREAS DISTURBED BY CONSTRUCTION OF OFFSITE UTILITIES, INCLUDING ROADWAY SURFACES, SHOULDERS AND OTHER AREAS WILL BE RESTORED TO THE SATISFACTION OF THE DPW.
7. ALL DISTURBED AREAS SHALL BE REVEGETATED OR OTHERWISE PROTECTED TO THE SATISFACTION OF THE ENGINEER. ONLY NATIVE BRUSH AND GRASS SPECIES SHALL BE USED FOR REVEGETATION. EXISTING AREAS OF DISTURBANCE WITHIN EACH PHASE SHALL BE RESTORED PURSUANT TO BEST MANAGEMENT PRACTICES (BMPs). THIS INCLUDES REVEGETATION OF EXISTING DIRT ROADS WHICH WILL NO LONGER BE UTILIZED FOR VEHICULAR ACCESS.
8. THE AREAS OF SOIL AND VEGETATION DISTURBANCE SHALL BE LIMITED TO THAT REQUIRED FOR CONSTRUCTION PURPOSES. EXCEPT WHERE REQUIRED FOR ACCESS, THERE SHALL BE NO DISTURBANCE IN AREAS TO BE LEFT IN A NATURAL STATE. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO AREAS TO BECOME PERMANENT CIRCULATION (E.G., ROADWAYS AND PARKING AREAS, ETC.) OR OTHER DESIGNATED ROUTES.
9. IN CONSTRUCTION AREAS TO BE REVEGETATED WHERE THE SUBSOIL LAYER HAS BEEN COMPACTED, RIPPING SHALL BE CONDUCTED DURING THE FINAL STAGES TO LOOSEN SOIL, ALLOWING FOR BETTER SUBSURFACE DRAINAGE AND ROOT PENETRATION. APPROPRIATE REVEGETATION PRACTICES SHALL BE EMPLOYED TO STABILIZE THESE AREAS IMMEDIATELY FOLLOWING CESSATION OF TRAVEL INTO THESE AREAS. TOPSOIL AND OTHER FILL MATERIAL TEMPORARILY STORED SHALL BE PROTECTED FROM EROSION BY COVERING WITH MULCH OR A COVER CROP, OR BY USE OF SILTATION BERMS OR OTHER MEANS APPROVED BY THE DPW.
10. DISTURBANCE CREATED BY CONSTRUCTION SHALL BE STABILIZED WITHIN 24 HOURS OF CESSATION OF TRAVEL INTO SUCH AREAS. IF WORK HAS CEASED IN AN AREA OR IF AN AREA IS FOUND TO BE SUBJECT TO POTENTIAL EROSION PROBLEMS ASSOCIATED WITH VEGETATION LOSS AND SOIL COMPACTION, EFFORTS TO STABILIZE SUCH AREAS SHALL BE INITIATED THE NEXT WORK DAY FOLLOWING THE INSPECTION. STABILIZATION OF THESE AREAS SHALL BE CARRIED OUT UTILIZING BMPs.
11. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DUST CONTROL PER SECTION 10 OF THE CALIFORNIA STANDARD SPECIFICATIONS. MEASURES SHALL INCLUDE BUT BE LIMITED TO THE FOLLOWING:
    A. CONDUCT MAJOR DUST-GENERATING ACTIVITIES WHEN WIND VELOCITIES ARE LOW.
    B. SPRINKLE WORK AREAS, CONSTRUCTION EQUIPMENT TRAVEL ROUTES, AND EQUIPMENT TO CONTROL DUST.
    C. PREVENT CONSTRUCTION VEHICLES FROM TRACKING MUD ONTO NEIGHBORING ROADS AND HIGHWAYS.
    D. RESTRICT ALL TRUCKS AND VEHICLES WITHIN CONSTRUCTION SITE TO A MAX. SPEED OF 15 MPH.

9 EROSION CONTROL NOTES

N.T.S.

REVISIONS

REV DATE	BY

RECORD DRAWING

DATE ENGINEER INITIAL

REGISTERED PROFESSIONAL ENGINEER — WALTER R. AUERBACH — No. C34303 — Exp. 9/30/23 — CIVIL — STATE OF CALIFORNIA

AUERBACH ENGINEERING CORP
CIVIL ENGINEERING • LAND SURVEYING • ENVIRONMENTAL PLANNING

DONNER SUMMIT PUBLIC UTILITY DISTRICT

SUGAR BOWL SEWER PHASE 2A

EROSION CONTROL DETAILS

NORDEN PLACER COUNTY CALIFORNIA

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90% IMPROVEMENT PLANS

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Appendix B

B - Mitigation Monitoring and Reporting Program

Mitigation, Monitoring, and Reporting Program

Sugar Bowl Sewer Extension Project

Initial Study and Mitigated Negative Declaration

SEPTEMBER 2023

Prepared for:

DONNER SUMMIT PUBLIC UTILITY DISTRICT
53823 Sherritt Lane
Soda Springs, California 95728
Contact: Steve Palmer, General Manager

Prepared by:

DUDEK

853 Lincoln Way, Suite 208
Auburn, California 95603
Contact: Markus Lang

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The California Environmental Quality Act (CEQA) requires that public agencies adopting a Mitigated Negative Declaration (MND) take affirmative steps to determine that approved mitigation measures and project design features are implemented subsequent to project approval. The lead or responsible agency must adopt a monitoring and reporting program for the mitigation measures incorporated into a project or included as conditions of approval. The program must be designed to ensure compliance with the MND during project implementation (Public Resources Code, Section 20181.6; CEQA Guidelines, Section 15074(d)).

This Mitigation, Monitoring, and Reporting Program (MMRP) will be used by the Donner Summit Public Utility District (DSPUD) to track compliance with adopted mitigation measures associated with the implementation of the proposed Sugar Bowl Sewer Extension Project (Project). The DSPUD, as Lead Agency pursuant to CEQA, will ensure that all design features and mitigation measures identified for the Project are carried out in accordance with the adopted MMRP.

This MMRP consists of a checklist (Table 1) that identifies the mitigation measures, organized by environmental impact category discussed in the MND. The table identifies the mitigation monitoring and reporting requirements, including the timing of verification (prior to, during, or after construction) and the party responsible for implementing the measure. Space is provided for sign-off following completion/implementation of the design feature or mitigation measure. The responsible parties listed in Table 1 include the DSPUD, and the contractor who will be hired by the DSPUD to construct the Project. These references in the table indicate the party responsible for implementing the respective measures, but the DSPUD will ultimately be responsible for verifying compliance with each measure listed in the table.

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Table 1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
Biological Resources								
MM-BIO-1	Prior to the initiation of construction, a qualified biologist familiar with western bumble bee behavior and life history should conduct surveys to determine the presence/absence of the species. Surveys should be conducted during the colony active period when the species is most likely to be detected above ground, between approximately April to September. Survey methods should follow CDFW guidance per the Survey Considerations for California Endangered species Act (CESA) Candidate Bumble Bee Species (June 6, 2023). Survey results, including negative findings, should be submitted to CDFW prior to ground-disturbing activities. The survey report should include the following information: • A description and map of the survey area, focusing on areas that could provide suitable habitat for western bumble bee; • Field survey conditions that should include the name(s) of qualified biologist(s) and their qualifications, date and time of the survey, survey duration, general weather conditions, survey goals, and species searched. • Map(s) showing the location of nests/colonies; and, • A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions where each nest/colony is found. A sufficient description of biological conditions, primarily impacted habitat, should include native plant composition (e.g., density, cover, and abundance) within the impacted habitat (e.g., species list separated by vegetation class, density, cover, and abundance of each species). If a qualified biologist determines western bumble bees are present, and if "take" or adverse impacts to this species cannot be avoided during project activities, the CDFW will be consulted to determine if a CESA Section 2080 Incidental Take Permit will be required and appropriate mitigation for any impacts.	X	X		Donner Summit Public Utilities District Qualified biologist			
MM-BIO-2	If avoidance of nesting birds is not feasible and construction would occur during the nesting season (February through August), the following measures shall be implemented to avoid or minimize impacts to nesting birds: • A qualified biologist shall conduct a pre-construction survey for nesting birds no more than 14 days prior to vegetation or structure removal or ground-disturbing activities conducted during the nesting season (February through August). The survey shall cover the limits of construction and suitable nesting habitat within 500 feet of the Project	X	X		Donner Summit Public Utilities District Qualified biologist			

Table 1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
	site for raptors and 100 feet for other nesting birds, as feasible and accessible. • If any active nests are observed during surveys, a qualified biologist shall establish a suitable avoidance buffer from the active nest. The buffer distance will typically range from 100 to 300 feet and shall be determined based on factors such as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests shall be established in the field with flagging, fencing, or other appropriate barriers and shall be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. • If vegetation removal activities are delayed, additional nest surveys shall be conducted such that no more than 7 days elapse between the prior survey and vegetation removal activities. • If an active nest is identified in or adjacent to the construction limits after construction has started, work in the vicinity of the nest shall be halted until the qualified biologist can provide appropriate avoidance and minimization measures to ensure that the nest is not disturbed by construction. Appropriate measures may include a no-disturbance buffer until the birds have fledged and/or full-time monitoring by a qualified biologist during construction activities conducted near the nest.							
MM-BIO-2	To avoid or minimize the potential for take of roosting bats, the following shall be implemented: • A qualified biologist shall conduct a focused bat roost assessment within the Project site. The assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the Project site, access routes, and 50 feet around these areas. The biologist shall survey these areas between 30 and 120 days prior to the start of work. Potential roosting features found during the survey shall be flagged or marked. • If bats are determined to be using on-site structures/resources for day roosts and such areas cannot be completely avoided, the individuals shall be safely evicted under the direction of the qualified bat biologist. If individuals cannot be safely evicted due to factors such as lack of alternative roosting sites, as determined by the qualified bat biologist, ground-disturbing activities within a	X	X		Donner Summit Public Utilities District Qualified biologist			

Table 1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
	specified distance of the roost (specified distance to be determined by the bat biologist, based on surroundings and vulnerability of roost site, etc.) shall be postponed or halted until conditions are suitable for safe eviction or the roost has vacated naturally.							
MM-BIO-3	To avoid or minimize impacts to sensitive natural communities, the following shall be implemented: • Prior to the initiation of ground-disturbing activities in riparian habitat (i.e., willow riparian corridor along PD-1 and ID-1, Lemmon's willow thickets), avoidance/exclusion fencing (e.g., mesh exclusion fencing, flagging, or similar) shall be installed between the riparian habitat and limits of disturbance to protect these features from inadvertent construction impacts. No construction, staging, or other ground disturbing activities should be permitted beyond the construction fence. A qualified wetland specialist should guide installation of the avoidance/exclusion fencing. In general, avoidance setbacks for riparian habitat is recommended at 50 feet.	X	X		Donner Summit Public Utilities District Qualified wetlands specialist Contractor (maintain fence)			
Cultural Resources								
MM-CUL-1	**Construction Exclusion Area for Overland Emigrant Trail.** An exclusionary Environmentally Sensitive Area (ESA) boundary area shall be established to ensure no construction disturbance occurs to remnant segments of the Overland Emigrant Trail. The ESA boundaries shall be shown on Project plans and delineated in the field with orange construction fencing or flagging. The Project archaeologist shall review and approve ESA depictions on Project plans and the Project contractor shall be responsible for establishing ESA boundaries in the field prior to construction activities.	X	X		Donner Summit Public Utilities District Qualified Archaeologist Contractor			
MM-CUL-2	**Unanticipated Discovery of Archaeological Resources.** In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under CEQA (14 CCR 15064.5(f); PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.		X		Donner Summit Public Utilities District			
Geology and Soils								

Table 1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
MM-GEO-1	To reduce runoff and erosion, and minimize the potential of sedimentation as a result of the Project, construction shall be carried out in compliance with a Water Pollution Control Plan and Erosion Control Plan providing site-specific measures for stormwater management and sediment and erosion control in accordance with the California Stormwater Quality Association's Stormwater Best Management Practices Handbook and Erosion and Sediment Control Guidelines for Developing Areas of the Sierra Foothills and Mountains or other erosion control reference determined to be appropriate by the Project Engineer. Specific minimum site stabilization and erosion control measures identified in Project plans shall include: • Installing erosion-control filter/silt fence and fiber wattles; • Containing and securely protecting soil stockpiles with fiber wattles and coverings; • Revegetating all disturbed areas with appropriate "weed-free" seed mixes and native species; • Applying mulch or an erosion control blanket to inactive disturbed areas.				Donner Summit Public Utilities District Contractor			
MM-GEO-2	Unanticipated Paleontological Resources. If fossils or fossil bearing deposits are discovered during ground-disturbing activities, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. Ground disturbance work shall cease until a qualified paleontologist determines whether the resource requires further study. The paleontologist shall document the discovery as needed (in accordance with Society of Vertebrate Paleontology standards [Society of Vertebrate Paleontology 1995]), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall consult with DSPUD to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If avoidance is not feasible, the paleontologist shall prepare an appropriate plan for mitigating the effect of construction activities on the discovery. All construction activity shall adhere to the recommendations in the mitigation plan.		X		Donner Summit Public Utilities District			
Hazards and Hazardous Material								
MM-HAZ-1	The following measures shall be implemented prior to and during construction and shall be incorporated into Project plans and specifications. • All equipment shall be inspected by the contractor for leaks prior to the start of construction and regularly throughout Project construction. Leaks from any equipment shall be contained and the leak remedied before the equipment is again used on the site.	X	X		Donner Summit Public Utilities District Contractor			

Table 1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
	• Best management practices for spill prevention shall be incorporated into Project plans and specifications and shall contain measures for secondary containment and safe handling procedures according to the Product Safety Data Sheets. • A spill kit shall be maintained on site throughout all construction activities and shall contain appropriate items to absorb, contain, neutralize, or remove hazardous materials stored or used in large quantities during construction. • Project plans and specifications shall identify construction staging areas and designated areas where equipment refueling, lubrication, and maintenance may occur. Areas designated for refueling, lubrication, and maintenance of equipment shall be approved by the District and shall be located away from any drainage or waterway. • In the event of any spill or release of any chemical or wastewater during construction, the contractor shall immediately notify the District. • Hazardous substances shall be handled in accordance with labeling, Product Safety Data Sheets and applicable codes.							
Tribal Cultural Resources								
MM-TCR-1	Unanticipated Tribal Cultural Resources. If potential Tribal Cultural Resources (TCRs) or human remains are discovered during construction activities, all work shall cease within 100 feet of the find (based on the apparent distribution of cultural resources). Examples of potential TCRs include midden soil, artifacts, chipped stone, exotic (non-native) rock, or unusual amounts of baked clay, shell, or bone. A qualified cultural resources specialist and Native American Representative from the traditionally and culturally affiliated Native American Tribe(s) will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. Culturally appropriate treatment that preserves or restores the cultural character and integrity of a TCR may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, construction monitoring of further construction activities by Tribal representatives of the traditionally and culturally affiliated Native American Tribe, and/or returning objects to a location within the Project area where they will not be subject to future impacts. If human remains are discovered during construction activities, the County Coroner and Native American Heritage Commission shall be contacted immediately. Upon determination by the County Coroner		X		Donner Summit Public Utilities District			

Table 1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Mitigation Measure	Timing of Verification			Responsible Party	Completed		Comments
		Pre Const	During Const	Post Const		Initials	Date	
	that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendant(s) who will work with the Project proponent to define appropriate treatment and disposition of the burials. Following a review of the find and consultation with appropriate experts, the authority to proceed may be accompanied by the addition of development requirements which provide for protection of the site and/or additional measures necessary to address the unique or sensitive nature of the site. The treatment recommendations made by the cultural resource specialist and the Native American Representative will be documented in the Project record. Any recommendations made by these experts that are not implemented, must be documented and explained in the Project record. Work in the area(s) of the cultural resource discovery may only proceed after authorization is granted by DSPUD following coordination with cultural resources experts and tribal representatives as appropriate.							
Wildfire								
MM-FIRE-1	To minimize the risk of accidental ignition of surrounding wildlands, plans and specifications shall include a Fire Prevention Plan. The construction contractor shall abide by the requirements of the Fire Prevention Plan throughout construction activities on the Project site. Measures may include but are not limited to fire suppression equipment requirements; guidelines for activities such as soldering, welding and blasting; designating a fire supervisor on site; rules for smoking onsite, requirements for parking and equipment and materials storage and storage areas; restrictions on certain activities during red flag conditions; and designating a fire patrol person as necessary during red flag conditions.	X	X		Donner Summit Public Utilities District			

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Appendix C

C – Air Quality Modeling Output

Sugar Bowl Ski Resort Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Sugar Bowl Ski Resort
Construction Start Date	7/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.00
Precipitation (days)	71.2
Location	39.30318992952539, -120.33790490870338
County	Placer-Mountain Counties
City	Unincorporated
Air District	Placer County APCD
Air Basin	Mountain Counties
TAZ	434
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.18

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	0.86	Mile	0.49	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.58	0.51	4.06	5.67	0.01	0.20	0.19	0.32	0.18	0.05	0.20	—	1,076	1,076	0.03	0.05	1.11	1,092
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.99	0.88	7.33	10.8	0.02	0.26	0.26	0.52	0.24	0.06	0.30	—	1,905	1,905	0.06	0.06	0.04	1,923
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.16	0.14	1.14	1.66	< 0.005	0.04	0.05	0.08	0.03	0.01	0.05	—	299	299	0.01	0.01	0.12	303
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.02	0.21	0.30	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	49.6	49.6	< 0.005	< 0.005	0.02	50.1

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	0.58	0.51	4.06	5.67	0.01	0.20	0.19	0.32	0.18	0.05	0.20	—	1,076	1,076	0.03	0.05	1.11	1,092
2025	0.53	0.45	3.72	5.57	0.01	0.11	0.17	0.28	0.10	0.04	0.15	—	990	990	0.03	0.03	0.92	1,002
2026	0.51	0.43	3.58	5.50	0.01	0.10	0.17	0.27	0.09	0.04	0.13	—	982	982	0.03	0.03	0.85	994
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
2025	0.53	0.47	3.89	5.50	0.01	0.18	0.17	0.28	0.16	0.04	0.18	—	981	981	0.03	0.03	0.02	992
2026	0.99	0.88	7.33	10.8	0.02	0.26	0.26	0.52	0.24	0.06	0.30	—	1,905	1,905	0.06	0.06	0.04	1,923
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.09	0.07	0.60	0.83	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	159	159	0.01	0.01	0.07	162
2025	0.16	0.14	1.14	1.66	< 0.005	0.04	0.05	0.08	0.03	0.01	0.05	—	299	299	0.01	0.01	0.12	302
2026	0.15	0.13	1.10	1.65	< 0.005	0.03	0.05	0.08	0.03	0.01	0.04	—	299	299	0.01	0.01	0.11	303
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.02	0.01	0.11	0.15	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	26.4	26.4	< 0.005	< 0.005	0.01	26.8
2025	0.03	0.02	0.21	0.30	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	49.5	49.5	< 0.005	< 0.005	0.02	50.1
2026	0.03	0.02	0.20	0.30	< 0.005	0.01	0.01	0.01	0.01	< 0.005	0.01	—	49.6	49.6	< 0.005	< 0.005	0.02	50.1

3. Construction Emissions Details

3.1. Phase 2A – West Village - Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.51	0.43	3.91	5.01	0.01	0.19	—	0.19	0.18	—	0.18	—	756	756	0.03	0.01	—	758
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.14	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.7	20.7	< 0.005	< 0.005	—	20.8
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.43	3.43	< 0.005	< 0.005	—	3.44
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.38	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	66.7	66.7	< 0.005	< 0.005	0.28	—
Vendor	0.01	0.01	0.13	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	< 0.005	0.01	0.30	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.72	1.72	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.33	3.33	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.3. Phase 2A – West Village - Striping (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.4	44.4	< 0.005	< 0.005	0.19	—
Vendor	0.01	0.01	0.13	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	< 0.005	0.01	0.30	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.26	1.26	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.66	3.66	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.5. Phase 1 – East Village - Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.40	3.73	4.99	0.01	0.17	—	0.17	0.16	—	0.16	—	756	756	0.03	0.01	—	758
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	22.8	22.8	< 0.005	< 0.005	—	22.9
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.77	3.77	< 0.005	< 0.005	—	3.78
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.7	60.7	< 0.005	< 0.005	0.01	—

Vendor	0.01	0.01	0.13	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	< 0.005	0.01	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.85	1.85	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.59	3.59	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.7. Phase 1 – East Village - Striping (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.21	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.4	40.4	< 0.005	< 0.005	< 0.005	—
Vendor	0.01	0.01	0.13	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	< 0.005	0.01	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.12	1.12	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.27	3.27	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.19	0.19	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.54	0.54	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.9. Phase 2B – West Village - Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.38	3.56	4.97	0.01	0.16	—	0.16	0.15	—	0.15	—	755	755	0.03	0.01	—	758
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.8	22.8	< 0.005	< 0.005	—	22.8
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.77	3.77	< 0.005	< 0.005	—	3.78
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.29	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	59.5	59.5	< 0.005	< 0.005	0.01	—

Vendor	0.01	0.01	0.13	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	117	117	< 0.005	0.01	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.81	1.81	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.52	3.52	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.11. Phase 2B – West Village - Striping (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.7	39.7	< 0.005	< 0.005	< 0.005	—
Vendor	0.01	0.01	0.13	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	117	117	< 0.005	0.01	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.20	3.20	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.13. Phase 1 – East Village - Trenching (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.47	0.39	3.48	4.77	0.01	0.11	—	0.11	0.10	—	0.10	—	676	676	0.03	0.01	—	679
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	0.39	3.48	4.77	0.01	0.11	—	0.11	0.10	—	0.10	—	676	676	0.03	0.01	—	679
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.94	1.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	183	183	0.01	< 0.005	—	184
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.4	30.4	< 0.005	< 0.005	—	30.5
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.70	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	131	131	0.01	< 0.005	0.51	—
Vendor	0.01	0.01	0.13	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	< 0.005	0.01	0.30	—
Hauling	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.5	63.5	< 0.005	0.01	0.11	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.63	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	121	121	< 0.005	< 0.005	0.01	—
Vendor	0.01	0.01	0.13	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	119	119	< 0.005	0.01	0.01	—
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	63.6	63.6	< 0.005	0.01	< 0.005	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.3	33.3	< 0.005	< 0.005	0.06	—
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.3	32.3	< 0.005	< 0.005	0.04	—
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.2	17.2	< 0.005	< 0.005	0.01	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.51	5.51	< 0.005	< 0.005	0.01	—
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.35	5.35	< 0.005	< 0.005	0.01	—
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.85	2.85	< 0.005	< 0.005	< 0.005	—

3.15. Phase 2A – West Village - Trenching (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.42	3.64	4.79	0.01	0.13	—	0.13	0.12	—	0.12	—	676	676	0.03	0.01	—	679
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.44	0.58	< 0.005	0.02	—	0.02	0.01	—	0.01	—	81.5	81.5	< 0.005	< 0.005	—	81.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.5	13.5	< 0.005	< 0.005	—	13.5
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.76	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	133	133	0.01	< 0.005	0.56	—
Vendor	0.01	0.01	0.13	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	< 0.005	0.01	0.30	—
Hauling	< 0.005	< 0.005	0.17	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	145	145	< 0.005	0.02	0.25	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.1	15.1	< 0.005	< 0.005	0.03	—
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.02	—
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.5	17.5	< 0.005	< 0.005	0.01	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.50	2.50	< 0.005	< 0.005	< 0.005	—
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.43	2.43	< 0.005	< 0.005	< 0.005	—
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.90	2.90	< 0.005	< 0.005	< 0.005	—

3.17. Phase 2B – West Village - Trenching (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.37	3.35	4.76	0.01	0.09	—	0.09	0.09	—	0.09	—	676	676	0.03	0.01	—	678

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	0.37	3.35	4.76	0.01	0.09	—	0.09	0.09	—	0.09	—	676	676	0.03	0.01	—	678
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.92	1.30	< 0.005	0.03	—	0.03	0.02	—	0.02	—	185	185	0.01	< 0.005	—	186
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	30.7	30.7	< 0.005	< 0.005	—	30.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.65	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.47	—
Vendor	0.01	0.01	0.12	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	117	117	< 0.005	0.01	0.28	—
Hauling	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.4	61.4	< 0.005	0.01	0.10	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.59	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	119	119	< 0.005	< 0.005	0.01	—
Vendor	0.01	0.01	0.13	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	117	117	< 0.005	0.01	0.01	—
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.5	61.5	< 0.005	0.01	< 0.005	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.0	33.0	< 0.005	< 0.005	0.06	—
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.0	32.0	< 0.005	< 0.005	0.03	—
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.8	16.8	< 0.005	< 0.005	0.01	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.46	5.46	< 0.005	< 0.005	0.01	—
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.30	5.30	< 0.005	< 0.005	0.01	—
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.79	2.79	< 0.005	< 0.005	< 0.005	—

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetatio	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Phase 2A – West Village - Paving	Linear, Paving	8/2/2024	8/15/2024	5.00	10.0	—
Phase 2A – West Village - Striping	Linear, Paving	8/16/2024	8/31/2024	5.00	11.0	—
Phase 1 – East Village - Paving	Linear, Paving	10/17/2025	10/31/2025	5.00	11.0	—
Phase 1 – East Village - Striping	Linear, Paving	11/1/2025	11/15/2025	5.00	10.0	—
Phase 2B – West Village - Paving	Linear, Paving	10/16/2026	10/31/2026	5.00	11.0	—
Phase 2B – West Village - Striping	Linear, Paving	11/1/2026	11/15/2026	5.00	10.0	—
Phase 1 – East Village - Trenching	Linear, Trenching	6/1/2025	10/16/2025	5.00	99.0	—
Phase 2A – West Village - Trenching	Linear, Trenching	6/1/2024	8/1/2024	5.00	44.0	—
Phase 2B – West Village - Trenching	Linear, Trenching	6/1/2026	10/16/2026	5.00	100	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Phase 2A – West Village - Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Phase 2A – West Village - Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Phase 2A – West Village - Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Phase 1 – East Village - Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Phase 1 – East Village - Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Phase 1 – East Village - Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Phase 2B – West Village - Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Phase 2B – West Village - Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Phase 2B – West Village - Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Phase 1 – East Village - Trenching	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 1 – East Village - Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Phase 1 – East Village - Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Phase 2A – West Village - Trenching	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 2A – West Village - Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Phase 2A – West Village - Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Phase 2B – West Village - Trenching	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73

Phase 2B – West Village - Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Phase 2B – West Village - Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Phase 2A – West Village - Trenching	—	—	—	—
Phase 2A – West Village - Trenching	Worker	12.0	14.3	LDA,LDT1,LDT2
Phase 2A – West Village - Trenching	Vendor	4.00	8.80	HHDT,MHDT
Phase 2A – West Village - Trenching	Hauling	2.08	20.0	HHDT
Phase 2A – West Village - Trenching	Onsite truck	0.00	0.00	HHDT
Phase 2A – West Village - Paving	—	—	—	—
Phase 2A – West Village - Paving	Worker	6.00	14.3	LDA,LDT1,LDT2
Phase 2A – West Village - Paving	Vendor	4.00	8.80	HHDT,MHDT
Phase 2A – West Village - Paving	Hauling	0.00	20.0	HHDT
Phase 2A – West Village - Paving	Onsite truck	0.00	0.00	HHDT
Phase 2A – West Village - Striping	—	—	—	—
Phase 2A – West Village - Striping	Worker	4.00	14.3	LDA,LDT1,LDT2
Phase 2A – West Village - Striping	Vendor	4.00	8.80	HHDT,MHDT
Phase 2A – West Village - Striping	Hauling	0.00	20.0	HHDT
Phase 2A – West Village - Striping	Onsite truck	0.00	0.00	HHDT
Phase 1 – East Village - Trenching	—	—	—	—
Phase 1 – East Village - Trenching	Worker	12.0	14.3	LDA,LDT1,LDT2
Phase 1 – East Village - Trenching	Vendor	4.00	8.80	HHDT,MHDT
Phase 1 – East Village - Trenching	Hauling	0.93	20.0	HHDT

Phase 1 – East Village - Trenching	Onsite truck	0.00	0.00	HHDT
Phase 1 – East Village - Paving	—	—	—	—
Phase 1 – East Village - Paving	Worker	6.00	14.3	LDA,LDT1,LDT2
Phase 1 – East Village - Paving	Vendor	4.00	8.80	HHDT,MHDT
Phase 1 – East Village - Paving	Hauling	0.00	20.0	HHDT
Phase 1 – East Village - Paving	Onsite truck	0.00	0.00	HHDT
Phase 1 – East Village - Striping	—	—	—	—
Phase 1 – East Village - Striping	Worker	4.00	14.3	LDA,LDT1,LDT2
Phase 1 – East Village - Striping	Vendor	4.00	8.80	HHDT,MHDT
Phase 1 – East Village - Striping	Hauling	0.00	20.0	HHDT
Phase 1 – East Village - Striping	Onsite truck	0.00	0.00	HHDT
Phase 2B – West Village - Paving	—	—	—	—
Phase 2B – West Village - Paving	Worker	6.00	14.3	LDA,LDT1,LDT2
Phase 2B – West Village - Paving	Vendor	4.00	8.80	HHDT,MHDT
Phase 2B – West Village - Paving	Hauling	0.00	20.0	HHDT
Phase 2B – West Village - Paving	Onsite truck	0.00	0.00	HHDT
Phase 2B – West Village - Striping	—	—	—	—
Phase 2B – West Village - Striping	Worker	4.00	14.3	LDA,LDT1,LDT2
Phase 2B – West Village - Striping	Vendor	4.00	8.80	HHDT,MHDT
Phase 2B – West Village - Striping	Hauling	0.00	20.0	HHDT
Phase 2B – West Village - Striping	Onsite truck	0.00	0.00	HHDT
Phase 2B – West Village - Trenching	—	—	—	—
Phase 2B – West Village - Trenching	Worker	12.0	14.3	LDA,LDT1,LDT2
Phase 2B – West Village - Trenching	Vendor	4.00	8.80	HHDT,MHDT
Phase 2B – West Village - Trenching	Hauling	0.92	20.0	HHDT
Phase 2B – West Village - Trenching	Onsite truck	0.00	0.00	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Phase 2A – West Village - Paving	0.00	0.00	0.00	0.00	100
Phase 1 – East Village - Paving	0.00	0.00	0.00	0.00	100
Phase 2B – West Village - Paving	0.00	0.00	0.00	0.00	100

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Phase 1 – East Village - Trenching	367	367	1.00	0.00	—
Phase 2A – West Village - Trenching	367	367	1.00	0.00	—
Phase 2B – West Village - Trenching	367	367	1.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	0.49	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.9	annual days of extreme heat
Extreme Precipitation	26.7	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	26.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Exposure Indicators	—
AQ-Ozone	64.9
AQ-PM	5.03
AQ-DPM	4.37
Drinking Water	37.7
Lead Risk Housing	12.0
Pesticides	0.00
Toxic Releases	27.2
Traffic	31.0
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	11.0
Haz Waste Facilities/Generators	10.5
Impaired Water Bodies	72.2
Solid Waste	89.8
Sensitive Population	—
Asthma	6.69
Cardio-vascular	4.00
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	14.2
Housing	64.5
Linguistic	6.27
Poverty	29.5
Unemployment	7.77

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	73.6173489
Employed	91.91582189
Median HI	39.08635955
Education	—
Bachelor's or higher	76.90234826
High school enrollment	100
Preschool enrollment	75.81162582
Transportation	—
Auto Access	92.6344155
Active commuting	77.69793404
Social	—
2-parent households	96.72783267
Voting	84.43474913
Neighborhood	—
Alcohol availability	85.94892853
Park access	53.56088798
Retail density	4.683690491
Supermarket access	11.33068138
Tree canopy	97.47209034
Housing	—
Homeownership	68.76684204
Housing habitability	77.22314898
Low-inc homeowner severe housing cost burden	7.031951752
Low-inc renter severe housing cost burden	96.86898499
Uncrowded housing	73.51469267

Health Outcomes	—
Insured adults	66.05928397
Arthritis	0.0
Asthma ER Admissions	99.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	72.2
Cognitively Disabled	90.0
Physically Disabled	73.0
Heart Attack ER Admissions	99.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	93.8
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	75.3
SLR Inundation Area	0.0

Children	97.4
Elderly	13.9
English Speaking	83.5
Foreign-born	2.1
Outdoor Workers	24.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	95.6
Traffic Density	19.6
Traffic Access	23.0
Other Indices	—
Hardship	19.5
Other Decision Support	—
2016 Voting	87.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	3.00
Healthy Places Index Score for Project Location (b)	87.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Project construction is anticipated to take approximately 24 months and would occur in three (3) phases. Construction on Phase 2A – West Village would commence in the summer of 2024 and require approximately three (3) months to complete. Phase 1 – East Village would begin in June of 2025 and be completed by November of 2025. Phase 2B – West Village would begin in June of 2026 and would be completed no later than November of 2026.
Construction: Off-Road Equipment	Based on similar projects.
Construction: Dust From Material Movement	4,310 cubic yards of excavated soil with 1,100 cubic yards of excavated soil materials would be exported. 1,100 cubic yards of engineered soil materials to be imported to the site for bedding.
Construction: Trips and VMT	Updated based on similar projects.
Construction: Architectural Coatings	Per PCAPCD Rule 218 - Architectural Coatings.

Appendix D

D - Biological Resources Assessment

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October 4, 2021 13449

Steven Palmer, PE, General Manager
Donner Summit PUD
53823 Sherritt Lane
PO Box 610
Soda Springs, California 95728

Subject: ***Biological Resources Assessment for the Sugar Bowl Sewer Collection System Project, Placer County, California***

Dear Mr. Palmer:

Dudek has prepared this Biological Resources Assessment (BRA) for the Sewer Collection System Project (project) located at 629 Sugar Bowl Road in Placer County, California (Figure 1, Project Location). The purpose of the BRA is to identify and characterize existing onsite biological resources, with particular focus on the potential of the project site to support special-status plant and wildlife species and other sensitive resources, such as wetlands and other aquatic resources potentially under the regulatory jurisdiction of state and/or federal resource agencies. This assessment also identifies potential constraints to project implementation posed by the presence or potential presence of sensitive resources, as well as recommendations to minimize and/or avoid impacts to these resources.

1 Project Location

The approximately 15-acre project site (629 Sugar Bowl Road) is located at Sugar Bowl Ski Resort, approximately 9 miles west of the town of Truckee in Nevada County, California (Figure 1, Project Location). Specifically, the project site is located in Township 17N, Range 14E, and Sections 20, 21, 25, 28, 29, and 36 of the "Norden, CA" U.S. Geological Survey 7.5-minute quadrangle (Figure 2, Project Site). The approximate center of the project site corresponds to 39°18'09.6" north latitude and 120°20'20.8" west longitude.

2 Project Description

Donner Summit Public Utility District (DSPUD) is proposing to develop a sewer collection system servicing private residences within the Sugar Bowl Ski Resort in eastern Placer County, California. The sewer collection system would replace individual on-site wastewater treatment systems that currently serve each residential parcel. Most or all of the work, including staging areas, are planned to occur within existing roads and areas disturbed by previous residential and infrastructure development. The utility crossing of the South Yuba River is anticipated to be achieved by jack and bore/horizontal drilling to avoid surface disturbance within the stream channel.

3 Methods

3.1 Preliminary Site Evaluation

Prior to conducting the survey, Dudek performed a review of pertinent online and literature sources. This consisted of a review of the following online databases and reports: the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) Trust Resource Report, California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants(USFWS 2020a; CDFW 2020b; CNPS 2020a). The IPaC report was based on a query for the project site. The CNDDB and CNPS databases were queried for the nine USGS 7.5-minute quadrangles containing and immediately surrounding the project site (Norden, Webber Park, Independence Lake, Hobart Mills, Truckee, Tahoe City, Royal Gorge, Granite Chief, and Soda Springs). Following a review of these resources, Dudek biologists determined the potential for special-status plant and wildlife species to occur onsite. Determinations were based on a review of habitat types, soils, and elevation preferences, as well as the known geographic range and nearest occurrence records of each species (Attachment A, Special-Status Plant Species Potential to Occur, and Attachment B, Special-Status Wildlife Species Potential to Occur). No protocol-level surveys for special-status species were conducted.

For this report, special-status plant and wildlife species are defined as those that are (1) listed, proposed for listing, or candidates for listing as Threatened or Endangered under the federal Endangered Species Act; (2) listed or candidates for listing as Threatened or Endangered under the California Endangered Species Act; (3) a state fully-protected species; (4) a CDFW Species of Special Concern; or (5) a species listed on the CNPS Inventory of Rare and Endangered Plants with a California Rare Plant Rank (CRPR) of 1 or 2.

3.2 Field Survey

Dudek biologist Laura Burris performed field surveys of the project site on July 14 and August 20, 2021. The surveys were conducted on foot to visually cover the entire project site. Field notes, an aerial photograph with an overlay of the property boundary and project boundary, and a Trimble Geo 7X Global Positioning System (GPS) unit were used to map vegetation communities and record any sensitive biological resources within the project site. Representative site photographs of the project site are included in Attachment C.

All plant species encountered were identified to the lowest taxonomic level needed to determine rarity. Those species that could not be immediately identified were brought into the laboratory for further investigation. Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2021), and common names follow the U.S. Department of Agriculture Natural Resources Conservation Service PLANTS Database (USDA 2021a). Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly into a field notebook. The site was also scanned with binoculars to aid in the identification of wildlife. A list of plant and wildlife species identified during the survey is included in Attachment D.

3.3 Aquatic Resources Delineation

Concurrent with the fieldwork on July 14 and August 20, 2021, Ms. Burris performed a preliminary field delineation to identify and map the extent of aquatic resources within or adjacent to the project site that are potentially subject to regulation under federal Clean Water Act (CWA) Sections 401 and 404, California Fish and Game Code Section 1600, or the provisions of the Porter-Cologne Water Quality Act. Results of the aquatic resources delineation are incorporated into this assessment.

4 Results

4.1 Site Description

The project site is in the Sierra Nevada Mountain Range. Elevations on the project site range from approximately 6,895 feet above mean sea level (AMSL) in the center of the site to 7,068 feet AMSL in the western portion of the site. The project site is surrounded by recreational facilities, residential development, and open space generally composed of evergreen forests. The project site is located in a semi-arid climate where annual temperatures range from 15.9°F to 77.1°F, and the average annual precipitation is 65.21 inches, most of which falls as snow at the elevation of the project site; snowpack often exceeds 10 feet on the project site during winter. On average, the months with the highest precipitation are December and January, and July has the least precipitation (WRCC 2021).

4.2 Soils

There are three soil mapping units mapped on the project site: Meiss-Waca-Cryumpbrepts complex 30-75% slopes, Tallac-Cryumpbrepts complex 2-30% slopes, and Tinker-rock outcrop, metamorphic-Cryumpbrepts complex 2-30% slopes (USDA 2020b) (Figure 3, Project Soils). Both the primary and secondary soil series are described below. No boulder fields or outcrops were observed on the project site during the July or August 2021 field surveys.

Primary Soil Series

Meiss-Waca-Cryumpbrepts, wet complex, 30-75% slopes: Meiss series soil consists of shallow, somewhat excessively drained soils with moderately rapid permeability above the bedrock. Meiss soils are found on mountains and formed in material weathered from andesitic tuff breccia from the Mehrten formation.

Soil in the Waca series consists of consists of moderately deep, well-drained soils with moderately rapid permeability above the paralithic contact. Waca soils are found on gently sloping to very steep mountains and formed in material weathered from andesitic tuff breccia

Cryumpbrepts complex is a secondary soil series within this unit. This map unit occurs along Mule Ears Drive in the eastern portion of the parcel.

Tallac-Cryumpbrepts, wet complex 2-30% slopes: The Tallac series consists of deep and very deep moderately well and well drained soils with moderately rapid permeability above the cemented layer and slow within. Tallac soils are found on nearly level to very steep lateral and terminal glacial moraines and outwash plains and formed in

material weathered from glacial deposits. This map unit occurs throughout the majority of the central portion of the parcel. Cryumpbrepts complex is a secondary soil series within this unit.

Tinker-Rock Outcrop, Metamorphic-Cryumpbrepts, wet complex, 2-30% slopes: Tinker series consists of moderately deep, well and moderately well drained soils with moderately rapid permeability above the cemented pan and very slow within the pan. Tinker soils are found on mountains and formed in glacial deposits derived from mixed sources including the Mehrten Formation.

Cryumpbrepts complex is a secondary soil series within this unit. This soil map unit occurs along Paintbrush Hill Court and Corn Lily Lane on the southwestern portion of the parcel.

Secondary Soil Series

Cryumpbrepts Complex: This secondary series is characterized by moderately deep to very deep, well drained to poorly drained soils formed in glacial outwash or alluvium. These soils are on glacial moraines, outwash terraces, and alluvial fans.

4.3 Hydrology

The project site occurs within the Upper South Yuba River watershed, which drains approximately 126,647 acres of land in Placer County (Hydrological Unit Code 1802012506) (CDFW 2020b). According to the USFWS National Wetlands Inventory, there are four aquatic resources mapped on the project site: riverine (R3UBH), freshwater pond (PUBHh), freshwater emergent wetland (PEM1A), and freshwater forested/shrub wetland (PSSA) (USFWS 2020b) (Figure 4, Hydrologic Setting). The National Wetlands Inventory dataset is based on coarse aerial mapping and is unlikely to include features that are not visible in aerial photography, such as small wetlands or wetlands hidden by tree canopy.

Surface run-off on the project site is generally by sheet flow and roadside drainages downgradient to a perennial tributary of the South Yuba River that flows south to north through the middle of the project site. Water is channeled to the perennial waterway through several roadside ditches, ephemeral drainages and one intermittent drainage. These features are discussed further in Section 4.5, below.

4.4 Vegetation Communities and Land Cover Types

Land cover on the project site consists of terrestrial non-vegetative land covers and natural vegetation communities. The vegetation communities and land covers have been adapted from the Manual of California Vegetation, Online Edition (CNPS 2020b). Two vegetation communities and three land cover types were documented on the project site (Figure 5, Vegetation Communities and Land Cover Types). Table 1 provides a breakdown of the cover types present, and a detailed discussion of cover types on the project site is included below.

Table 1. Vegetation Communities and Land Cover Types on the Project Site

Abbreviation	Vegetation Community/ Land Cover Type	Vegetation Alliance and CDFW Alliance Code	Rarity Rank	Acreage
Vegetation Communities				
AM-PCM	Red Fir Forest and Woodland	Red fir (*Abies magnifica*) Forest and Woodland Alliance; 88.200.25	S4, G5	9.79
SALM	Lemmon's Willow Thickets	Lemmon's willow (*Salix lemmonii*) Thickets; 61.113.00	S3, G4	0.11
Other Land Over Types				
DH	Disturbed Habitat	NA	NA, NA	1.89
DEV	Urban/Developed	NA	NA, NA	1.99
DRD	Dirt Road	NA	NA, NA	1.39
			Total:	15.17

Notes: NA: not applicable. State (S) ranks of 1-3 are considered highly imperiled by CDFW (2020a). Global (G) ranks are as follows: GX – eliminated; GH – presumed eliminated; G1 – critically imperiled; G2 – imperiled; G3 – vulnerable; G4 – apparently secure; G5 – secure.

Red Fir Forest. Red fir forest is the dominant vegetation community within the project area. This vegetation community has an intermittent to continuous tree canopy dominated by red fir (*Abies magnifica*), white fir (*A. concolor*), lodgepole pine (*Pinus contorta*), and Jeffrey pine (*P. jeffreyi*). The understory is variable and generally open and dry on slopes. Where this vegetation community intersects with drainages, additional trees and shrubs, such as creek alder (*Alnus incana*) and dogwood (*Cornus sericea*), become more prevalent in the understory.

Lemmon's Willow Thickets. Riparian scrub is present in the northeast corner of the project site. This vegetation community is located adjacent to intermittent and perennial drainages within the project area (discussed in Section 4.5 below). The tree and shrub layers are intermittent to continuous and include Lemmon's willow (*Salix lemmonii*) and arroyo willow (*S. lasiolepis*). The herbaceous layer is largely absent from this vegetation community as the willows create a densely shaded canopy through which light does not pass. This vegetation community is considered a sensitive natural community.

Disturbed Habitat. This land cover type includes areas that have been heavily disturbed or completely altered by human activities and contain little to no vegetation. Such areas on the project site include gravel lots and other developed and disturbed areas associated with residential and recreation land uses with the exception of buildings described in the Urban/Developed land cover, described below.

Urban/Developed. This land cover type includes areas devoted to the community of Sugar Bowl, including paved roadways, houses, ski and recreational facilities, and other buildings. These areas have been altered completely from the natural condition, contain ornamental plantings associated with buildings, and do not typically provide habitat for special-status species unless they are adapted to human habitation.

Dirt Road. This land cover type includes areas that have been graded and covered in aggregates or left dirt for the use of vehicular access. These areas do not typically contain vegetation and do not provide habitat for special-status species.

4.5 Jurisdictional Aquatic Resources

During the field delineation, Dudek mapped approximately 0.39 acre of aquatic resources within the project site that are anticipated to meet the criteria to be considered jurisdictional aquatic resources under federal and/or state jurisdiction (Figure 6, Aquatic Resources Delineation). These resources are listed in Table 2 below and described in more detail further below. Findings with regard to federal jurisdiction are preliminary until verified by the Sacramento District of the USACE.

Table 2. Aquatic Resources on the Project Site

Feature Type	Anticipated Jurisdiction	Acreage	Linear Feet
Wetlands			
Riparian Woodland*	CDFW	0.11	--
Wet Meadow	USACE/RWQCB/CDFW	0.01	--
	Subtotal:	***0.12***	**–**
Non-Wetland Waters			
Perennial Drainage	USACE/RWQCB/CDFW	0.21	622.79
Intermittent Drainage	USACE/RWQCB/CDFW	0.03	125.83
Ephemeral Drainage	USACE/RWQCB/CDFW	0.01+	287.19
Roadside Drainage	RWQCB/CDFW	0.01	240.66
	Subtotal:	***0.26***	***1,276.48***
	Total:	**0.39**	***1,276.48***

***** Riparian woodland corresponds to Lemmon's willow thickets described in Section 4.4
Notes: USACE: United State Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife.

4.5.1 Wetlands

Wet Meadow. There is one wet meadow (WM-1) associated with an ephemeral drainage in the north-central portion of the project site (refer to Figure 6). This feature is located in a low-lying area bounded by two branches of the braided ephemeral drainage (ED-2). WM-1 is characterized by annual and perennial species that prefer open canopy and wetter soil conditions such as corn lily (*Veratrum californicum*), fireweed (*Chamerion angustifolium*), tall annual willowherb (*Epilobium brachycarpum*), sedges (*Carex heteroneura* and *C. rossii*), and Idaho bentgrass (*Agrostis idahoensis*). There was no standing water or saturated soils observed during the July 14 or August 20, 2021 field surveys.

4.5.2 Non-Wetland Waters

Perennial Drainage. One perennial drainage (PD-1) conveys water from south to north through the center of the project site. This drainage ranges in size from 5 to 10 feet wide and exhibits a moderate to sharp break in slope, sediment sorting, and change in vegetation at the OHWM. The bed of the drainage contains a mixture of sand, gravel, and some boulders. Vegetation on the banks of the drainage consists of corn lily, Brewer's angelic (*Angelica breweri*), and common knotweed (*Persicaria lapathifolia*). There is a narrow riparian canopy associated with this drainage consisting primarily of mountain alder (*Alnus incana*) and red osier dogwood (*Cornus sericea*). Flowing water approximately 4 inches in depth was present in the drainage during the July 14 and August 20, 2021 field surveys.

Intermittent Drainage. One intermittent drainage (ID-1) that originates west and offsite drains water east to PD-1. This drainage has direct surface connection to PD-1 through a metal culvert under a dirt road in the center of the project site. This drainage is approximately 2-feet-wide on average and exhibits a moderate break in slope and sediment sorting at the OHWM. The bed of the drainage contains large cobble and gravel. There is a thick riparian vegetation community associated with this drainage that is consistent with Lemmon's willow thickets, described in Section 4.4, above. Flowing water was present in the drainage during the July 14 and August 20, 2021 field surveys.

Ephemeral Drainage. There are two ephemeral drainages present in the project site, one in the eastern portion (ED-1) and one in the northern portion (ED-2). ED-1 appears to drain water from east to west, downslope toward PD-1 although connectivity seems interrupted between the two drainages due to residential development. ED-2 drains water from southwest to northeast to PD-1. Both drainages averaged 1-foot wide at the OHWM and contained moderate break in slope and change in vegetation. ED-2 contained riparian vegetation along the banks consisting of red osier dogwood. There was no standing water present in ED-2, but there were saturated soils, during the July 14 and August 20, 2021 field surveys.

Roadside Drainage. Three roadside drainages (RD-1 through -3) occur in the western portion of the project site. These drainages parallel the roadways and were constructed with the purpose of channeling rainwater and snowmelt runoff away from road surfaces and into natural drainages. The roadside drainages drain in an easterly direction toward ID-1. None of these features contained water at the time of the July 14 or August 20, 2021 field surveys.

4.6 Plant and Wildlife Species Observed

A total of 92 species of native or naturalized plants, 80 native (87%) and 12 non-native (13%), was recorded on the site (see Attachment D). Dudek's biologist directly observed, or documented via scat, sign, or call, 12 wildlife species on the project site during the field surveys. Observed wildlife primarily included common bird species such as northern flicker (*Colaptes auratus*), western tanager (*Piranga ludoviciana*), and common raven (*Corvus corax*). A list of the plant and wildlife species identified on the project site during the field survey is included in Attachment D.

4.7 Special-Status Plant Species

In general, the project site is disturbed or developed with paved and dirt roads, homes, and recreation facilities associated with Sugar Bowl Ski Resort. Habitat adjacent to these developed areas retains remnants of natural habitat, primarily along the perennial drainage that runs through the center of the project site. The site lacks unique habitat features required by many special-status plants, such as exposed granite, tallus, rocky soil substrates or seeps. Results of USFWS, CNDDB, and CNPS database searches revealed 46 special-status plant species that are known to occur in the project site region (see Attachment A). Of these, 29 special-status plant species were removed from further consideration due to lack of suitable habitat within or adjacent to the project site due to the site being outside of the species' known geographic or elevation range and/or the species not being identified during the field survey (for species that could be evident and identifiable at the time of the survey). The remaining 17 species, Galena Creek rockcress (*Arabis rigidissima* var. *demote*), threetip sagebrush (*Artemisia tripartita* ssp. *tripartita*), upswetpt moonwort (*Botrychium ascendens*), scalloped moonwort (*Botrychium crenulatum*), common moonwort (*Botrychium lunaria*), Mingan moonwort (*Botrychium minganense*), Davy's sedge (*Carex davyi*), mud sedge (*Carex limosa)*, subalpine fireweed (*Epilobium howellii*), starved daisy (*Erigeron miser*), Donner Pass buckwheat (*Eriogonum umbellatum* var. *torreyanum*), American manna grass (*Glyceria grandis*), Santa Lucia dwarf rush (*Juncus luciensis*), Stebbins' phacelia (*Phacelia stebbinsii*), alder buckthorn (*Rhamnus alnifolia*), marsh skullcap (*Scutellaria galericulata*), and obtuse starwort (*Stellaria obtusa*), have some potential to occur on the project site due to the presence of suitable habitat and because the site is within the known elevation and geographic range for each of these species. Each of these plant species are identified in Table 3 and discussed below.

Table 3. Special-Status Plants with a Potential to Occur on the Project Site

Scientific Name	Common Name	Status (Fed/State/CRPR)	Habitat Present	Bloom Period	Potential to Occur
Arabis rigidissima var. *demota*	Galena Creek rockcress	None/None/1B.2	Forest	July-Aug	Low
Artemisia tripartita ssp. *tripartita*	threetip sagebrush	None/None/2B.3	Forest	Aug	Low
Botrychium ascendens	upswept moonwort	None/None/2B.3	Wet meadow	July-Aug	Low
Botrychium crenulatum	scalloped moonwort	None/None/2B.2	Wet meadow	June-Sep	Low
Botrychium lunaria	common moonwort	None/None/2B.3	Wet meadow	Aug	Low
Botrychium minganense	Mingan moonwort	None/None/2B.2	Wet meadow	July-Sep	Low
Carex davyi	Davy's sedge	None/None/1B.3	Forest	May-Aug	Moderate
Carex limosa	mud sedge	None/None/2B.2	Wet meadow	June-Aug	Low
Epilobium howellii	subalpine fireweed	None/None/4.3	Forest, wet meadow	July-Aug	Low
Erigeron miser	starved daisy	None/None/1B.3	Forest	June-Oct	Low
Eriogonum umbellatum	Donner Pass buckwheat	None/None/1B.2	Forest edge, wet meadow	July-Sep	Low

var. *torreyanum*					
Glyceria grandis	American manna grass	None/None/2B.3	Drainages, wet meadow	June-Aug	Low
Juncus luciensis	Santa Lucia dwarf rush	None/None/1B.2	Wet meadow	Apr-July	Low
Phacelia stebbinsii	Stebbins' phacelia	None/None/1B.2	Forest, wet meadow	May-July	Low
Rhamnus alnifolia	alder buckthorn	None/None/2B.2	Drainages, wet meadow	May-July	High
Scutellaria galericulata	marsh skullcap	None/None/2B.2	Wet meadow	June–Sep	Low
Stellaria obtusa	obtuse starwort	None/None/4.3	Drainages, wet meadow	May-Sep	Low

Notes: None: no status.

Galena Creek rockcress (*Arabis rigidissima* var. *demota*). Galena Creek rockcress has a low potential to occur onsite. Galena Creek rockcress is a perennial herb known to occur in rocky areas of broadleafed upland forest and upper montane coniferous forest from approximately 5,900 to 8,400 feet above mean sea level. Galena Creek rockcress blooms July through August (CNPS 2021; Jepson Flora Project 2021). The nearest occurrence of this species is located approximately 10.5 miles southeast of the project site (CDFW 2021). Mixed coniferous forest in the project site provides potential habitat for Galena Creek rockcress; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Threetip sagebrush (*Artemisia tripartita* ssp. *tripartita*). Threetip sagebrush has a low potential to occur onsite. Threetip sagebrush is a perennial shrub known to occur in openings of upper montane coniferous forest with rocky, volcanic soils from approximately 7,215 to 8,530 feet above mean sea level. Threetip sagebrush blooms in August (CNPS 2021). The nearest documented occurrence is located approximately 3.6 miles north of the project site (CDFW 2021). Mixed coniferous forest in the project site provides potential habitat for threetip sagebrush; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Upswept moonwort (*Botrychium ascendens*). Upswept moonwort has a low potential to occur onsite. Upswept moonwort is a perennial rhizomatous herb known to occur in wet areas of lower montane coniferous forest, and meadows and seeps from approximately 3,655 to 9,990 feet above mean sea level. Upswept moonwort blooms in July through August, and sometimes as early as June (CNPS 2021). The nearest documented occurrence for upswept moonwort, which lacks ecological and locational details, is approximately 7 miles northeast of the project site (CDFW 2021). The wet meadow onsite provides potential habitat for upswept moonwort; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Scalloped moonwort (*Botrychium crenulatum*). Scalloped moonwort has a low potential to occur onsite. Scalloped moonwort is a perennial rhizomatous herb known to occur in bogs and fens, lower montane coniferous forest, meadows and seeps, freshwater marshes and swamps, and upper montane coniferous forest from approximately 4,160 to 10,760 feet above mean sea level. Scalloped moonwort blooms June through September (CNPS 2021). The nearest documented occurrence for scalloped moonwort is approximately 4 miles southeast of the project site

(CDFW 2021). The wet meadow onsite provides potential habitat for scalloped moonwort; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Common moonwort (*Botrychium lunaria*). Common moonwort has a low potential to occur onsite. Common moonwort is a perennial rhizomatous herb known to occur in meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest from approximately 6,495 to 11,155 feet above mean sea level. Common moonwort blooms in August (CNPS 2021). The nearest documented occurrence for common moonwort is approximately 5.7 miles northeast of the project site (CDFW 2021). The wet meadow onsite provides potential habitat for common moonwort; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Mingan moonwort (*Botrychium minganense*). Mingan moonwort has a low potential to occur onsite. Mingan moonwort is a perennial rhizomatous herb known to occur in bogs and fens, edges of meadows and seeps, and upper montane coniferous forest from approximately 4,770 to 7,150 feet above mean sea level. Mingan moonwort blooms July through September (CNPS 2021). The nearest documented occurrence for Mingan moonwort is approximately 4 miles southeast of the project site (CDFW 2021). The wet meadow onsite provides potential habitat for Mingan moonwort; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Davy's sedge (*Carex davyi*). Davy's sedge has a moderate potential to occur onsite. Davy's sedge is a perennial herb known to occur in subalpine coniferous forest and upper montane coniferous forest from approximately 4,920 to 10,500 feet above mean sea level. Davy's sedge blooms May through August (CNPS 2021). The nearest documented occurrence for Davy's sedge is approximately 11 miles southeast of the project site near Lake Tahoe (CDFW 2021). The coniferous forest onsite provides potential habitat for Davy's sedge; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Mud sedge (*Carex limosa*). Mud sedge has a low potential to occur onsite. Mud sedge is a perennial rhizomatous herb known to occur in bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, and upper montane coniferous forest from approximately 3,935 to 8,860 feet above mean sea level. Mud sedge blooms June through August (CNPS 2021). The nearest documented occurrence for mud sedge is approximately 9 miles north of the project site (CDFW 2021). The wet meadow onsite provides potential habitat for mud sedge; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Subalpine fireweed (*Epilobium howellii*). Subalpine fireweed has a low potential to occur onsite. Subalpine fireweed is a perennial stoloniferous herb known to occur in meadows and seeps, and subalpine coniferous forest from approximately 6,560 to 10,235 feet above mean sea level. Subalpine fireweed blooms July through August (CNPS 2021). The nearest documented occurrence for subalpine fireweed is approximately 8.3 miles north of the project site (CDFW 2021). The wet meadow onsite provides potential habitat for subalpine fireweed; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Starved daisy (*Erigeron miser*). Starved daisy has a moderate potential to occur onsite. Starved daisy is a perennial herb known to occur in rocky areas of upper montane coniferous forest from approximately 6,035 to 8,595 feet above mean sea level. Subalpine fireweed blooms June through October (CNPS 2021). There are multiple

occurrences of starved daisy within one mile of the project site, primarily on the surrounding mountain peaks where rocky microhabitat is more abundant. The nearest documented occurrence for starved daisy is approximately 0.7 mile northeast of the project site (CDFW 2021). The coniferous forest onsite provides potential habitat for starved daisy; however, there is limited suitable rocky soil substrates and it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Donner Pass buckwheat (*Eriogonum umbellatum* var. *torreyanum*). Donner Pass buckwheat has a moderate potential to occur onsite. Donner Pass buckwheat is a perennial herb known to occur in rocky, volcanic soils in meadows and seeps and upper montane coniferous forest habitat from approximately 6,085 to 8,595 feet above mean sea level (CNPS 2021). This species is generally found in sandy or gravelly habitat (Jepson Flora Project 2021). Donner Pass buckwheat blooms July through September (CNPS 2021). There are two documented occurrences of Donner Pass buckwheat within one mile of the project site, with the nearest located approximately 0.68 mile north (CDFW 2021) The coniferous forest onsite provides potential habitat for Donner Pass buckwheat; however, there is limited suitable rocky soil substrates and it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

American manna grass (*Glyceria grandis*). American manna grass buckwheat has a low potential to occur onsite. American manna grass is a perennial rhizomatous herb known to occur in bogs and fens, meadows and seeps, and marshes and swamps (lake margins and streambanks) from approximately 50 to 6,495 feet above mean sea level (CNPS 2021). American manna grass blooms June through August (CNPS 2021). The nearest documented location of American manna grass is located approximately 9,2 miles southeast of the project site (CDFW 2021) The wet meadow onsite provides potential habitat for American manna grass; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Santa Lucia dwarf rush (*Juncus luciensis*). Santa Lucia dwarf rush has a low potential to occur onsite. Santa Lucia dwarf rush is an annual herb known to occur in chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, and vernal pools from approximately 980 to 6,695 feet above mean sea level (CNPS 2021). Santa Lucia dwarf blooms April through July (CNPS 2021). The nearest documented occurrence for Santa Lucia dwarf is located approximately 1.1 miles northeast of the project site (CDFW 2021). Coniferous forest and wet meadow in the project site provide potential habitat for Santa Lucia dwarf rush; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Stebbin's phacelia (*Phacelia stebbinsii*). Stabbin's phacelia has a low potential to occur onsite. Stabbin's phacelia is an annual herb known to occur in cismontane woodland, lower montane coniferous forest, and meadows and seeps from approximately 2,000 to 6,595 feet above mean sea level (CNPS 2021). Stebbin's phacelia blooms May through July (CNPS 2021). The nearest documented occurrence for Stebbin's phacelia is located approximately 2.7 miles southwest of the project site (CDFW 2021). Coniferous forest and wet meadow in the project site provide potential habitat for Stebbin's phacelia; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Alder buckthorn (*Rhamnus alnifolia*). Alder buckthorn has a high potential to occur onsite. Alder buckthorn is a perennial deciduous shrub known to occur in lower montane coniferous forest, meadows and seeps, riparian scrub, and upper montane coniferous forest from approximately 4,495 to 6,990 feet above mean sea level (CNPS 2021). Alder buckthorn blooms May through July (CNPS 2021). The nearest documented occurrence for alder buckthorn

is located approximately 4 miles east of the project site (CDFW 2021). Coniferous forest, riparian areas along drainages, and wet meadow in the project site provide potential habitat for alder buckthorn; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Marsh skullcap (*Scutellaria galericulata*). Marsh skullcap has a low potential to occur onsite. Marsh skullcap is a perennial rhizomatous herb known to occur in lower montane coniferous forest, meadows and seeps, marshes and swamps from approximately 0 to 6,890 feet above mean sea level (CNPS 2021). Marsh skullcap blooms June through September (CNPS 2021). The nearest documented occurrence for marsh skullcap located approximately 9 miles east of the project site, along the Truckee River (CDFW 2021). Coniferous forest and wet meadow in the project site provide potential habitat for marsh skullcap; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

Obtuse starwort (*Stellaria obtusa*). Obtuse starwort has a low potential to occur onsite. Obtuse starwort is a perennial rhizomatous herb known to occur in lower montane coniferous forest, riparian woodland, and upper montane coniferous forest from approximately 490 to 7,515 feet above mean sea level (CNPS 2021). Obtuse starwort blooms May through September and sometimes into October (CNPS 2021). The nearest documented occurrence for obtuse starwort is located approximately 5 miles north of the project site (CCH 2021). Coniferous forest in the project site provides potential habitat for obtuse starwort; however, it was not observed during the 2021 surveys, which were conducted when this species would be evident and identifiable.

4.8 Special-Status Wildlife Species

Results of the USFWS and CNDDB searches revealed 26 special-status wildlife species that are known to occur in the project site region (see Attachment B). Of these, 14 species were removed from consideration due to lack of suitable habitat within or adjacent to the project site or due to the site being outside of the species' known geographic or elevation range. The remaining 12 special-status wildlife species have some potential to occur on the project site and are discussed below. In addition, the project site provides habitat for nesting birds protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC), as well as native bats protected by the CFGC. Each of these plant species are identified in Table 4 and discussed below.

Table 4. Special-Status Wildlife Species with Potential to Occur in the Project Site

Scientific Name	Common Name	*Status (Fed/State)*	Potential to Occur
Amphibians			
Rana sierrae	Sierra Nevada yellow-legged frog	FE/ST	**Low potential to occur.** Species may move through stream habitat, but no suitable overwintering habitat present – project footprint is adjacent to Lake Mary and the Yuba River. 2021 occurrence reported just outside of Kingvale.

Table 4. Special-Status Wildlife Species with Potential to Occur in the Project Site

Scientific Name	Common Name	*Status (Fed/State)*	Potential to Occur
Birds			
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	**Moderate potential to occur**. Suitable nesting habitat is present within the project site. Multiple recent occurrences have been reported in and near Soda Springs.
Accipiter gentilis (nesting)	northern goshawk	None/SSC	**Low potential to nest**. Suitable habitat is present; however this species is typically intolerant of disturbance near the nest site and thus would not be expected to nest near existing development. 2021 occurrence reported in Tahoe National Forest and in 2016 in Nevada County.
Empidonax traillii (nesting)	willow flycatcher	BCC/SE	**Low potential to occur.** There is a small amount of suitable nesting habitat present, and the species is relatively rare. Thus, there is low potential for this species to nest within the project site. 2020 occurrence reported south of Soda Springs and east of Donner <3 miles from the project site.
Haliaeetus leucocephalus (nesting & wintering)	bald eagle	FPD, BCC/FP, SE	**Moderate potential to occur, low potential to nest**. Suitable habitat is present for nesting, however the species tends to reuse existing nest sites. The species would be most likely to occur briefly in the project site and would be expected to spend more time closer to larger bodies of water outside of the project site. Several recent occurrences reported (2019, 2020, 2021) just outside of Norden <3 miles from the project site.
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	**Low potential to occur**. There is a small amount of suitable nesting habitat (riparian vegetation) present within the project site. Known to occur in Donner Memorial State Park. Recent occurrences reported (2019) just outside of Norden <3 miles from the project site.

Table 4. Special-Status Wildlife Species with Potential to Occur in the Project Site

Scientific Name	Common Name	*Status (Fed/State)*	Potential to Occur
Mammals			
Gulo gulo	California wolverine	None/FP, ST	**Low potential to occur.** Suitable physical habitat is present, and the project footprint is within historic range. Potential to occur is lower since the area experiences moderate human disturbance from surrounding development and recreational activities. Last recorded occurrence was in Truckee in 2018.
Lasionycteris noctivagans	silver-haired bat	None/None	**High potential to occur.** Suitable habitat is present. 2018 occurrence reported between Independence Lake and Highway 89.
Lepus americanus tahoensis	Sierra Nevada snowshoe hare	None/SSC	**Low potential to occur.** Small amount of suitable habitat (willow thickets) within the project area. Several recent sightings (<20 years) in Placer County and around Lake Tahoe.
Myotis volans	long-legged myotis	None/None	**High potential to occur.** Suitable habitat is present within the project footprint and work area within historic range.
Vulpes vulpes necator	Sierra Nevada red fox	FPE/ST	**Low potential to occur.** The project site is in an area that experiences moderate human disturbance from surrounding development and recreational activities and therefore provides only marginal habitat. Project footprint is within historic range.
Invertebrates			
Bombus occidentalis	western bumble bee	None/SCE	**Low potential to occur** due to declining populations. Project footprint is within historic range for this species and there are abundant floral resources for nectar plants within and adjacent to the project site.

Sierra Nevada yellow-legged frog (*Rana sierrae*). Sierra Nevada yellow-legged frog is a medium-size amphibian, measuring about 1.5 to 3.25 inches on average. Females tend to be slightly larger than males. Typical habitat includes lakes, ponds, marshes, meadows, and streams at high elevations— typically ranging from about 4,500 to 12,000 feet, but can occur as low as about 3,500 feet in the northern portions of their range. This species is highly aquatic and adults can be found sitting on rocks along the shoreline, where there was little or no vegetation. They

are rarely found more than 3.3 feet from water. The nearest documented occurrence for this species is located approximately 0.5 mile west of the project site, within the same watershed (CDFW 2021a). Although this species has been documented in close proximity to the site, the drainages onsite provide only marginally suitable habitat due to the heavy tree canopy and lack of any open, sunny banks or open water. Additionally, the Yuba River onsite does not provide suitable overwintering habitat. Thus, there is low potential for this species to occur in the aquatic habitat onsite.

Cooper's hawk (*Accipiter cooperii*). Cooper's hawks' nest throughout the state but most commonly occur near open bodies of water in dense stands of mixed-conifer forests as well as deciduous riparian and live oak woodland. This species requires nest locations in riparian corridors or near open bodies of water to forage but will also hunt along habitat edges. The existing level of disturbance associated with human habitat in the project site likely precludes this species from nesting within the project site. Protective measures for nesting birds will ensure no impacts to this species occur.

Northern goshawk (*Accipiter gentilis*). Northern goshawk is a California species of special concern with moderate potential to nest within the project footprint. This species requires large stands of mature and old-growth forests for nesting with great canopy cover and relatively open understories for foraging. Due to their intolerance to disturbance, much of this species historic range has been truncated by urban development, logging, and timbering activities and thus, breeding density and distributional changes within the Sierra Nevada's remains inconclusive (Shuford ed. 2008). While the mixed coniferous forest onsite provides suitable nesting habitat, the existing level of disturbance associated with Sugar Bowl Resort and associated residences voids habitability. Protective measures for nesting birds will ensure no impacts to this species occur.

Willow flycatcher (*Empidonax traillii*). Willow flycatcher is a state endangered species with low potential to occur within the project footprint. This species commonly occurs in riparian/riverine areas, wet marshes, and wet meadows and requires dense patches or riparian vegetation for nesting. The nearest documented occurrence for the willow flycatcher was in 1991 at the Lake Van Norden confluence with the South Yuba River, less than 2 miles from the project site (CDFW 2021b). Wet meadow habitat within the project footprint and the adjacent forested wetland area provides marginal suitable habitat for this species. Protective measures for nesting birds will ensure no impacts to this species occur.

Bald eagle (*Haliaeetus leucocephalus*). Bald eagle is a state endangered species with a low potential to occur in the study area. This species occurs along coasts, rivers, and large, deep lakes and reservoirs in California. They mostly nest in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity counties, but are more widespread as a winter migrant. Bald eagles require large bodies of water or free-flowing rivers with abundant fish and perching sites. Nesting typically occurs in large old growth and dominant live trees with open branchwork (CDFW 2019b). The nearest documented occurrence for bald eagle is located approximately 3.7 miles east of the project site, adjacent to Donner Lake (CDFW 2021b). Mixed coniferous forest in the project site provides marginal nesting habitat for bald eagle due to anthropogenic activities associated with the Sugar Bowl Resort and associated residences. Protective measures for nesting birds will ensure no impacts to this species occur.

Yellow warbler (*Setophaga petechia*). Yellow warblers nest widely in the Cascade and Sierra Nevada mountain ranges, primarily along riparian corridors and in fields of chapparal/shrubland and breed in higher abundance along the eastern Sierra Nevada's in postfire chaparral/mixed conifer systems, Perazzo Meadows, and the upper Truckee River watershed (Shuford ed. 2008). This species requires riparian trees and shrubs within close proximity to streams or wet willow meadows to nest. The nearest documented occurrence for this species is located approximately 4.9 miles east of the project site, adjacent to Donner Lake (CDFW 2021b). Although there is marginally suitable breeding habitat onsite, this species is unlikely to occur due to the existing level of human disturbance in the surrounding area. This species was not observed during fieldwork. Protective measures for nesting birds will ensure no impacts to this species occur.

California wolverine (*Gulo gulo*). California wolverine is proposed for federal listing, a state fully protected species, and state threatened species with a low potential to occur in the project site. This species is a scarce resident of the north Coast Range and Sierra Nevada. In the northern Sierra, habitat consists of mixed conifer, red fir, and lodgepole habitats from approximately 4,300 to 7,300 feet above mean sea level (CDFW 2021b). California wolverines excavate their burrows under shelving rock or in logs, caves, or snags in remote places, away from human populations. They naturally occur at low densities and are rarely encountered (Verner and Boss 1980). The nearest documented occurrence for California wolverine is for a single sighting in 1991 northwest of the Tahoe Donner Ski Resort, approximately 5 miles northeast of the project site (CDFW 2021b). The project site provides marginal habitat for California wolverine due to the existing level of human disturbance in the surrounding area. No potential dens were observed in the project site during fieldwork and no impacts to this species are anticipated to occur.

Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*). Sierra Nevada snowshoe hare has low potential to occur in the project site. This species is an uncommon resident at upper elevations of the Sierra Nevada. This subspecies of snowshoe hare is primarily found in montane riparian habitats with thickets of alders and willows, and in stands of young conifers mixed with chaparral. It prefers the younger stages of a variety of coniferous forest habitats, primarily occurring along the edges, adjacent to meadows. Individuals seek cover in dense tree or shrub thickets, where they create a shallow bowl-like depression. Breeding takes place from mid-February to June or July, with a gestation period of 35 to 37 days. Two to three litters are generally produced. Diet consists of grasses, forbs, sedges, and low shrubs during the summer. In winter, they eat the needles and bark of young conifers, and leaves and twigs of willow and alder (Zeiner et al., 1990). The nearest documented occurrence for Sierra Nevada snowshoe hare is located approximately 7 miles east of the project site, near Truckee, CA (CDFW 2021b). The project site provides marginal habitat for this species due to the existing level of human disturbance in the surrounding area, and the rarity in the region likely precludes it from occurring onsite. No impacts to this species are anticipated to occur.

Sierra Nevada red fox (*Vulpes vulpes necator*). Sierra Nevada red fox is a state threatened species with a low potential to occur in the project site. This species is found in the Cascades in Siskiyou County, and from Lassen County south to Tulare County. They are found in a variety of habitats, including (but not limited to) alpine dwarf-shrub, wet meadow, subalpine conifer, montane chaparral and riparian habitat, and mixed conifer forest. Most sightings in the Sierra Nevada are documented above 7,000 feet, with a range of 3,900 to 11,900 feet above mean sea level. Den sites include rock outcrops, hollow logs and stumps, and burrows in deep, loose soil. Sierra Nevada red fox prefers forests interspersed with meadows or alpine fell-fields, and edge habitats are extensively utilized

(CDFW 2021b). The nearest documented occurrence for Sierra Nevada red fox is located approximately 3.2 miles north of the project site and was documented in 1941 (CDFW 2021b). The project site provides very marginal habitat for Sierra Nevada red fox due to the existing level of human disturbance in the surrounding area, and their rarity in the region likely precludes them from occurring onsite. No potential dens were observed in the project site during fieldwork and no impacts to this species are anticipated to occur.

Western bumble bee (*Bombus occidentalis*). Western bumble bee is a native California bee that is a generalist forager. In California, it has been documented in Alameda, Alpine, Butte, Calaveras, Contra Costa, Del Norte, El Dorado, Fresno, Humboldt, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Modoc, Monterey, Napa, Nevada, Placer, Plumas, Sen Benito, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Tehama, Trinity, Tulare, Yolo, and Yuba counties (Xerces Society 2018). While this species forages for nectar on a variety of species, it typically nests in the ground adjacent or within scrub habitats, which are mostly lacking from the site. Due to the mostly disturbed nature of the project site, and the existing human presence in the surrounding vicinity, it is unlikely this species utilizes the area for nesting. Impacts to Western bumble bee are not anticipated.

Native Bats (including silver haired bat and long-legged myotis). The project site provides potential roosting habitat for silver haired bat (*Lasionycteris noctivagans*) and long-legged myotis (*Myotis volans*), and other native bats protected by regulations defined in the CFGC. Silver haired bat typically roosts in old-growth forest where maternity roosts are generally formed in large snags 50 feet aboveground. This species hibernates in hollow trees, rock crevices, buildings, mines, caves, and under sloughing bark. Foraging habitat for silver haired bat includes coniferous and deciduous forest, streams and drainages. Long-legged myotis are primarily found in coniferous forests, but also seasonally in riparian and desert habitats This species roosts in crevices in cliffs, caves, mines, buildings, exfoliating tree bark, and snags (CDFW 2021b).

Although no active bat roosts or signs of occupation, such as guano or staining, were detected during the field survey, a focused survey for roosting bats was not conducted.

Nesting Birds. The project site provides suitable nesting habitat for numerous local and migratory bird species protected by the federal MBTA and the CFGC. Specifically, trees, shrubs, and human-made structures and buildings on the project site provide suitable nesting habitat. Multiple bird species were detected during the July 14 and August 20 field surveys, but a focused survey for bird nests was not conducted.

4.9 Sensitive Vegetation Communities

Lemmon's willow thickets associated with drainages in the central portion of the project site are identified as a sensitive vegetation community by CDFW. In addition, all riparian vegetation adjacent to the intermittent and perennial drainages onsite are likely regulated by CDFW as part of the lake or stream zone pursuant to Section 1600 of the CFGC.

5 Conclusions and Recommendations

5.1 Special-Status Plants

Based on a field assessment and relevant literature, 17 special-status plant species have a varied potential to occur in the wet meadow, riparian areas, and coniferous forest habitats in the project site. Of these, 15 species are considered to have a low potential to occur and 2 have a moderate or high potential to occur. The July 14 and August 20 site surveys were conducted within the appropriate time of year to accurately identify special-status plant species if present within the project site. None were observed during the site surveys, and thus, no impacts to these species are anticipated and no further surveys are recommended at this time.

5.2 Special-Status Wildlife

Native Bats. If bats are roosting on the project site, direct impacts to individual bats could result from the removal of roosting sites, such as rock outcrops, trees, and snags. Should individual bats be roosting during construction activities, removal of active day roost sites that would result in the harm or mortality of native bats and would be considered a violation of the take provisions of Section 4150 of the CFGC for non-game mammals (including native bats). To avoid or minimize the potential for take of roosting bats, Dudek recommends implementing the following measures:

- A qualified biologist shall conduct a focused bat roost assessment within the project site. The assessment shall include a visual inspection of potential roosting features (bats need not be present) and presence of guano within the project site, access routes, and 50 feet around these areas. The biologist shall survey these areas between 30 and 120 days prior to the start of work. Potential roosting features found during the survey shall be flagged or marked.
- If bats are determined to be using on-site structures/resources for day roosts and such areas cannot be completely avoided, the individuals shall be safely evicted under the direction of the qualified bat biologist. If individuals cannot be safely evicted due to factors such as lack of alternative roosting sites, as determined by the qualified bat biologist, ground-disturbing activities within a specified distance of the roost (specified distance to be determined by the bat biologist, based on surroundings and vulnerability of roost site, etc.) shall be postponed or halted until conditions are suitable for safe eviction or the roost has vacated naturally.

Nesting Birds. Eventual development on the project site could involve tree and vegetation removal, which has the potential to impact nesting birds protected by the federal MBTA and California Fish and Game Code if such removal occurrs during the typical nesting season for the project region (February through August). To avoid impacting active nests, Dudek recommends conducting tree or vegetation removal outside of the nesting season. If not feasible, Dudek recommends implementing the following measures to avoid or minimize impacts to nesting birds:

- A qualified biologist shall conduct a survey for nesting birds within 1 week prior to vegetation removal or ground-disturbing activities during the nesting season (February through August). The survey shall cover the limits of construction and accessible suitable nesting habitat within 100 feet for non-raptor species and up to 300 feet for raptor species potentially nesting on or adjacent to the site.

- If any active nests are observed during surveys, a qualified biologist shall establish a suitable avoidance buffer from the active nest. The buffer distance will typically range from 100 to 300 feet, and shall be determined based on factors such as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests shall be established in the field with flagging, fencing, or other appropriate barriers and shall be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.
- If vegetation removal activities are delayed, additional nest surveys shall be conducted such that no more than 7 days elapse between the survey and vegetation removal activities.
- If an active nest is identified in or adjacent to the construction zone after construction has started, work in the vicinity of the nest shall be halted until the project biologist can provide appropriate avoidance and minimization measures to ensure that the nest is not disturbed by construction. Appropriate measures may include a no disturbance buffer until the young have fledged and/or full-time monitoring by a qualified biologist during construction activities conducted in close proximity to the nest.

5.3 Aquatic Resources

Dudek mapped approximately 0.39 acre of aquatic resources anticipated to meet the criteria to be considered jurisdictional aquatic resources under federal and/or state jurisdiction. The ephemeral, intermittent, and perennial drainages, as well as the adjacent wet meadow, are all potentially jurisdictional Findings with regard to federal jurisdiction are preliminary until verified by the Sacramento District of the USACE.

Dudek recommends that development on the project site avoid aquatic resources where possible. The crossing of PD-1 may result in impacts to the drainage either through direct fill or through potential frac out if drilling under. Impacts to jurisdictional aquatic resources would be considered a significant impact under CEQA and would also require aquatic resource permits from U.S. Army Corps of Engineers (USACE), RWQCB and/or CDFW (e.g., 404 Nationwide permit for linear projects, 401 Water Quality Certification and 1602 Streambed Alteration Agreement), In addition, compensatory mitigation may be required for permanent impacts to aquatic resources to ensure no net loss of these resources. Potential compensatory mitigation options include purchasing mitigation credits from an agency-approved wetlands mitigation bank or paying an agency-approved in-lieu fee. Where direct impacts to jurisdictional aquatic resources can be avoided, exclusion fencing should be installed between the avoided aquatic resource and limits of disturbance to protect from indirect impacts. A qualified wetland specialist should guide installation of the exclusion fencing. Appropriate best management practices and spill prevention measures should also be implemented to ensure protection of jurisdictional aquatic resources during project construction.

5.4 Sensitive Natural Communities

Riparian woodland mapped in the project site are identified as sensitive vegetation communities by CDFW. In addition, riparian woodland and riparian vegetation associated with the intermittent and perennial drainages onsite are vegetation communities likely regulated by CDFW as part of the lake or stream zone pursuant to Section 1600 of the CFGC. Impacts to sensitive natural communities, including removal and trimming, would be considered a significant impact under CEQA without appropriate mitigation. Dudek recommends limiting disturbance or removal

of these communities to the maximum extent feasible. If disturbance is necessary, Dudek recommends implementing the following measures to avoid or minimize impacts to sensitive natural communities:

- To the extent feasible, all riparian vegetation should be avoided. If no direct impacts to riparian habitat are anticipated, avoidance/exclusion fencing should be installed between the riparian habitat and limits of disturbance to protect these features from indirect impacts. A qualified wetland specialist should guide installation of the avoidance/exclusion fencing. In general, avoidance setbacks for riparian habitat is recommended at 50 feet.

- If riparian impacts are unavoidable, then the following measures to minimize impacts are recommended:
  - Prior to the initiation of ground-disturbing activities in riparian habitat (i.e., willow riparian corridor along PD-1 and ID-1, Lemmon's willow thickets), the limits of disturbance and avoided habitat should be fenced (e.g., mesh exclusion fencing, flagging, or similar). No construction, staging, or other ground-disturbing activities should be permitted beyond the construction fence. Construction contractors should be responsible for establishing and maintaining appropriate BMPs prior to, during, and following ground disturbance in the riparian woodland.
  - Temporarily disturbed areas in the riparian woodland should be revegetated following construction and prior to the first rain event (more than one half inch of precipitation in a 24-hour period). Reseeded areas should be covered with a biodegradable erosion control fabric to prevent erosion and downstream sedimentation. The Project engineer should determine the specifications needed for erosion control fabric (e.g., shear strength) based on anticipated maximum flow velocities and soil types. No seed of non-native species should be used unless certified to be sterile.

If you have any questions or concerns regarding the content of this report, please contact me at 916.835.9671 or lburris@dudek.com.

Sincerely,

Laura Burris
Senior Botanist/Biologist

Att.: *Figure 1 – Project Location*
Figure 2 – Project Site
Figure 3 – Soils
Figure 4 – Hydrologic Setting
Figure 5 – Vegetation Communities and Land Cover Types
Figure 6 – Aquatic Resources Delineation

Attachment A, Special-Status Plant Species Potential to Occur Within the Project Site Region
Attachment B, Special-Status Wildlife Species Potential to Occur Within the Project Site Region
Attachment C, Representative Project Site Photographs
Attachment D, List of Plant and Wildlife Species Observed

cc: *Markus Lang, Dudek*

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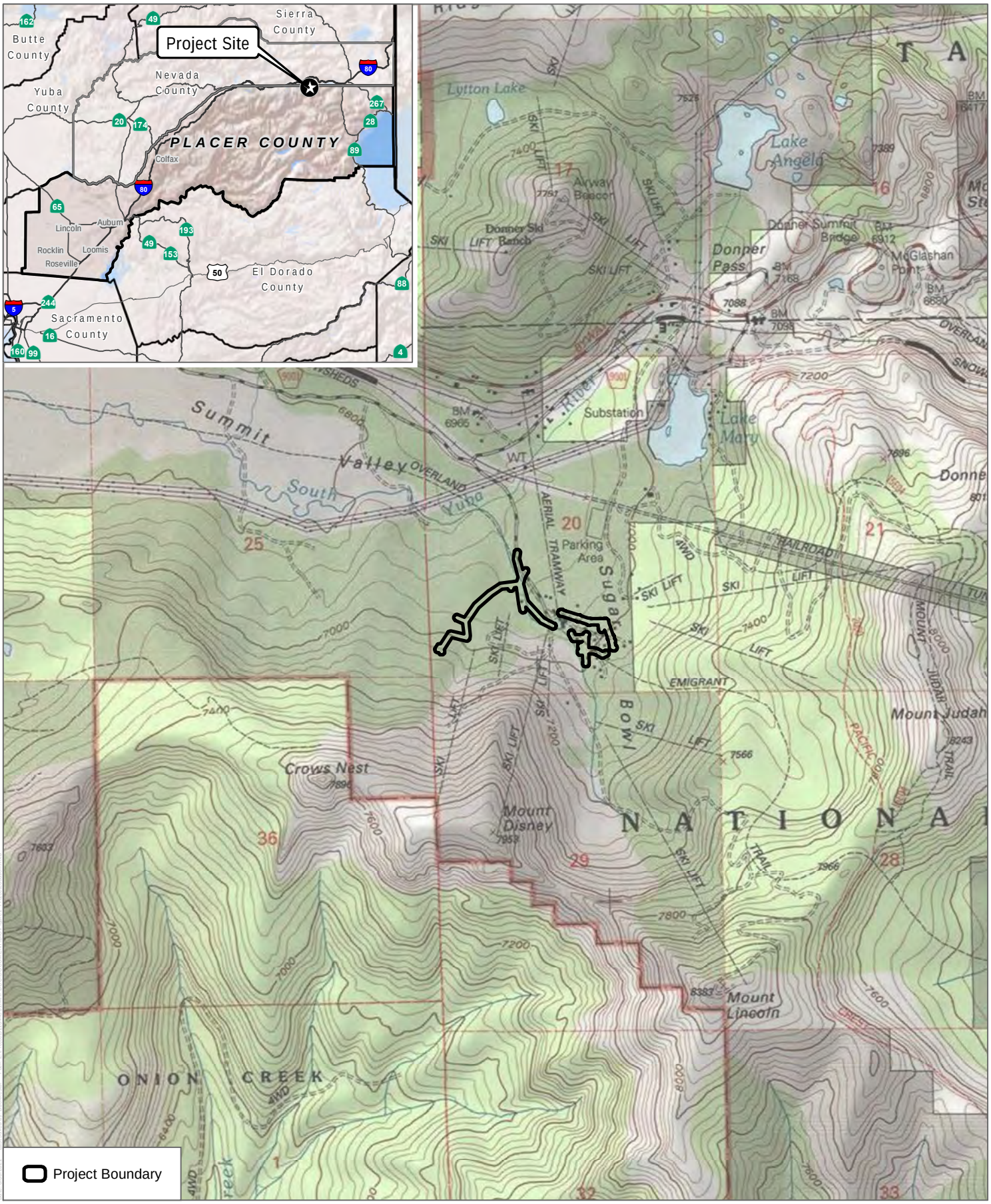
Figures 1-6



SOURCE: USGS 7.5-Minute Series Norden

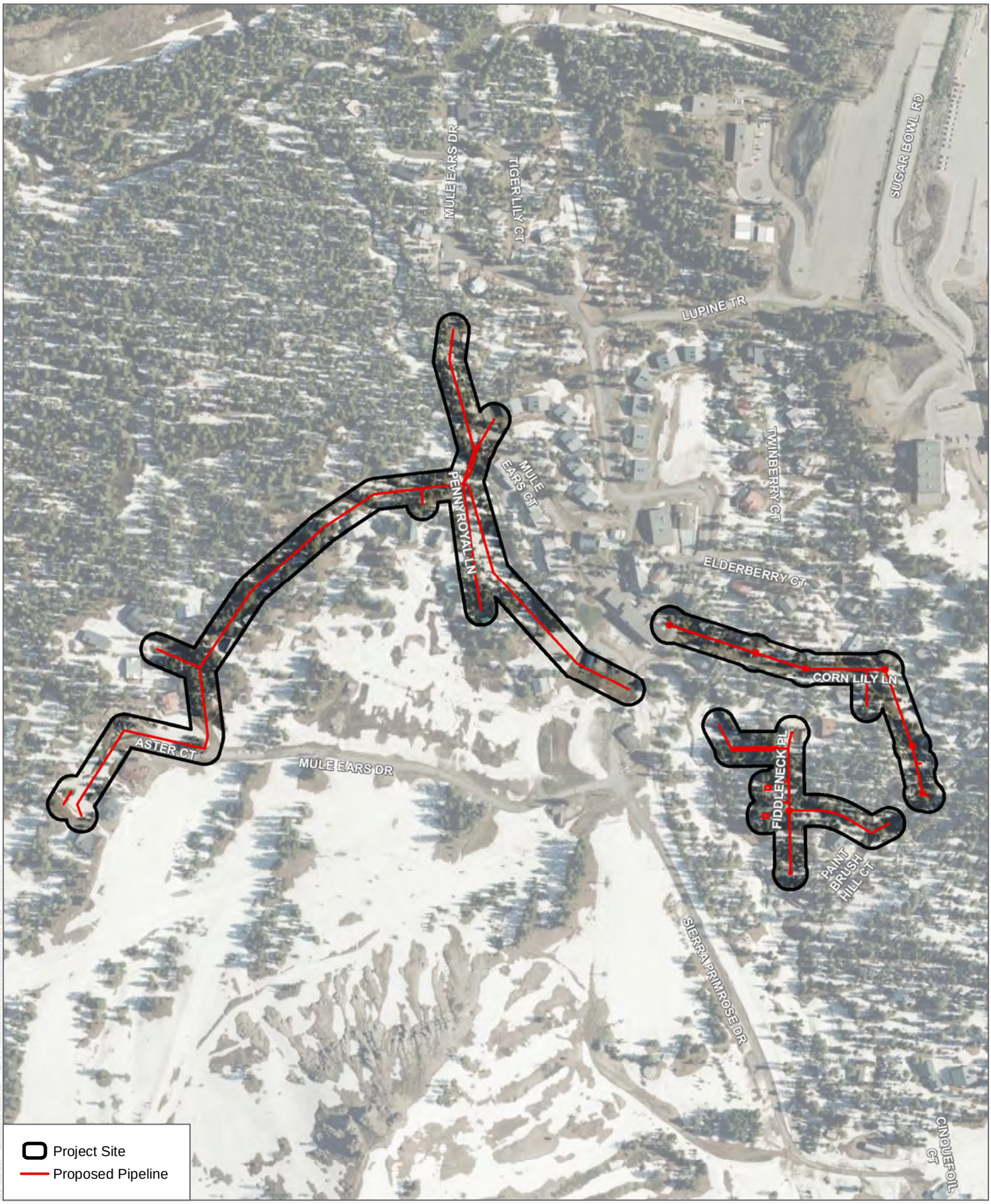
DUDEK

0 1,000 2,000 Feet
0 285 570 Meters
1:24,000

FIGURE 1

Project Location

DSPUD Sugar Bowl Sewer Collection System Project



SOURCE: Bing Maps (Accessed 2021) Placer County 2017

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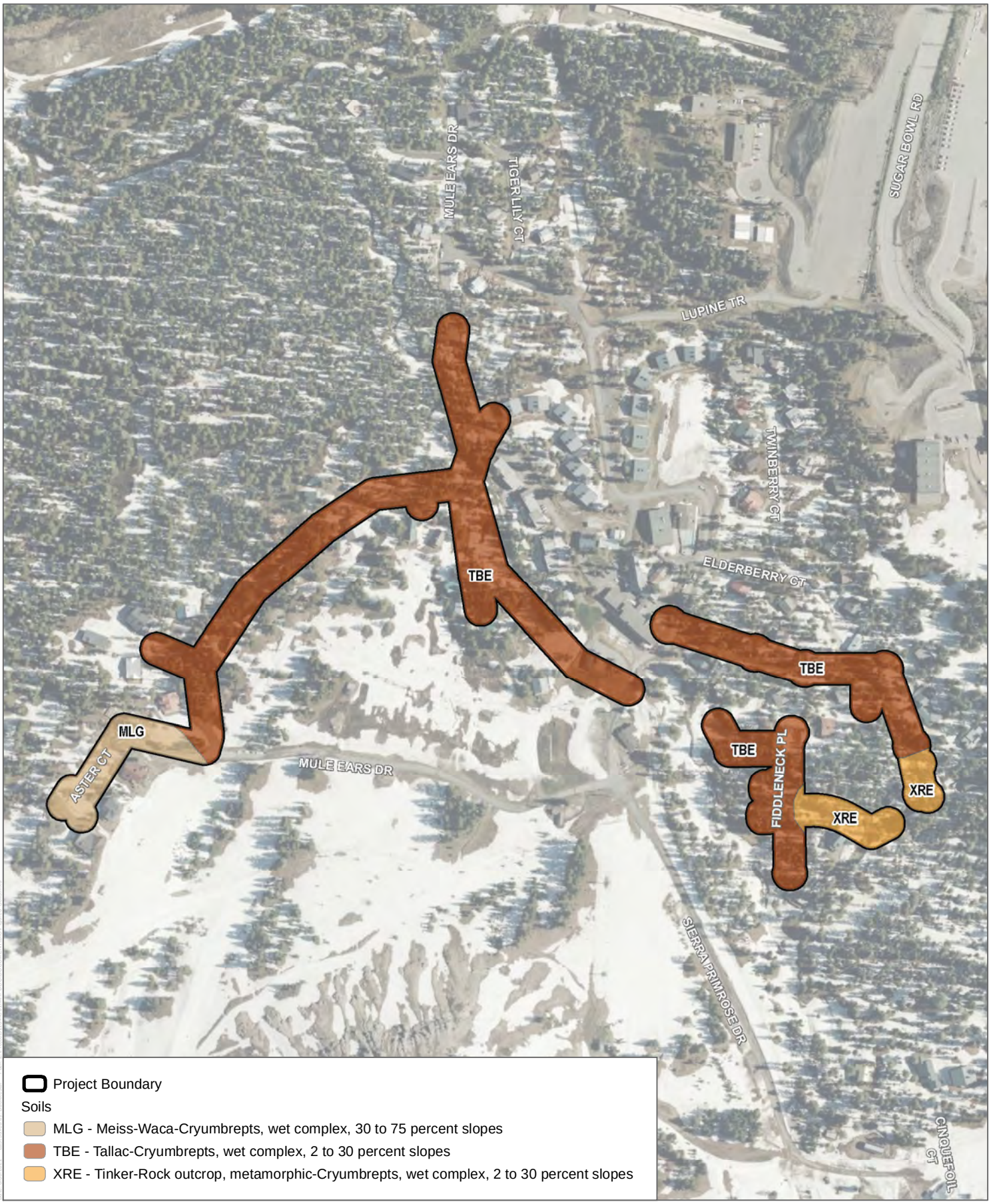
FIGURE 2

Project Site

DSPUD Sugar Bowl Sewer Collection System Project



SOURCE: Bing Maps (Accessed 2021) USDA 2017

DUDEK

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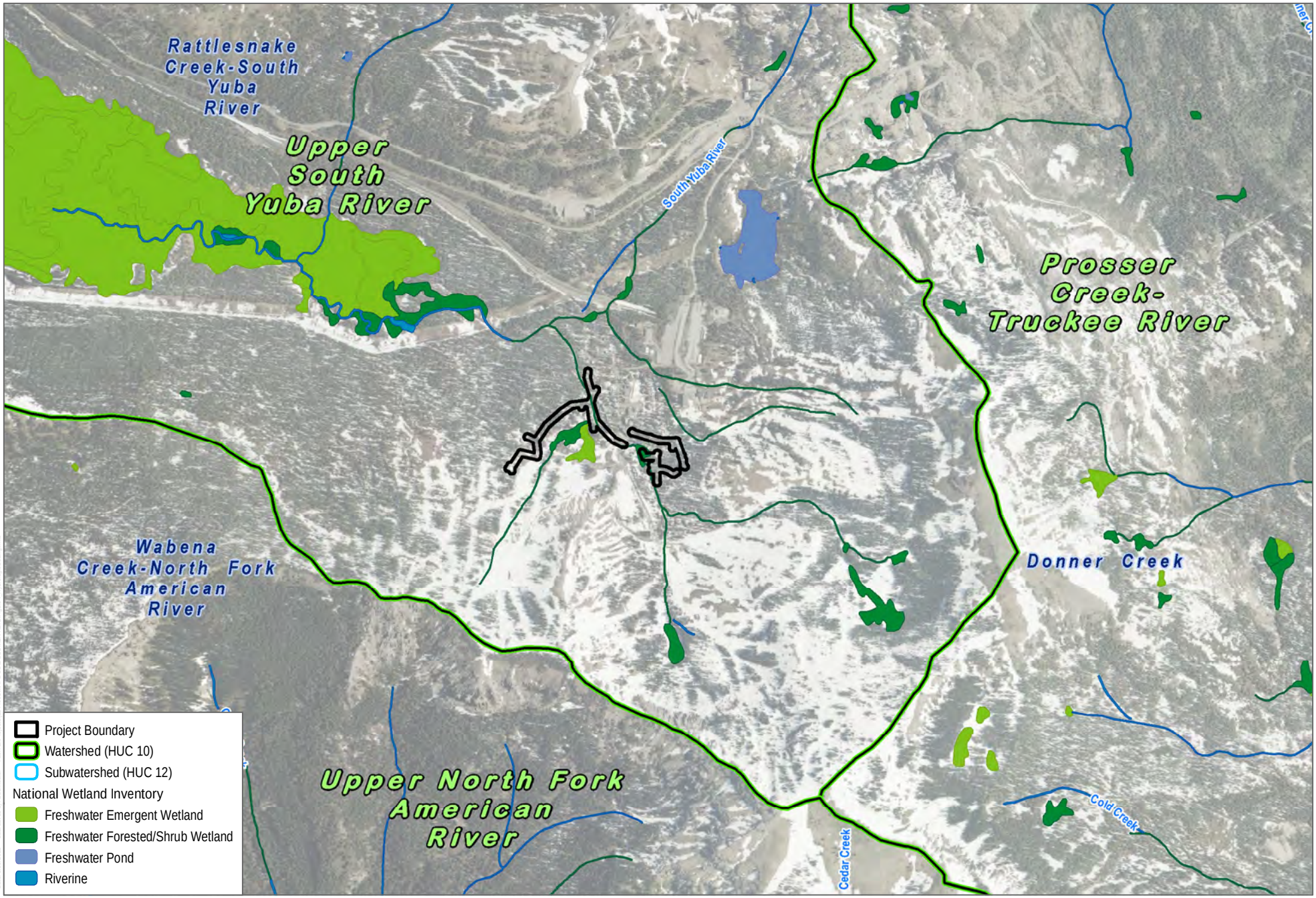
1:4,896

FIGURE 3
Soils
DSPUD Sugar Bowl Sewer Collection System Project



SOURCE: USGS 2019, USFWS 2019, ESRI (Accssed 2020)

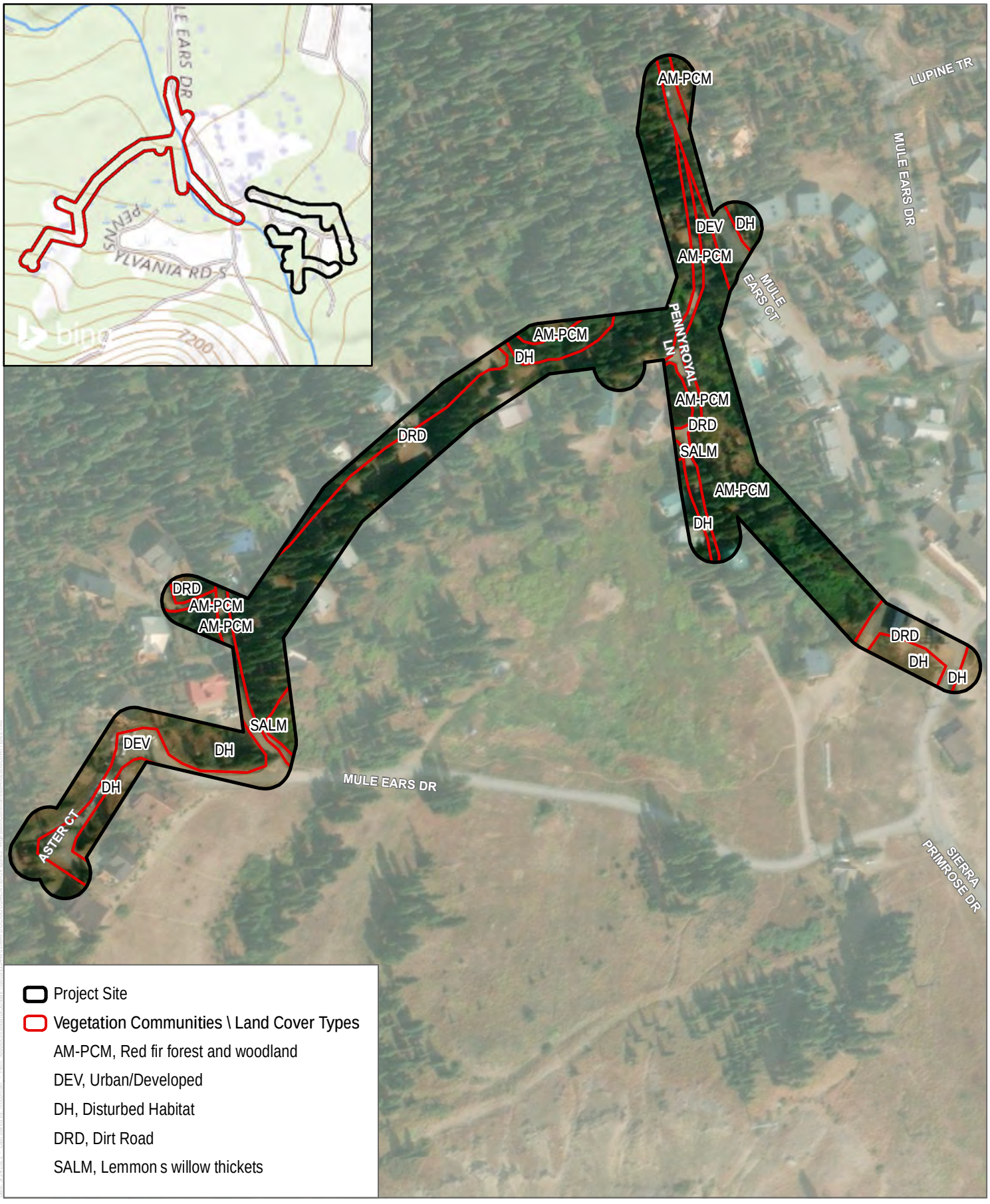
DUDEK

0 1,000 2,000 Feet

FIGURE 4

Hydrologic Setting

DSPUD Sugar Bowl Sewer Collection System Project



SOURCE: Bing Maps (Accessed 2021), Placer County 2017

DUDEK

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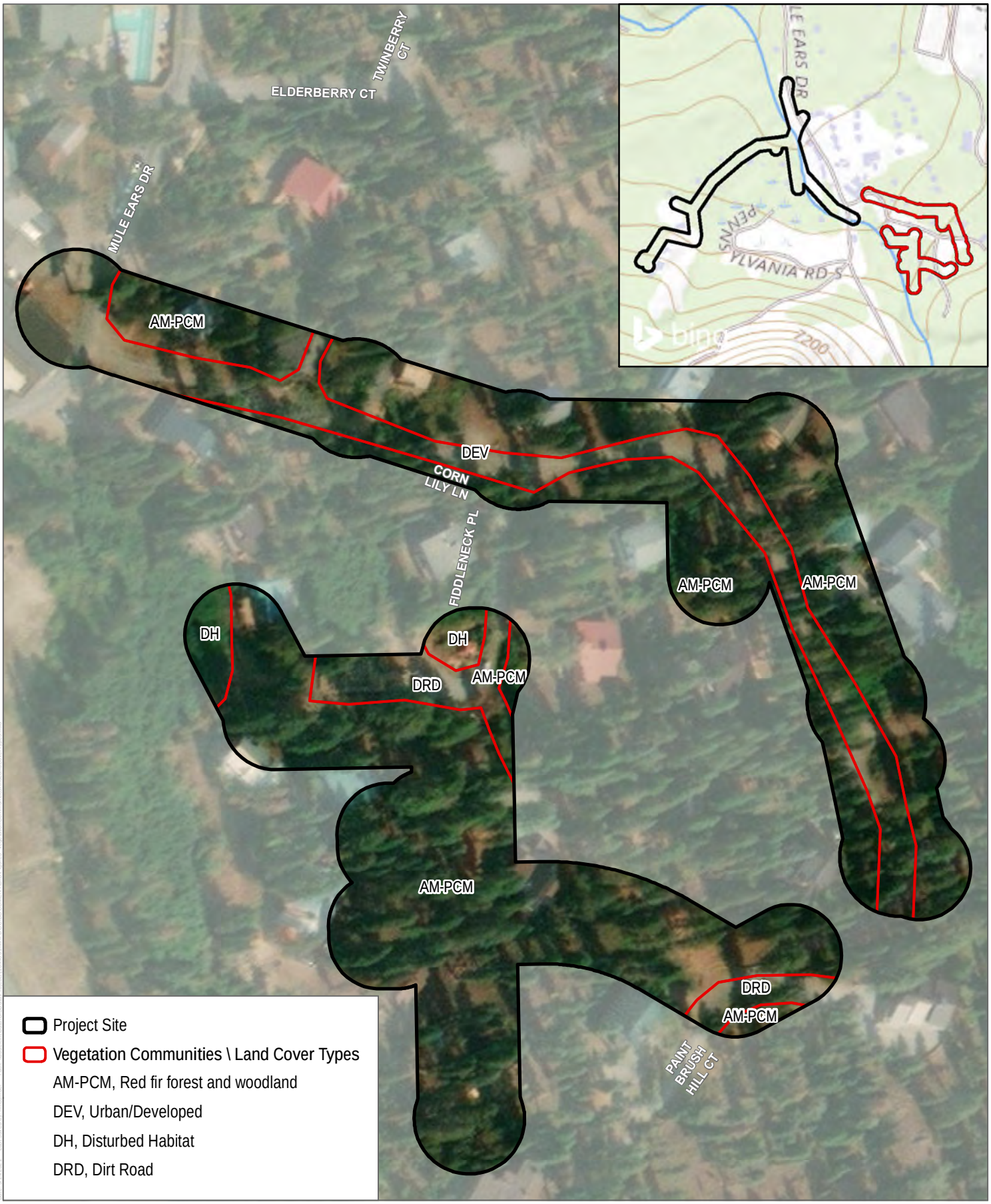
1:3,000

FIGURE 5-1

Vegetation Communties and Land Cover Types

DSPUD Sugar Bowl Sewer Collection System Project



SOURCE: Bing Maps (Accessed 2021), Placer County 2017

DUDEK

0 62.5 125 Feet
0 15 30 Meters
1:1,500

FIGURE 5-2

Vegetation Communities and Land Cover Types

DSPUD Sugar Bowl Sewer Collection System Project

Coordinate System: NAD 1983 State Plane Zone II
Projection: Lambert Conformal Conic
Datum: North American 1983 (2011)
Vertical Datum: NAVD 88, U.S. Feet
1 inch = 150 feet

Created on September 21st, 2021

Made in accordance with the
Updated Map and Drawing Standards for the South Pacific Division Regulatory Program,
as amended on February 10, 2016, by:
Jason Deters, Project Manager
Enforcement and Special Projects Unit
U.S. Army Corps of Engineers
South Pacific Division
Sacramento District, Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2922

SOURCE: Esri Basemap (Accessed 2021), Placer County 2017

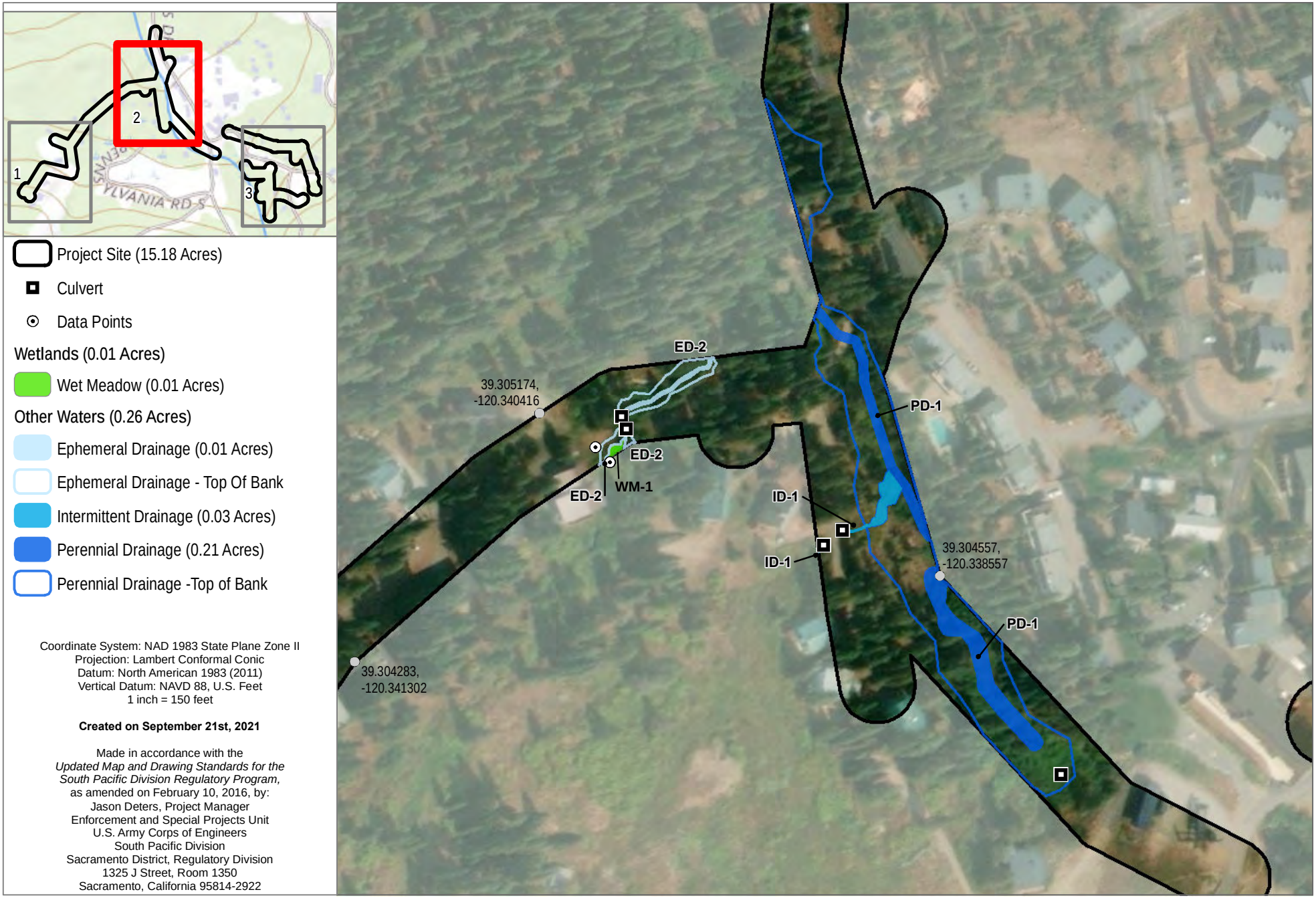
DUDEK

0 85 170 Feet

FIGURE 6-1

Aquatic Resources Delineation

DSPUD Sugar Bowl Sewer Collection System Project



Coordinate System: NAD 1983 State Plane Zone II
Projection: Lambert Conformal Conic
Datum: North American 1983 (2011)
Vertical Datum: NAVD 88, U.S. Feet
1 inch = 150 feet

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SOURCE: Esri Basemap (Accessed 2021), Placer County 2017

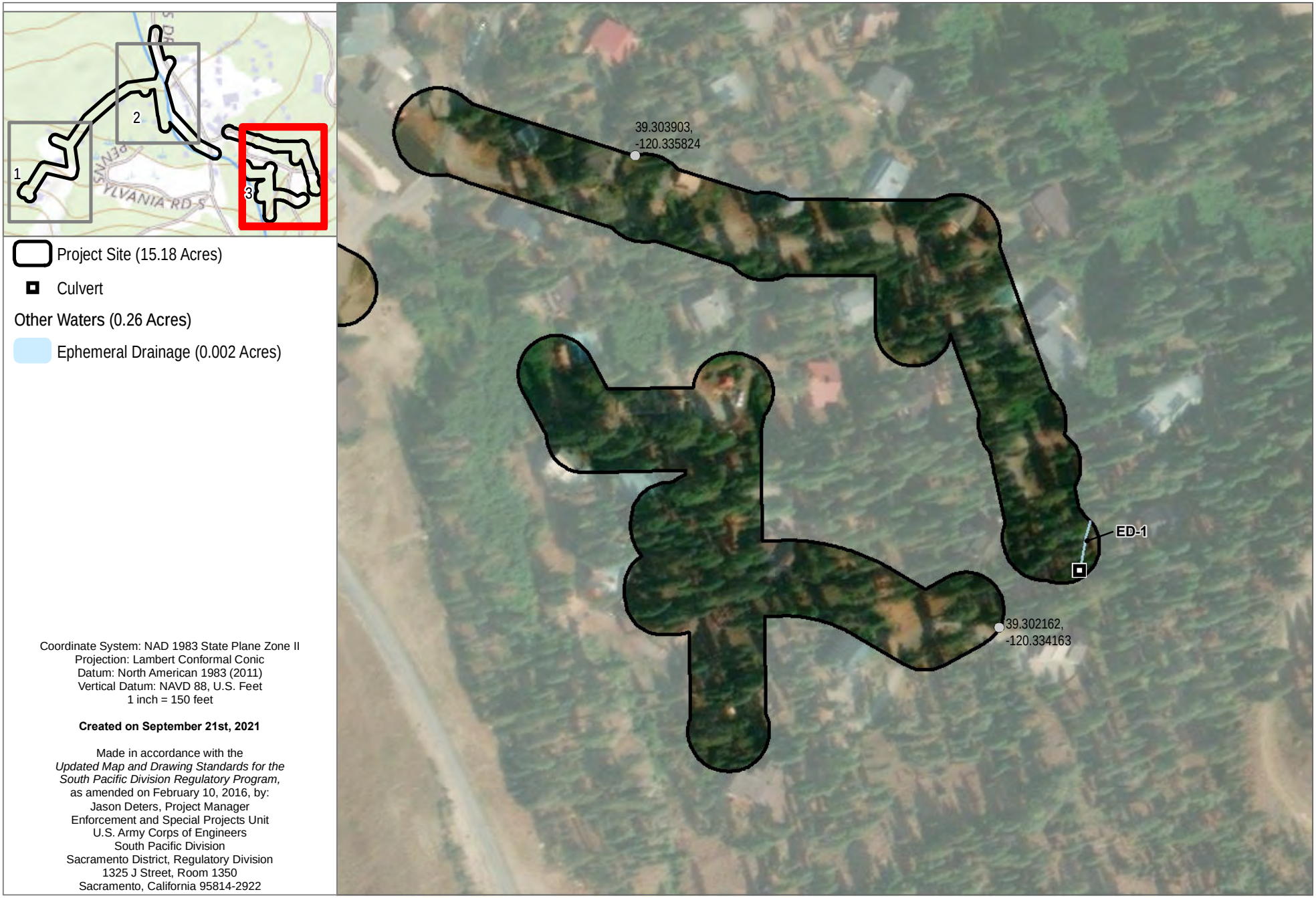
DUDEK

0 85 170 Feet

FIGURE 6-2

Aquatic Resources Delineation

DSPUD Sugar Bowl Sewer Collection System Project



SOURCE: Esri Basemap (Accessed 2021), Placer County 2017

DUDEK

0 85 170 Feet

FIGURE 6-3

Aquatic Resources Delineation

DSPUD Sugar Bowl Sewer Collection System Project

Attachment A

Special-Status Plant Species Potential to Occur in the Project Site Region

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Ambystoma macrodactylum sigillatum	southern long-toed salamander	None/SSC	High elevation along the northern Sierra Nevada south to Garner Meadows in alpine meadows and high mountain ponds and lakes.	**Not expected to occur**. Project site is within historic range; however, there are no ponds or lakes within the project site.
Rana boylii	foothill yellow-legged frog	None/SSC, SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland within the foothills	**Not expected to occur**. Suitable rocky stream habitat is present - project footprint is adjacent to Lake Mary and the Yuba River. Recorded incidence within <10 years in Tahoe National Forest. Site above typical elevation range.
Rana sierrae	Sierra Nevada yellow-legged frog	FE/ST, WL	Lakes, ponds, meadow streams, isolated pools, and open riverbanks	**Low potential to occur**. Marginally suitable habitat is present in the perennial stream onsite; however, the riparian canopy provides heavy shade for this stream, thus reducing the likelihood of occurrence. The project footprint is adjacent to Lake Mary and the Yuba River. 2021 occurrence reported just outside of Kingvale.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	**Moderate potential to occur**. Suitable nesting habitat is present within the project site. Multiple recent occurrences have been reported in and near Soda Springs.
Accipiter gentilis (nesting)	northern goshawk	None/SSC	Nests primarily in middle- and higher-elevation dense conifer forests; winters at lower elevations along coast,	**Low potential to nest**. Suitable habitat is present, however this species is typically intolerant of disturbance near the nest site and thus would not be

			foothills, and northern deserts in riparian and pinyon–juniper woodland	expected to nest near existing development. 2021 occurrence reported in Tahoe National Forest and in 2016 in Nevada County.
Antigone canadensis tabida (nesting & wintering)	greater sandhill crane	None/FP, ST	Winter foraging in cropland, grazed and mowed grassland, pasture, alfalfa fields, and shallow wetlands; roosting sites are flooded and support several inches of water	**Not expected to nest or winter**. No recent or historical reported occurrences in proximity to project site. The site is outside of the geographical range of this species according to some range maps. Project site is within existing developed residential area.
Cypseloides niger (nesting)	black swift	BCC/SSC	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	**Not expected to occur**. No suitable vegetation present for nesting.
Empidonax traillii (nesting)	willow flycatcher	BCC/SE	Nests in wet meadow and montane willow riparian	**Low potential to occur.** There is a small amount of suitable nesting habitat present, and the species is relatively rare. Thus, there is low potential for this species to nest within the project site. 2020 occurrence reported south of Soda Springs and east of Donner <3 miles from the project site.
Haliaeetus leucocephalus (nesting & wintering)	bald eagle	FPD, BCC/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	**Moderate potential to occur, low potential to nest**. Suitable habitat is present for nesting, however the species tends to reuse existing nest sites. The species would be most likely to occur briefly in the project site and would be expected to spend more time closer to larger bodies of water outside of the project site. Several recent occurrences reported (2019, 2020,

				2021) just outside of Norden <3 miles from the project site.
Histrionicus histrionicus (nesting)	harlequin duck	None/SSC	Wintering habitat includes coastal rocky shorelines, shallow intertidal rocky benches, and cobble beaches; rests on riverbanks; nests along shores of shallow, swift rivers	**Not expected to occur**. Suitable habitat is present within 1 mile of project footprint. However, no recent occurrences have been reported. The current breeding range of this species is generally north of California.
Pandion haliaetus (nesting)	osprey	None/WL	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	**Not expected to nest.** This species typically reuses nest sites year after year and is not expected to nest within the project site. Stick nests are large and conspicuous. The species would be most likely to occur briefly in the project site and would be expected to spend more time closer to larger bodies of water outside of the project site. Known to occur in Donner Memorial State Park. Several recent occurrences reported (2019, 2020, 2021) just outside of Norden <3 miles from the project site.
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	**Low potential to occur**. There is a small amount of suitable nesting habitat (riparian vegetation) present within the project site. Known to occur in Donner Memorial State Park. Recent occurrences reported (2019) just outside of Norden <3 miles from the project site.
Fishes				
Catostomus platyrhynchus	mountain sucker	None/SSC	Restricted to the Lahontan drainage system and the north fork of the Feather River	**Not expected to occur**. Although aquatic habitat onsite provides

				potential habitat, populations in the region are declining and less common than previously thought (Moyle et al. 2015). The study area is outside the currently known geographic range for this species..
Oncorhynchus clarkii henshawi	Lahontan cutthroat trout	FT/None	Variety of coldwater habitats; large terminal alkaline lakes, alpine lakes, slow meandering rivers, mountain rivers, and small headwater tributary streams	**Not expected to occur** within project footprint. Portion of distribution resides in the Truckee River drainage in Lahontan Basin. Recent occurrences reported just northeast of Carpenter Valley.
Prosopium williamsoni	mountain whitefish	None/SSC	Tributaries east of the Sierra Nevada Mountains	**Not expected to occur** within project footprint. Portion of distribution resides in the Truckee River drainage. Recent occurrences reported in Reno, NV and just south of Lake Tahoe.
Siphateles bicolor pectinifer	Lahontan Lake tui chub	None/SSC	Inhabits large, deep lakes; tolerates a wide range of physiochemical water conditions	**Not expected to occur** within project footprint. Historic distribution resides between Pyramid Lake and Lake Tahoe in the Truckee River drainage. Recent occurrences reported just south of Lake Tahoe (2018).
Mammals				
Aplodontia rufa californica	Sierra Nevada mountain beaver	None/SSC	Wooded, moist habitats with herbaceous plants along slopes of ridges and gullies; brushy successional stages of most coniferous communities	**Not expected to occur.** Suitable habitat is present within 3 miles of the project footprint but, historic range is limited to the eastern slope of the Sierra Nevada range at high elevation.
Gulo gulo	California wolverine	None/FP, ST	Douglas-fir, red fir, lodgepole, subalpine conifer, alpine dwarf shrub, mixed-conifer, and barren habitats	**Low potential to occur**. Suitable physical habitat is present, and the project footprint is within historic range. Potential to occur is low since the area experiences moderate human

				disturbance from surrounding development and recreational activities. Last recorded occurrence was north of Truckee in 2018.
Lasionycteris noctivagans	silver-haired bat	None/None	Old-growth forest, maternity roosts in trees, large snags 50 feet aboveground; hibernates in hollow trees, rock crevices, buildings, mines, caves, and under sloughing bark; forages in or near coniferous or mixed deciduous forest, stream or river drainages	**High potential to occur.** Suitable habitat is present. 2018 occurrence reported between Independence Lake and Highway 89.
Lepus americanus tahoensis	Sierra Nevada snowshoe hare	None/SSC	Riparian with thickets of deciduous trees such as alders and willows, dense thickets of conifers, and sometimes ceanothus and manzanita	**Low potential to occur**. Small amount of suitable habitat (willow thickets) within the project area. Several recent sightings (<20 years) in Placer County and around Lake Tahoe.
Lepus townsendii townsendii	western white-tailed jackrabbit	None/SSC	Open forests and sagebrush–grassland	**Not expected to occur**. Suitable habitat is present within the project footprint, but this species is primarily limited to the crests and eastern slopes of the Sierra Nevada. Project site is within historic range, but this species is believed to be extirpated from Placer County (NatureServe 2019).
Myotis volans	long-legged myotis	None/None	Primarily coniferous forests, but also seasonally in riparian and desert habitats; roosts in crevices in cliffs, caves, mines, buildings, exfoliating tree bark, and snags	**High potential to occur**. Suitable habitat is present within the project footprint and work area within historic range.
Pekania pennanti	fisher	None/SSC	Ranges widely in forested regions; uses heavy stands of mixed species of mature trees	**Not expected to occur.** The species' distribution in CA is represented by two populations: the northwestern CA and the southern Sierra Nevada

				populations. Fishers apparently no longer inhabit the area between the Pit River in the northern Sierra Nevada/Cascades to the Merced River in the southern Sierra Nevada. There is little empirical evidence that fishers previously inhabited this gap in the Sierra Nevada (CDFW 2010). Fishers have not been recorded in this region in more than 30 years.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Not expected to occur.** While the site is within the historic range for this species, there is no suitable habitat present within the project site.
Vulpes vulpes necator	Sierra Nevada red fox	FPE/ST	Barren, conifer, and shrub habitats at high elevations during summer and red fir, mixed-conifer, montane chaparral, and white fir forests during winter	**Low potential to occur**. The project site is in an area experiences moderate human disturbance from surrounding development and recreational activities and therefore provides only marginal habitat. Project footprint is within historic range.
Invertebrates				
Bombus occidentalis	western bumble bee	None/SCE	Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease	**Low potential to occur** due to declining populations. Project footprint is within historic range for this species.

Attachment B

Special-Status Wildlife Species Potential to Occur in the Project Site Region

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Ambystoma macrodactylum sigillatum	southern long-toed salamander	None/SSC	High elevation along the northern Sierra Nevada south to Garner Meadows in alpine meadows and high mountain ponds and lakes.	**Not expected to occur**. Project site is within historic range; however, there are no ponds or lakes within the project site.
Rana boylii	foothill yellow-legged frog	None/SSC, SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland within the foothills	**Not expected to occur**. Suitable rocky stream habitat is present - project footprint is adjacent to Lake Mary and the Yuba River. Recorded incidence within <10 years in Tahoe National Forest. Site above typical elevation range.
Rana sierrae	Sierra Nevada yellow-legged frog	FE/ST, WL	Lakes, ponds, meadow streams, isolated pools, and open riverbanks	**Low potential to occur**. Marginally suitable habitat is present in the perennial stream onsite; however, the riparian canopy provides heavy shade for this stream, thus reducing the likelihood of occurrence. The project footprint is adjacent to Lake Mary and the Yuba River. 2021 occurrence reported just outside of Kingvale.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	**Moderate potential to occur**. Suitable nesting habitat is present within the project site. Multiple recent occurrences have been reported in and near Soda Springs.
Accipiter gentilis (nesting)	northern goshawk	None/SSC	Nests primarily in middle- and higher-elevation dense conifer forests; winters at lower elevations along coast,	**Low potential to nest**. Suitable habitat is present, however this species is typically intolerant of disturbance near the nest site and thus would not be

			foothills, and northern deserts in riparian and pinyon–juniper woodland	expected to nest near existing development. 2021 occurrence reported in Tahoe National Forest and in 2016 in Nevada County.
Antigone canadensis tabida (nesting & wintering)	greater sandhill crane	None/FP, ST	Winter foraging in cropland, grazed and mowed grassland, pasture, alfalfa fields, and shallow wetlands; roosting sites are flooded and support several inches of water	**Not expected to nest or winter**. No recent or historical reported occurrences in proximity to project site. The site is outside of the geographical range of this species according to some range maps. Project site is within existing developed residential area.
Cypseloides niger (nesting)	black swift	BCC/SSC	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	**Not expected to occur**. No suitable vegetation present for nesting.
Empidonax traillii (nesting)	willow flycatcher	BCC/SE	Nests in wet meadow and montane willow riparian	**Low potential to occur.** There is a small amount of suitable nesting habitat present, and the species is relatively rare. Thus, there is low potential for this species to nest within the project site. 2020 occurrence reported south of Soda Springs and east of Donner <3 miles from the project site.
Haliaeetus leucocephalus (nesting & wintering)	bald eagle	FPD, BCC/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	**Moderate potential to occur, low potential to nest**. Suitable habitat is present for nesting, however the species tends to reuse existing nest sites. The species would be most likely to occur briefly in the project site and would be expected to spend more time closer to larger bodies of water outside of the project site. Several recent occurrences reported (2019, 2020,

				2021) just outside of Norden <3 miles from the project site.
Histrionicus histrionicus (nesting)	harlequin duck	None/SSC	Wintering habitat includes coastal rocky shorelines, shallow intertidal rocky benches, and cobble beaches; rests on riverbanks; nests along shores of shallow, swift rivers	**Not expected to occur**. Suitable habitat is present within 1 mile of project footprint. However, no recent occurrences have been reported. The current breeding range of this species is generally north of California.
Pandion haliaetus (nesting)	osprey	None/WL	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	**Not expected to nest.** This species typically reuses nest sites year after year and is not expected to nest within the project site. Stick nests are large and conspicuous. The species would be most likely to occur briefly in the project site and would be expected to spend more time closer to larger bodies of water outside of the project site. Known to occur in Donner Memorial State Park. Several recent occurrences reported (2019, 2020, 2021) just outside of Norden <3 miles from the project site.
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	**Low potential to occur**. There is a small amount of suitable nesting habitat (riparian vegetation) present within the project site. Known to occur in Donner Memorial State Park. Recent occurrences reported (2019) just outside of Norden <3 miles from the project site.
Fishes				
Catostomus platyrhynchus	mountain sucker	None/SSC	Restricted to the Lahontan drainage system and the north fork of the Feather River	**Not expected to occur**. Although aquatic habitat onsite provides

				potential habitat, populations in the region are declining and less common than previously thought (Moyle et al. 2015). The study area is outside the currently known geographic range for this species..
Oncorhynchus clarkii henshawi	Lahontan cutthroat trout	FT/None	Variety of coldwater habitats; large terminal alkaline lakes, alpine lakes, slow meandering rivers, mountain rivers, and small headwater tributary streams	**Not expected to occur** within project footprint. Portion of distribution resides in the Truckee River drainage in Lahontan Basin. Recent occurrences reported just northeast of Carpenter Valley.
Prosopium williamsoni	mountain whitefish	None/SSC	Tributaries east of the Sierra Nevada Mountains	**Not expected to occur** within project footprint. Portion of distribution resides in the Truckee River drainage. Recent occurrences reported in Reno, NV and just south of Lake Tahoe.
Siphateles bicolor pectinifer	Lahontan Lake tui chub	None/SSC	Inhabits large, deep lakes; tolerates a wide range of physiochemical water conditions	**Not expected to occur** within project footprint. Historic distribution resides between Pyramid Lake and Lake Tahoe in the Truckee River drainage. Recent occurrences reported just south of Lake Tahoe (2018).
Mammals				
Aplodontia rufa californica	Sierra Nevada mountain beaver	None/SSC	Wooded, moist habitats with herbaceous plants along slopes of ridges and gullies; brushy successional stages of most coniferous communities	**Not expected to occur.** Suitable habitat is present within 3 miles of the project footprint but, historic range is limited to the eastern slope of the Sierra Nevada range at high elevation.
Gulo gulo	California wolverine	None/FP, ST	Douglas-fir, red fir, lodgepole, subalpine conifer, alpine dwarf shrub, mixed-conifer, and barren habitats	**Low potential to occur**. Suitable physical habitat is present, and the project footprint is within historic range. Potential to occur is low since the area experiences moderate human

				disturbance from surrounding development and recreational activities. Last recorded occurrence was north of Truckee in 2018.
Lasionycteris noctivagans	silver-haired bat	None/None	Old-growth forest, maternity roosts in trees, large snags 50 feet aboveground; hibernates in hollow trees, rock crevices, buildings, mines, caves, and under sloughing bark; forages in or near coniferous or mixed deciduous forest, stream or river drainages	**High potential to occur.** Suitable habitat is present. 2018 occurrence reported between Independence Lake and Highway 89.
Lepus americanus tahoensis	Sierra Nevada snowshoe hare	None/SSC	Riparian with thickets of deciduous trees such as alders and willows, dense thickets of conifers, and sometimes ceanothus and manzanita	**Low potential to occur**. Small amount of suitable habitat (willow thickets) within the project area. Several recent sightings (<20 years) in Placer County and around Lake Tahoe.
Lepus townsendii townsendii	western white-tailed jackrabbit	None/SSC	Open forests and sagebrush–grassland	**Not expected to occur**. Suitable habitat is present within the project footprint, but this species is primarily limited to the crests and eastern slopes of the Sierra Nevada. Project site is within historic range, but this species is believed to be extirpated from Placer County (NatureServe 2019).
Myotis volans	long-legged myotis	None/None	Primarily coniferous forests, but also seasonally in riparian and desert habitats; roosts in crevices in cliffs, caves, mines, buildings, exfoliating tree bark, and snags	**High potential to occur**. Suitable habitat is present within the project footprint and work area within historic range.
Pekania pennanti	fisher	None/SSC	Ranges widely in forested regions; uses heavy stands of mixed species of mature trees	**Not expected to occur.** The species' distribution in CA is represented by two populations: the northwestern CA and the southern Sierra Nevada

				populations. Fishers apparently no longer inhabit the area between the Pit River in the northern Sierra Nevada/Cascades to the Merced River in the southern Sierra Nevada. There is little empirical evidence that fishers previously inhabited this gap in the Sierra Nevada (CDFW 2010). Fishers have not been recorded in this region in more than 30 years.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Not expected to occur.** While the site is within the historic range for this species, there is no suitable habitat present within the project site.
Vulpes vulpes necator	Sierra Nevada red fox	FPE/ST	Barren, conifer, and shrub habitats at high elevations during summer and red fir, mixed-conifer, montane chaparral, and white fir forests during winter	**Low potential to occur**. The project site is in an area experiences moderate human disturbance from surrounding development and recreational activities and therefore provides only marginal habitat. Project footprint is within historic range.
Invertebrates				
Bombus occidentalis	western bumble bee	None/SCE	Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease	**Low potential to occur** due to declining populations. Project footprint is within historic range for this species.

Attachment C

Representative Project Site Photographs

Photo Number 1. Crossing of perennial drainage, facing southwest.

Photo Number 2. Wet meadow adjacent to ephemeral drainage, facing southwest.

Photo Number 3. Typical view of developed habitat within the project site, facing south.

Photo Number 4. Lemmon's willow thicket adjacent to the intermittent drainage and gravel roads, facing west.

Photo Number 5. Typical view of residential development with remnant mixed fir forest in the western end of the project area, facing northeast.

Photo Number 6. View of ephemeral drainage in the eastern portion of the project site, facing east.

Photo Number 7. Typical view of the perennial drainage and associated riparian corridor, facing south.

Photo Number 8. Typical view of residential development with remnant mixed fir forest in the eastern end of the project area, facing west.

Attachment D

List of Plant and Wildlife Species Observed

Plant Species

Angiosperms (Dicots)

ADOXACEAE—MUSKROOT FAMILY

Sambucus racemosa—red elderberry

APIACEAE—CARROT FAMILY

Angelica breweri—Brewer's angelica
Heracleum maximum—common cowparsnip
Perideridia parishii—Parish's yampah

APOCYNACEAE—DOGBANE FAMILY

Apocynum androsaemifolium—spreading dogbane

ASTERACEAE—SUNFLOWER FAMILY

Achillea millefolium—common yarrow
Adenocaulon bicolor—American trailplant
Agoseris aurantiaca—orange agoseris
Anaphalis margaritacea—western pearly everlasting
Arnica discoidea—rayless arnica
Arnica mollis—hairy arnica
Cirsium andersonii—rose thistle
Erigeron glacialis—subalpine fleabane
Erigeron inornatus—California rayless fleabane
Eurybia integrifolia—thickstem aster
Gnaphalium palustre—western marsh cudweed
Heliomeris multiflora—showy goldeneye
Hieracium albiflorum—white hawkweed
Madia elegans—common madia
Madia glomerata—mountain tarweed
Madia gracilis—grassy tarweed
Solidago velutina—threenerve goldenrod
Symphyotrichum spathulatum—western mountain aster
Wyethia mollis—woolly mule-ears

BETULACEAE—BIRCH FAMILY

Alnus incana—mountain alder

BORAGINACEAE—BORAGE FAMILY

* *Anchusa officinalis—common bugloss*

Hackelia velutina—velvet stickseed

Phacelia hastata—silverleaf phacelia

CAPRIFOLIACEAE—HONEYSUCKLE FAMILY

Lonicera conjugialis—purpleflower honeysuckle

CARYOPHYLLACEAE—PINK FAMILY

* *Spergularia rubra—red sandspurry*

CORNACEAE—DOGWOOD FAMILY

Cornus sericea—red osier

ERICACEAE—HEATH FAMILY

Chimaphila menziesii—little prince's pine

FABACEAE—LEGUME FAMILY

Hosackia oblongifolia—streambank bird's-foot trefoil

* *Lotus corniculatus—bird's-foot trefoil*

Lupinus latifolius—broadleaf lupine

Lupinus lepidus—Pacific lupine

* *Trifolium hirtum—rose clover*

* *Trifolium hybridum—alsike clover*

GROSSULARIACEAE—GOOSEBERRY FAMILY

Ribes nevadense—Sierra currant

Ribes roezlii—Sierra gooseberry

HYPERICACEAE—ST. JOHN'S WORT FAMILY

Hypericum anagalloides—tinker's penny

* *Hypericum perforatum—common St. Johnswort*

LAMIACEAE—MINT FAMILY

Monardella odoratissima—mountain monardella

LINACEAE—FLAX FAMILY

Linum lewisii—Lewis flax

MALVACEAE—MALLOW FAMILY

Sidalcea glaucescens—waxy checkerbloom

MONTIACEAE—MONTIA FAMILY

Calyptridium monandrum—common pussypaws

ONAGRACEAE—EVENING PRIMROSE FAMILY

Chamerion angustifolium—fireweed
Epilobium brachycarpum—tall annual willowherb
Gayophytum diffusum ssp. parviflorum—spreading groundsmoke

OROBANCHACEAE—BROOM-RAPE FAMILY

Castilleja miniata—giant red Indian paintbrush

PHRYMACEAE—LOPSEED FAMILY

Erythranthe erubescens—no common name
Erythranthe guttata—common monkey flower
Erythranthe moschata—muskflower
Erythranthe tilingii—Tiling's monkeyflower

PLANTAGINACEAE—PLANTAIN FAMILY

Penstemon heterophyllus—bunchleaf penstemon
* *Plantago major—common plantain*

POLEMONIACEAE—PHLOX FAMILY

Collomia linearis—tiny trumpet
Ipomopsis aggregata—scarlet gilia
Microsteris gracilis—slender phlox

POLYGONACEAE—BUCKWHEAT FAMILY

Eriogonum umbellatum var. nevadense—sulphur-flower buckwheat
Persicaria lapathifolia—smartweed
* *Polygonum aviculare—prostrate knotweed*
Polygonum polygaloides ssp. confertiflorum—fruitleaf knotweed
* *Rumex acetosella—common sheep sorrel*

RANUNCULACEAE—BUTTERCUP FAMILY

Aconitum columbianum—Columbian monkshood
Aquilegia formosa—western columbine
Delphinium nuttallianum—twolobe larkspur

ROSACEAE—ROSE FAMILY

Drymocallis lactea—Nevada cinquefoil
* *Potentilla recta—sulphur cinquefoil*
Rubus parviflorus—thimbleberry

SALICACEAE—WILLOW FAMILY

Salix eastwoodiae—Sierran willow

Salix lasiolepis—arroyo willow
Salix lemmonii—Lemmon's willow

Angiosperms (Monocots)

CYPERACEAE—SEDGE FAMILY

Carex heteroneura—different-nerve sedge
Carex pellita—woolly sedge
Carex rossii—Ross' sedge

JUNCACEAE—RUSH FAMILY

Luzula parviflora—smallflowered woodrush

LILIACEAE—LILY FAMILY

Lilium parvum—Sierra tiger lily

MELANTHIACEAE—FALSE HELLEBORE FAMILY

Veratrum californicum—white corn lily

POACEAE—GRASS FAMILY

Agrostis idahoensis—Idaho bentgrass
Bromus ciliatus—fringed brome
Deschampsia danthonioides—annual hairgrass
Elymus elymoides—squirreltail
Elymus glaucus—blue wildrye
* *Festuca myuros—rat-tail fescue*
Hordeum brachyantherum—meadow barley
* *Phalaris aquatica—Harding grass*
Trisetum spicatum—spike trisetum

RUSCACEAE—LILY-OF-THE-VALLEY FAMILY

Maianthemum stellatum—starry false lily of the valley

Gymnosperms

PINACEAE—PINE FAMILY

Abies concolor—white fir
Abies magnifica—red fir
Pinus monticola—western white pine

Wildlife Species – Vertebrates

Reptiles

IGUANIDAE – IGUANID LIZARDS

Sceloporus occidentalis – western fence lizard

Birds

CARDINALIDAE – CARDINALS

Piranga ludoviciana – western tanager

CATHARTIDAE – NEW WORLD VULTURES

Cathartes aura – turkey vulture

COLUMBIDAE – PIGEONS AND DOVES

Zenaida macroura – mourning dove

CORVIDAE – JAYS AND CROWS

Corvus brachyrhynchos – American crow

Corvus corvax – common raven

Cyanocitta stelleri – Steller's jay

FRINGILLIDAE – FINCHES

Carpodacus mexicanus – house finch

Carduelis psaltria – lesser goldfinch

PASSERELLIDAE – PASSERINES

Junco hyemalis – dark-eyed junco

PHASIANIDAE – PHEASANTS AND QUAILS

Callipepla californica – California quail

PICIDAE – PHEASANTS AND QUAILS

Colaptes auratus – northern flicker

* signifies introduced (non-native) species

Appendix E

E - Cultural Resources Assessment

CULTURAL RESOURCES INVENTORY REPORT
for the
SUGAR BOWL SEWER COLLECTION SYSTEM PROJECT, PLACER COUNTY, CALIFORNIA

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Cultural Resources Inventory Report for the Sugar Bowl Sewer Collection System Project, Placer County, California

NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION

Authors: Adam Giacinto, MA, RPA and Ross Owen, MA, RPA

Firm: Dudek

Project Proponent: Auerbach Engineering Corp.

Report Date: September 2021

Report Title: Cultural Resources Inventory Report for the Sugar Bowl Sewer Collection System Project, Placer County, California

Type of Study: Archaeological Inventory

Resources: P-31-000825 (Emigrant Trail)

USGS Quads: Norden, California 1:24,000; T 17N, R 14E, Sections 20, 21, 25, 28, 29, 36

Acreage: 33.9

Permit Numbers: Pending

Keywords: Norden USGS 7.5-Minute Quadrangle; Emigrant Trail; P-31-000825; Intensive Pedestrian Survey

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MANAGEMENT SUMMARY

Sugar Bowl Resort (Resort) is proposing to develop a sewer collection system servicing private residences located on the Resort property in eastern Placer County, California. Auerbach Engineering Corporation contracted Dudek to perform a Phase I cultural resource inventory for the project. This cultural resources inventory report was conducted in compliance with the California Environmental Quality Act (CEQA), for which the Donner Summit Public Utility District is the lead reviewing agency responsible for compliance. To account for potential review by the U.S. Army Corps of Engineers, work has also been completed in compliance with Section 106 of the National Historic Preservation Act (NHPA).

The proposed Sugar Bowl Sewer Collection System Project (Project) is focused on infrastructure development within the Resort. Most or all of this work is planned to occur within existing roads. The Project site is located near the crest of the Sierra Nevada at the base of Mounts Judah and Lincoln. Specifically, the project site is located in Township 17N, Range 14E, and Sections 20, 21, 25, 28, 29, and 36 of the "Norden, CA" U.S. Geological Survey 7.5-minute quadrangle.

The Project Area of Potential Effect (APE) is approximately 33.9 acres, although the direct Project footprint will be smaller, falling within the existing roads where sewer improvements and staging are planned to occur. For the purposes of providing management recommendations, the vertical APE, as represented by the maximum depth of disturbance, is assumed to be 15 feet below the existing ground surface, though the maximum depth of disturbance is not likely to exceed 3 feet below the existing road surface in most areas.

This study consisted of a records search of the APE and a half-mile radius, a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search, and an intensive pedestrian survey of the APE. A North Central Information Center (NCIC) records search identified a portion of the Emigrant Trail (P-31-000825) within the APE; and an additional 23 previously recorded resources have been identified within a half-mile area. A NAHC SLF search was negative for the presence of any Native American cultural resources within the half-mile search area. A record of tribal outreach is on file with the Donner Summit Public Utility District. An intensive-level pedestrian survey conducted of the APE confirmed the presence of two portions of the Emigrant Trail within the APE. However, these segments fall outside the existing roadway and can be avoided by the project. Based on these results, no cultural resources will be impacted (No Historic Properties Affected) by the Project. Recommended management strategies to be applied through the duration of Project earth disturbing activities include establishing an exclusionary Environmentally Sensitive Area (ESA) boundary along the edge of the existing road within 50 feet of the two

Emigrant Trail segments and application of standard measure for protection of archaeological resources in the event of an unanticipated discovery.

Cultural Resources Inventory Report for the Sugar Bowl Sewer Collection System Project, Placer County, California

1 INTRODUCTION

1.1 Project Location and Description

Sugar Bowl Resort is proposing to develop a sewer collection system servicing private residences located on the Resort property in eastern Placer County, California. Auerbach Engineering Corporation contracted with Dudek to perform a Phase I cultural resource inventory for the project. This cultural resources inventory report was conducted in compliance with CEQA, for which the Donner Summit Public Utility District is the lead agency responsible for compliance. To account for potential review by the USACE, work has also been completed in compliance with Section 106 of the NHPA.

The proposed Sugar Bowl Sewer Collection System Project (Project) is focused on infrastructure development within the Resort. Most or all of this work is planned to occur within existing roads. The project site is located near the crest of the Sierra Nevada at the base of Mounts Judah and Lincoln. Specifically, the project site is located in Township 17N, Range 14E, and Sections 20, 21, 25, 28, 29, and 36 of the "Norden, CA" U.S. Geological Survey 7.5-minute quadrangle (Figure 1, Project Location).

The Project APE considered in the present study is approximately 33.9 acres, although the direct Project footprint will be smaller, falling within the existing roads where sewer improvements and staging are planned to occur (Figure 2, APE Map). For the purposes of providing management recommendations, the vertical APE, as represented by the maximum depth of disturbance, is assumed to be 15 feet below the existing ground surface, though the maximum depth of disturbance is not likely to exceed 3 feet below the existing road surface in most areas.

1.2 Regulatory Context

The current cultural resources investigation was completed to satisfy both CEQA and Section 106 of NHPA.

1.2.1 National Historic Preservation Act (NHPA)

The National Register of Historic Places (NRHP) is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service (NPS), under the U.S. Department of the Interior, the NRHP was authorized under the NHPA, as amended. Its listings encompass all National Historic Landmarks, as well as historic areas administered by NPS.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

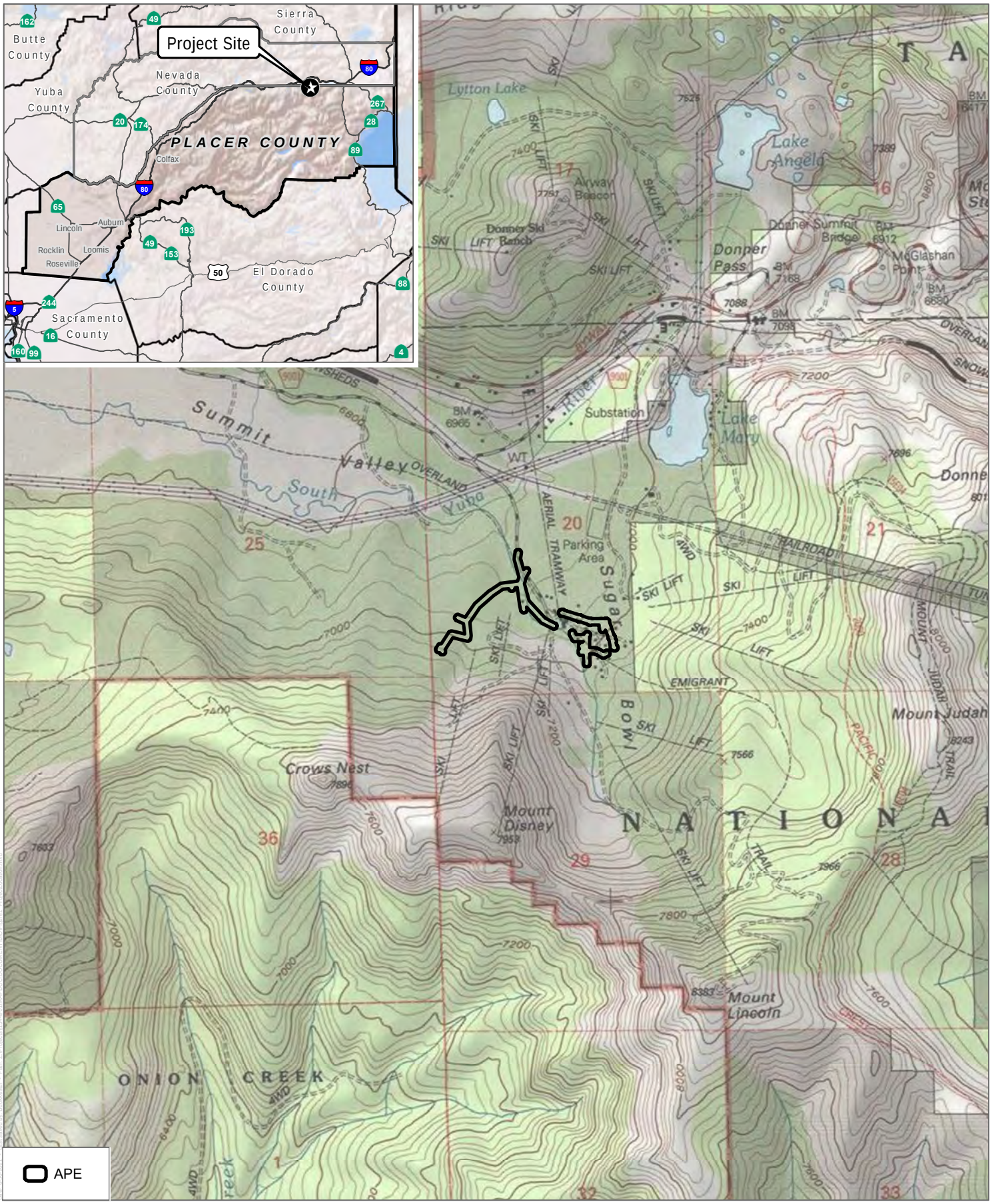
The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, information important in prehistory or history.



SOURCE: USGS 7.5-Minute Series Norden

DUDEK

0 1,000 2,000 Feet
0 285 570 Meters
1:24,000

FIGURE 1

Project Location

DSPUD Sugar Bowl Sewer Collection System Project

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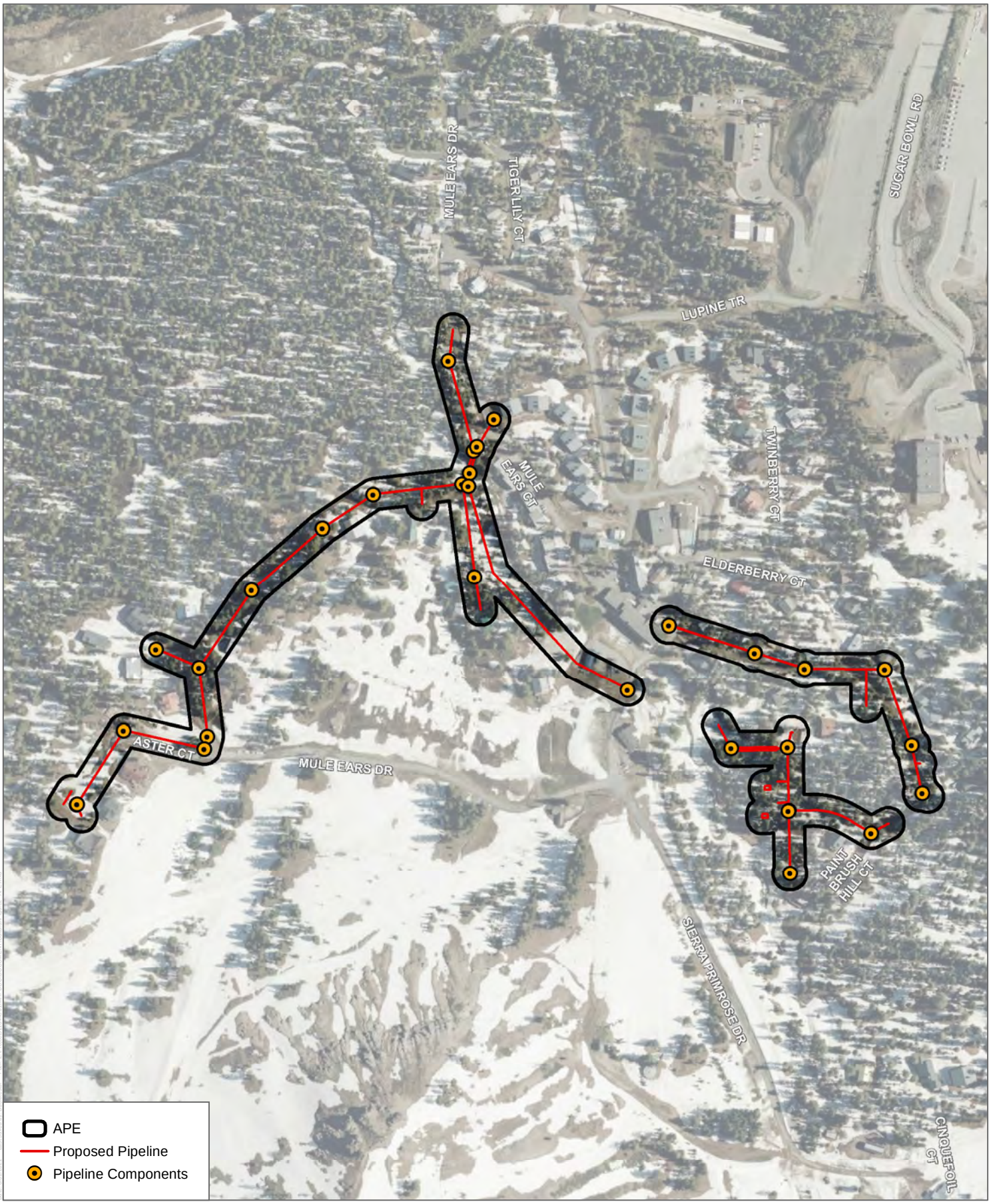

SOURCE: Bing Maps (Accessed 2021) Placer County 2017

DUDEK

0 205 410 Feet
0 55 110 Meters
1:4,896

FIGURE 2

Area of Potential Effects (APE)

DSPUD Sugar Bowl Sewer Collection System Project

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Integrity is defined in NRHP guidance, *How to Apply the National Register Criteria,* as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 2009). NRHP guidance further asserts that properties must have been completed at least 50 years before evaluation to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration G) to be considered for listing.

A historic property is defined as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria" (36 CFR Sections 800.16(i)(1)).

Effects on historic properties under Section 106 of the NHPA are defined in the assessment of adverse effects in 36 CFR Sections 800.5(a)(1):

> *An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.*

Adverse effects on historic properties are clearly defined and include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (36 CFR 800.5 (2)).

To comply with Section 106, the criteria of adverse effect are applied to historic properties, if any exist in the project Area of Potential Effect (APE), pursuant to 36 CFR Sections 800.5(a)(1). If no historic properties are identified in the APE, a finding of "no historic properties affected" will be made for the proposed project. If there are historic properties in the APE, application of the criteria of adverse effect will result in project-related findings of either "no adverse effect" or of "adverse effect," as described above. A finding of no adverse effect may be appropriate when the undertaking's effects do not meet the thresholds in criteria of adverse effect 36 CFR Sections 800.5(a)(1), in certain cases when the undertaking is modified to avoid or lessen effects, or if conditions were imposed to ensure review of rehabilitation plans for conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (codified in 36 CFR Part 68).

If adverse effects findings were expected to result from the proposed project, mitigation would be required, as feasible, and resolution of those adverse effects by consultation may occur to avoid, minimize, or mitigate adverse effects on historic properties pursuant to 36 CFR Part 800.6(a).

1.2.2 California Register of Historic Resources (CRHR) and CEQA

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." (PRC section 5020.1(j).) In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change."

(PRC section 5024.1(a).) The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

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

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than fifty years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see Cal. Code Regs., tit. 14, section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC section 21083.2(g) defines "unique archaeological resource."
- PRC section 21084.1 and CEQA Guidelines section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource;" it also defines the circumstances when a project would materially impair the significance of an historical resource.

- PRC section 21074(a) defines “tribal cultural resources.”
- PRC section 5097.98 and CEQA Guidelines section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated cemetery.

PRC sections 21083.2(b)-(c) and CEQA Guidelines section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource." (PRC section 21084.1; CEQA Guidelines section 15064.5(b).) If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA. (PRC section 21084.1; CEQA Guidelines section 15064.5(a).) The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption. (PRC section 21084.1; CEQA Guidelines section 15064.5(a).)

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." (CEQA Guidelines section 15064.5(b)(1); PR Code section 5020.1(q).) In turn, the significance of an historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

(CEQA Guidelines section 15064.5(b)(2).) Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2[a], [b], and [c]).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC section 21083.2(a); CEQA Guidelines section 15064.5(c)(4).) However, if a non-unique archaeological resource qualifies as tribal cultural resource (PRC 21074(c); 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC section 5097.98.

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those

remains. Health and Safety Code section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California Native American Heritage Commission (NAHC) within 24 hours (section 7050.5c). The NAHC will notify the Most Likely Descendant. With the permission of the landowner, the Most Likely Descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the Most Likely Descendant by the NAHC. The Most Likely Descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

1.3 Report Structure and Key Personnel

This report is divided into five chapters. Following this introduction, Chapter 2 reviews the natural environment and the cultural context and Chapter 3 provides the methods used to complete the current inventory. The records search, survey results, and tribal correspondence are discussed in Chapter 4. Chapter 5 summarizes the cultural resources work completed for this project to-date and provides recommendations for further treatment of the cultural resources consistent with CEQA and Section 106 of the NHPA. Several appendices are attached to this report. Appendix A provides resumes of key personnel; Appendix B includes confidential records search results; Appendix C contains NAHC and tribal correspondence documents. Appendix D provides ESA Maps.

Ross Owen, MA, RPA, conducted the intensive pedestrian survey and drafted the technical report. Adam Giacinto, MA, RPA acted as principal investigator, prepared management recommendations, and finalized the technical report. All archaeologists meet Secretary of the Interior Standards for archaeology and have extensive experience working within local, state, and federal regulatory contexts (Appendix A).

2 PROJECT CONTEXT

2.1 Environmental Context

The APE is located within the Sierra Nevada. Slopes are forested with lodgepole pine, Jeffrey pine, red fir, white fir and mountain hemlock. Rocky and drier areas are dominated by shrub species such as pinemat manzanita, chokecherry, gooseberry/currant, huckleberry oak, and mules ears. Wet meadows and drainages support willows, and a variety of grasses, forbs and red mountain heather. Typical fauna include mule deer, black bear, and several small mammals (Lindstrom 1988).

The entirety of the APE is within the Resort, with shared infrastructure connecting private residences to Resort facilities. Much of the APE consists of gravel and paved roads. Adjacent to the roads are forested areas with existing residential development(Figure 2). In addition to ground disturbance during residential construction, the entire APE has been subject to disturbance associated with historic logging activities.

2.2 Cultural Context

Various attempts to parse out information provided through recorded archaeological assemblages from throughout California for the past 12,000 years have led to the development of several cultural chronologies. Some of these are based on geologic time, most are interpreted through temporal trends derived from archaeological assemblages, and others are interpretive reconstructions. Each of these chronologies describes essentially similar trends in assemblage composition in more or less detail. California's archaeological assemblage composition is generally accepted as falling within the following overarching patterns: Paleoindian (pre-5500 BC), Archaic (8000 BC – AD 500), Late Prehistoric (AD 500–1750), and Ethnohistoric (post-AD 1769).

Occupation of the Sierra is likely to have occurred at least 9,000 years ago, however, only a handful of Paleoindian Period lithic bifacial points have been recorded. The nearest of these fluted points were found in Sierra Valley (west of Reno, Nevada; Foster and Betts 1996), Ebbett's Pass (south of Lake Tahoe; Dillon 2002), and at the Sailor Flat site (in the Tahoe National Forest; Wohlgemuth 1984). Fluted points from this area have generally been recorded as isolated finds, or recovered from contexts of mixed provenience. The primary examples of the Paleoindian pattern, to which such fluted and stemmed points are generally assigned, have been recorded east of the Sierra Nevada. The typical assemblage includes large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of

groundstone tools. Some of the most pertinent of such sites were studied by Emma Lou Davis (1978) on China Lake Naval Air Weapons Station, near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multicomponent fluted point site, and MNO-680—a single component Great Basined Stemmed point site (Basgall et al. 2002). At MNO-679 and MNO-680, groundstone tools were rare while finely made projectile points were common.

While the limited available data relating to the earliest occupation in the region has provided for a relatively broad and consistent interpretation of the Paleoindian Period, subsequent prehistoric temporal sequences are much more geographically defined and variable due to the greater amount of available data. The Tahoe Reach is currently the most commonly applied cultural temporal sequence within the region. This draws from regional syntheses primarily developed by both Heizer and Elsasser (1953) and Elston, Davis, and Townsend (1977). The sequence includes the Washoe Lake Phase, Tahoe Reach Phase, Spooner Phase, Martis Complex, and Kings Beach Complex (Hull 2007; Moratto 1984, 1999). Of these, the Martis Complex and the Kings Beach Complex are most applicable to the current project area.

2.2.1 Martis Complex (3000 B.C.–A.D. 500)

The Martis Complex has been identified to extend from Lassen County to Alpine County (Elsasser 1960). The date range, 3000 B.C. to approximately 500 A.D. has been substantiated by obsidian hydration and radiocarbon dates provided by Elsasser (1960). Subsistence during the Martis Complex was based on hunting and seed collecting economy, with highly mobile populations that exploited both upper and lower regions based on the relative seasonal abundance of resources. Projectile points are variable during this period, and were most commonly heavy with low formality, providing some resemblance to those identified in the Great Basin regions. Temporally representative tools include finger-held drills or punches, retouched volcanic flake scrapers, spokeshave-notched tools, and large biface blades and cores (Hull 2007). During this period, there is a more intensive exploitation of local materials, rather than non-local cherts and obsidian, for the manufacture of formed flaked tools.

2.2.2 Kings Beach Complex (A.D. 500–Historic Contact)

Similar to the Martis Complex, the Kings Beach Complex was characterized by populations that migrated between upper areas in the warmer months and lower elevations during the fall and winter. Subsistence during this period shifted toward a focus on fishing and gathering. A reduction in size and weight of projectile points corresponded with adoption of bow and arrow technology.

Typical point forms within this region included Desert Side-notched, Cottonwood, and Rosegate series (CRM 2011). Obsidian and chert replaced volcanic materials such as basalt as the preferred materials for the manufacture of lithic tools. As both high quality cherts and obsidian are not local, the greater presence of such exotic materials suggests that there was an increase in trade with neighboring tribes during this period.

The Kings Beach Complex additional included a greater reliance on exploitation of acorns. This trend is exemplified by the increased presence of bedrock mortars and pestles formed from local cobbles. It should be noted that while bedrock mortars were predominantly used for crushing and grinding acorns, they were also employed for the processing of a variety of other foods, including deer meat, camas roots and seeds (CRM 2011). While the creation of mortars indicated a relatively high investment of time and energy, bedrock milling features are found as frequently at sites with limited-to-no subsurface cultural deposits as at intensive use occupation areas with well-developed midden soils.

2.2.3 Ethnohistoric (post-AD 1750)

Washoe

The Washoe people have a deeply-rooted relationship to the Tahoe Basin and surrounding region. This group's primary use area included the areas surrounding Lake Tahoe; extending north to Honey Lake, south beyond Topaz Lake, west beyond the present Town of Truckee, and east beyond present Reno and Virginia City (Kroeber 1925). Washoe people were known to have traveled an extended area for trade and use. As is consistent with ethnographic documentation (D'Azevedo 1986), the area traditionally used for procurement and exchange of trade goods and natural resources, as well as potentially other purposes, would have extended to the western boundaries of Pyramid Lake. This area of overlap is consistent with archaeological data, which shows extensive trade between neighboring tribes as well as borrowing of lithic technologies from the surrounding Great Basin, the Sierra Nevada, and foothills regions,

Habitation areas were most commonly situated near lakes, primary drainages, along ridgelines with mild slopes and south-facing exposures (D'Azevedo 1986). Traditional village features often included enclosed house pit-style structures configured in clusters with defined resource processing/use areas (including habitation, sweat lodge, and ceremonial), cooking and storage features, rock-filled roasting pits, bedrock milling stations, as well as sweat and ceremonial houses. The dead were primarily cremated, though burials were also conducted. The Washoe had a well-defined tribal social structure, the chief (*teubeyu*) was succeeded along male lines (Kroeber 1925).

Intra-tribal boundaries overlapped, with natural resources being shared relatively freely between tribelets. Inter-tribal conflict did occur on rare occasions over resources (Wilson and Towne 1978).

The Washoe subsistence strategy was centered on fishing, hunting, and collecting vegetative resources. This group was semi-sedimentary, with larger central habitation areas and surrounding satellite sites used during hunting excursions and for pre-processing of collected plant resources such as acorns and pinyon. The Washoe seasonal cycle required large amounts of preparation for the high-elevation winters, storing high quantities of pine nuts as a primary nutrition source during this period. Core habitation areas were rich in resources, allowing lesser degree of travel to gather resources relative to surrounding tribes. Common food items included deer, bighorn sheep, rabbits, birds, bear, marmots, rodents, other mammals of small and moderate size, as well as various insects. Washoe subgroups often spread out around the shoreline of Lake Tahoe as resources became more plentiful in the Spring; the *Wel mel ti* occupied the northern shore, the *Hung a lel ti* used the south, and the *Pau wa lu* occupied the eastern and southeastern shoreline (Nevers 1976; Perry 2017). Major ceremonies included an adolescence dance for girls, and mourning ceremonies (Kroeber 1925). Common tools included the bow and arrow, traps, harpoons, hooks, nets, portable and stationary grinding implements, and pestles and handstones. Groundstone technology was used for seed, pinyon, acorn, and other resource processing; reflecting characteristics of tribal adaptations in both the western Sierras and the Great Basin. A number of goods were made using fibrous plants, including canoes constructed from tule balsa or logs. Imported items included shell ornaments and beads (particularly disk beads as a monetary unit), green pigment, tobacco, steatite items, and obsidian. Exported items included bows and arrows, basketry, animal skins, pine nuts, and other local resources (Kroeber 1925).

Washoe indigenous populations derived their linguistic roots from a Hokan stock. This language group, suggested to have a time depth of 8,000 years BP (Golla 2007), is distributed throughout the California and Nevada regions as discrete isolates. Just as with other Hokan-derived speaking groups, the Washoe language demonstrates a relatively high amount of influence from surrounding from surrounding tribal languages, specifically Maiduan and Numic linguistic groups. These later populations, as well as proceeding groups, wrapped and displaced the Hokan-speaking Washoe populations. This is indicated both culturally and by the high frequency of loan words from these surrounding populations (Golla 2007).

Nisenan

The region within and to the west of the project area would have been in Hill Nisenan (also known as the southern Maidu) tribal territory during the ethnohistoric period (Wilson and Towne 1978). This group inhabited the Yuba, Bear, and American River watersheds, extending from the Sierra

Nevada summit to the Sacramento River. Ethnographic work, most prominently conducted by Stephen Powers in the 1870s, writes of a relatively high population of indigenous inhabitance in this region (1877). Powers focused most of his energy on the 18 named villages alone along the Bear River, and indicated that there were a number of villages that he had no knowledge of outside of this area. This inference was later substantiated by interviews conducted by Hugh Littlejohn in 1928, who recorded a number of additional named habitation areas (Carlson 1986). Littlejohn did not map any known villages within the project area.

Nisenan habitation areas were most commonly situated near primary drainages, along ridgelines with mild slopes and south-facing exposures (Wilson and Towne 1978). Traditional village features included bedrock milling stations, granaries, conical house structures, as well as sweat and ceremonial houses. The dead were typically cremated and buried within the boundaries of the habitation area. Tribal groups included extended and unmarried relatives. Groups of Hill Nisenan did have defined chiefs, however, these individuals were chosen based on wealth and popularity rather than hereditary descent (Kroeber 1925). Intra-tribal boundaries overlapped, with natural resources being shared relatively freely between triblets (Carlson 1986). Inter-tribal conflict did occur over resources, and the Hill Nisenan would attack small hunting parties of Washoe that encroached too far into their territory.

The Nisenan subsistence strategy was centered on fishing, hunting, and collecting vegetative resources. This group was highly mobile, with larger central habitation areas and surrounding satellite sites used during hunting excursions and for pre-processing of collected plant resources such as acorns. Common food items included deer, rabbits, birds, bear, rodents, other mammals of small and moderate size, as well as various insects. Deer were sometimes partially processed using mortar and pestle (Kroeber 1925). A ceremony among the Hill Nisenan involved the hunting of a bear during hibernation season. Common tools included the bows and arrow, traps, harpoons, hooks, nets, portable and stationary grinding implements, and pestles and handstones. A number of goods were made using fibrous plants, including canoes constructed tule balsa or logs. Imported items included shell ornaments and beads (particularly disk beads as a monetary unit), green pigment, tobacco, steatite items, and obsidian (Wilson and Towne 1978). Exported items included bows and arrows, animal skins, pine nuts, and other local resources (Kroeber 1925).

Central California indigenous populations derived their linguistic roots from a common Penutian stock. The degree of internal variation among these three decedent language groups (Yokution, Maiduan, and Wintuan) is similar to Indo-European, suggesting a time depth of approximately 6,500 years (Golla 2007). The Nisenan spoke one of four closely related Maiduan languages, including Konkow, Chico Maidu, Mountain Maidu, and Nisenan. Shared Hokan phonological and morphological substratal components identified within all Maiduan languages indicate past

interactions between these two language populations (Hokan time depth is approximately 8,000 years). Maiduan language structure suggests that all four Maiduan languages were descended from the same proto-Maiduan speaking population to the north. The most likely scenario is that these populations spread southward in the last last1,200 years, with the Nisenan encroaching into area previously occupied by Miwok tribal groups sometime in the past few centuries (Golla 2007). This later population movement is further substantiated by the high frequency of Miwok loan words found within Nisenan vocabulary, a trait that is not shared with the other three Maiduan languages.

2.2.4 The Historic Period

Spanish Period (1769–1822)

Gaspar de Portolá entered the San Francisco Bay in 1769. Additional explorations of the San Francisco Bay and the plains to the east were conducted by Father Pedro Fages in 1772 and Juan Bautista De Anza in 1776 (Grunsky 1989). In 1808, Lieutenant Gabriel Moraga led the first Spanish expedition into the Sacramento Valley. This group explored areas along the American, Calaveras, Cosumnes, Feather, Merced, Mokelumne, Sacramento, and Stanislaus river watersheds. The most recent Spanish expedition into this region was conducted by Luis Arguello in 1817. This group traveled up the Sacramento River to the mouth of the Feather River (Grunsky 1989).

Spanish missionization of Alta California was initiated in San Diego 1769. A total of 21 missions were constructed by the Dominican and Franciscan orders between 1769 and 1823. Missions in the region included San Francisco de Asís (1776), Santa Clara de Asís (1776), San José de Guadalupe (1797 in Alameda County), San Rafael Arcángel (1817 in Marin County), and San Francisco Solano (1823 in Sonoma County; Grunsky 1989). While missionization had a detrimental effect on tribes throughout the region, there is no record of forcible transport of Nisenan communities by the Spanish to the missions (Wilson and Towne 1978).

Mexican Period (1822–1848)

Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to native populations. Following the establishment of the Mexican republic, the government seized many of the lands belonging to Native Americans, providing them as parts of larger Land Grants to affluent Mexican citizens and rancheros. Captain John Sutter was granted the two largest areas of land in the Sacramento Valley area. Sutter founded New Helvetia, a trading and agricultural empire, in 1839. The headquarters was located within Valley Nisenan territory at the confluence of the Sacramento and American rivers. The 1833

Secularization Act passed by the Mexican Congress ordered half of all mission lands to be transferred to the Indians, and the other half to remain in trust and managed by an appointed administrator. These orders were never implemented due to several factors that conspired to prevent the Indians from regaining their patrimony.

American fur trappers and traders conducted a number of exploratory intrusions into west Sierra Nevada Mexican territory. Notably, in 1826, Jebediah Smith led a small party of trappers in an expedition along the Sierra Nevada range, eventually entering the Sacramento Valley in 1827. This group covered the area along the American and Cosumnes rivers. From these travels, maps of this inhospitable terrain were created and disseminated, providing for the waves of European prospectors, ranchers and settlers that would come in the following decades (Grunsky 1989).

American Period (Post 1848)

Lake Tahoe was first identified by non-native peoples in 1844 when explorer John C. Frémont and his cartographer encountered the lake while making their way west across the Sierras. Prior to this time, the alpine mountain lake was known only to local Native American tribes, namely the Washoe, who had long since utilized the lake for hunting, fishing, and collecting medicinal plants (Goin 2012). Upon reaching the lake, Frémont marked Lake Tahoe as a crossing-over point for explorers and settlers making their way across the Sierras. Initially, very few pioneers dared to brave the region's treacherous mountain passes during the harsh winters.

The discovery of gold in January of 1848 at Sutter's Mill in Coloma, on the South Fork of the American River, led to extensive and enduring changes to California's physical and cultural landscapes. The initial emigrant influx quickly transmuted into a flood of pioneers, utilizing passes on both the north and south sides of Tahoe Basin. The main route running along the north side of the lake was Scott's Route, now known as the Overland Emigrant Trail, which was utilized during a relatively brief period from 1852 to 1855 (Lindström, 1993). In 1858, a large silver discovery was made in Virginia City, a town 24 miles east of Lake Tahoe. This strike was known as the Comstock Lode and brought miners to the Tahoe region from great distances. The Comstock Lode had a great effect on the region. Between 1858 and 1890, nearly all of the trees in the Tahoe Basin were logged to provide wood for the underground tunnels and excavation of the mines (North Lake Tahoe 2015). As fortune seekers converged on the region, new routes through the mountains were identified, including the Dutch Flat Wagon Road. The Central Pacific Railroad opened on December 1, 1868, to the Summit of the Sierra Nevada, after successfully completing Tunnel #6 (a.k.a., the Summit Tunnel) at Donner Pass. Timber logging to support the burgeoning towns in the region resulted in the development of more wagon trails, similar to the compacted earth trail located near Donner Trail Elementary School.

As the allure of gold mining declined, agriculture and ranching in the foothills, and the timber industry at higher elevations, became more prominent and productive economic pursuits in the region (Davis 1975). During the Great Depression, however, small scale placer mining, using Gold Rush era techniques and technologies, made a brief reappearance. Depression-era miners either reworked old diggings in formerly mined areas or moved into previously unmined locations, often on public lands (Caltrans 2008). According to Clark (1992), the second all-time high of gold production in California, totaling some $50.9 million, occurred during this period.

Development in the area gradually shifted from a logging- and mining-based economy to one based on tourism and sports, in particular skiing. Modern skiing began in 1850 when Sondre Norheim of Morgedal Telemark, Norway, developed a new heel strap that kept skis on the foot even when going off a jump. The first ski manufacturing began in 1879 in Minnesota, and shortly afterwards in 1882 the first modern ski club in America, the Norske Ski Club, was founded by resident Norwegians in Berlin, New Hampshire. The vast majority of skiing in America remained focused in the northeastern section of the country until 1936 when the Aspen-Ashcroft area in Colorado was ski surveyed and residents formed the Roaring Fork Winter Sport Club near Aspen, Colorado. In 1938, Dave McCoy organized a rope tow at Mammoth Mountain, California, and the following year Sugar Bowl opened in Norden, California, approximately six miles southeast of Kingvale. A decade later in 1949, the ski resort at Squaw Valley, California, opened for business (Lund 2016). The 1960 Winter Olympics held at Squaw Valley resulted in further development of the area and completion of Interstate 80. The area continued to grow throughout the 1980s and 1990s, and remains a popular recreational destination to this day.

3 RESEARCH METHODS

The Secretary of the Interior has issued Standards and Guidelines for Archeology and Historic Preservation (48 FR 44720–44726)), which are used for the identification and evaluation of historic properties and to ensure that the procedures are adequate and appropriate. The identification and evaluation of historic properties are dependent upon the relationship of individual properties to other similar properties (NPS and ACHP 1998, pp. 18–20). Information about properties regarding their prehistory, history, architecture, and other aspects of culture must be collected and organized to define these relationships (NPS 2009), which is the intent of the current inventory.

This investigation consisted of a records search of the project area and a half-mile radius around the project area at the North Central Information Center (NCIC), Sacramento State. Following Bureau of Land Management (BLM) precedents, which are appropriate for federal projects in general, survey techniques are loosely grouped into two categories: reconnaissance and intensive (BLM 2004; NPS 2009). The choice of survey category depends on the level of effort required for a particular project, which can vary depending on the nature of the properties or property types, the possible adverse effects on such properties, and agency requirements (NPS and ACHP 1998). The selection of field survey techniques and level of effort must be responsive to the management needs and preservation goals that direct the survey effort. For any survey, it is important to consider the full range of historic properties that may be affected, either directly or indirectly, and consider strategies that will minimize any adverse effects and maximize beneficial effects on those properties (BLM 2004; NPS 2009; NPS and ACHP 1998).

The current survey methods can be classified as intensive since close-interval transect spacing and full documentation of cultural resources was completed. Survey staff exceeded the applicable Secretary of Interior Professional Qualifications Standards for archaeological survey. Dudek archaeologist Ross Owen surveyed the entire Project APE with transects spaced no more than 15 meters apart and oriented along the project alignment, except for the active creek channel, which was not surveyed due to water flow. A Global Positioning System (GPS) receiver with sub-meter accuracy, loaded with a shapefile of the project boundary was used to verify the accuracy of the survey coverage. Evidence for buried cultural deposits was opportunistically sought through inspection of natural or artificial erosion/excavation exposures and the spoils from rodent burrows. Field recording and photo documentation of resources, as appropriate, was completed.

Historic research was also performed to understand better the history of land use of the project area. This research consisted of reviewing historic topographic map and aerials (www.historicaerials.com).

Documentation of cultural resources complied with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-44740), and the California Office of Historic Preservation Planning Bulletin Number 4(a), December 1989, Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports. All cultural resources identified during this inventory were recorded on California Department of Parks and Recreation Form DPR 523 (Series 1/95), using the Instructions for Recording Historical Resources (Office of Historic Preservation 1995), including updates to previously recorded resources.

4 RESULTS

This section presents the results of the records search and the field survey of the current study.

4.1 Records Search Results

A records search was completed for the current APE and a ½ mile buffer by staff at the North Central Information Center (NCIC) at California State University Sacramento on July 20, 2021. The records search identified 24 previous studies which have been performed within the records search area; of these, 5 have covered a least a portion of the APE (Table 1).

Table 1 Previous Cultural Resource Studies within ½ Mile of APE

Report ID	Author(s)	Year	Title
Reports Intersecting the APE			
002307	Suter, Robert	1995	Confidential Archaeological and Historical Resources Survey and Impact Assessment, A Supplemental Report for a Timber Harvesting Plan, Van Norden, Nevada and Placer Counties, California.
007332	Suter, Robert	2000	Sugar Bowl Conversion
007707	Lindström, Susan	1988	A Cultural Resource Evaluation of the Sugar Bowl Ski Area Expansion Near Norden, California
007978	Ann S. Peak	1976	Cultural Resource Assessment of the Donner Summit Public Utilities District Wastewater Project, Nevada and Placer Counties, CA
009958	Henning, A. E.	1949	Overland Emigrant Trail
Reports within 1/2 mile of the APE			
001856	Peak and Associates	1983	Cultural Resource Assessment of the Donner Summit-Norden Wastewater Treatment Project, Clean Water Grant No. C-06-1398-010.
002521	Sutherland, Barbara	1991	Archaeological Reconnaissance Report for the Donner Insect Salvage Sale (CRIR #05-17-919; Adden. #57-06).
002935	Jones and Stokes Associates, Inc.	1999	Cultural Resources Inventory Report for Williams Fiber Optic Cable System: Sacramento to CA/NV State Border
005785	Fores, Richard B.	1993	Confidential Archaeological and Historical Resources Survey and Impact Assessment, A Supplemental report for a Timber Harvesting Plan: Sugar Bowl Conversion.
007317	Lindstöm, Susan	1989	Cultural Resource Evaluation of the Sugar Bowl Ski Area Expansion Project Addendum II
007319	Lindström, Susan	1992	Cultural Resource Evaluation of the Sugar Bowl Ski Area Expansion Project Addendum V A 70-Acre Surface Survey near Norden, California Placer County (Norden 7.5' Quadrangle)
007320	Lindström, Susan	1993	Cultural Resource Evaluation of the Sugar Bowl Ski Area Expansion Project Addendum VI A Surface Survey of 15 Acres Around Lake Mary-Donner Summmit (Norden 7.5' Quadrangle)

Report ID	Author(s)	Year	Title
007334	Lindström, Susan	2001	Crows Peak Ski Lift Project
007342	Suter, Robert	1996	Archaeological and Historical Resources Survey and Impact Assessment: Summit THP
007346	Brady, Jon L.	1977	Mt. Lincoln Grading Project
007347	Whitlock, Kevin	2002	Crow's Nest Addendum
008619	Cindy Arrington et al	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California
010434	John W. Snyder	1997	Central Pacific Transcontinental Railroad, Sacramento to Nevada State Line - HAER CA-196
010752	Douglas Ferrier	2010	Archaeological Survey Report for the Gondola North Timber Harvesting Plan, Placer County, California
011371	Douglas Ferrier	2012	An Archaeological Survey Report for the Addendum to the Gondola North Timber Harvest Plan, covering the Sugar Bowl Ski Academy Relocation Project Placer County, California
011387	Doug Ferrier	2013	An Archaeological Survey Report for the Crows Peak THP Placer County, California
011886	Susan Lindstrom	2015	Donner Lake Basin Watershed Assessment A Contexual Overview of Human Land Use and Environmental Conditions: Workbook
012448	Lisa Holm	2017	Cultural Resources Constraints Report for Drum-Summit #1 115kV Transmission Line Project
012499	Samantha Dollinger, Mark Selverston, and Doshia Dodd	2018	Cultural Resources Inventory of 735-Acre Parcel and Archaeological Survey of 380 Acres at Summit Valley, Nevada and Placer Counties, California

The records search identified one historic resource within the APE, a portion of the Emigrant Trail (P-31-000825). An additional 23 cultural resources have been identified within a ½ mile of the APE (Table 2; Confidential Appendix B).

Table 2 Previously Recorded Cultural Resources

Primary ID	Trinomial	Name	Age	Attributes
Previously Recorded Sites Intersecting the APE				
P-31-000825	CA-PLA-000699H	Overland Emigrant Trail	Historic	Roads/Trails; Highway/Trail
Previously Recorded Sites within 1/2 mile of the APE				
P-31-000903	CA-PLA-000777/H	Yuba Duba	Prehistoric, Historic	Foundations/structure pads; Trash scatter; Roads/Trails; Lithic scatter
P-31-000964	CA-PLA-000841H	Central Pacific Rail Road Company of California; Central Pacific Railroad Company of California	Historic	Roads/Trails; Other
P-31-001042	None		Prehistoric	Lithic scatter

Primary ID	Trinomial	Name	Age	Attributes
P-31-001064	None		Historic	Trash scatter
P-31-001065	None		Historic	Trash scatter
P-31-001295	CA-PLA-001003H	Lincoln Highway; FS-05-17-5-00531; Bridge # 19-C0041	Historic	Unknown; Trash scatter; Roads/Trails; Engineering structure; Government building; Bridge; Highway/Trail
P-31-002718	None		Prehistoric	Other
P-31-002720	CA-PLA-001906		Prehistoric	Lithic scatter
P-31-002721	None		Historic	Trash scatter
P-31-002722	None		Historic	Trash scatter
P-31-002726	CA-PLA-001907H	Lake Mary Complex	Historic	Trash scatter; Water conveyance system; Dams; Reservoir
P-31-002916	None	Summit No. 1	Historic	Trash scatter
P-31-002917	None		Historic	Trash scatter
P-31-006374	None	ISOSB-01	Historic	Other
P-31-006375	None	ISOSB-03	Historic	Other
P-31-006376	None	ISOSB-04	Historic	Other
P-31-006377	CA-PLA-002740H	SB-01	Historic	Trash scatter; Other
P-31-006378	CA-PLA-002741H	SB-02	Historic	Other
P-31-006379	CA-PLA-002742H	SB-03	Historic	Other
P-31-006380	CA-PLA-002743H	SB-04	Historic	Other
P-31-006381	CA-PLA-002744H	SB-05	Historic	Other
P-31-006382	CA-PLA-002745H	SB-06	Historic	Trash scatter; Standing structure; Single family property
P-31-006383	None	ISOSB-02	Historic	Other

P-31-000825

The Overland Emigrant Trail is listed as California State Historical Landmark No. 799 (California Department of Parks and Recreation 1982). The segment of the trail within the APE is referred to as the Truckee Route of the California Portion of the Overland Emigrant Trail. In advance of proposed Resort developments in 1988 Susan Lindstrom conducted a study to identify the trail within the Resort property. Three routes of the Truckee Route of the California Emigrant Trail converged at the base of Mount Judah within the Resort area. From the base of the mountain the trail proceeds across the Resort base facility and through Summit Valley. Actual remains of the Emigrant Trail were reported to be faint, and consisted of traces of the road bed in association with rust marks, polished and grooved rocks, and tree scarring. The trail corridor was marked

occasionally by wooden signs, blazes, rock cairns, and monuments. Almost no trace of the treadway was observed. Thirty-three trail markers, one linear and polished grooved rock, and one compacted road bed was recorded (Lindstrom 1988).

Historic-Period Map Review

Historic aerial photographs of the project area were available for the years 1953, 1993, 1998, 2005, 2009, 2010, 2012, 2014, and 2016 (Historicaerials 2021). Topographic maps including the project area were available for the years 1957, 1960, 1961, 1964, 1971, 1973, 1980, 2003, 2012, 2015 and 2018 (Historicaerials 2021). In 1953 the APE was largely undeveloped except for the Ski Lodge and chairlifts, and Old Donner Summit Road intersecting the APE oriented north-south from Historic U.S. 40. In 1957 thirty additional residences were constructed within the Resort Village. From 1998 to 2005 increased development of the APE occurred with road paving and paved parking areas added, along with Resort maintenance and operations facilities. By 2005 the current extent of roads had been developed along with many of the residences along Mule Ears Drive, Aster Court, Corn Lilly Lane and Paintbrush Hill. Between 2005 and 2009 additional development within the center of the APE occurred with construction of multi-family residences along Mule Ears Court. Residential construction within the APE is ongoing, with active construction along Mule Ears Drive viewed during the survey.

4.2 Geomorphological Information

According to the U.S. Department of Agriculture Natural Resources Conservation Services (USDA 2021), one soil type is mapped in the Study Area: Tallac-Cryumbrepts wet complex, 2 to 30 percent slopes. This soil type is glacially deposited alluvium locates on Moraines, and consists of very gravelly sandy loam.

In general, the soils present in the APE are consistent with alluvial lands derived from an assortment of parent materials in the surrounding area underlain by Mesozoic granitic rocks. Sediment formation in this location would likely have occurred primarily since the Holocene, generally the result of receding glaciers in the High Sierra and associated increased water flows following Pleistocene glaciation (possibly 5,000 – 7,000 B.P; Ritter 1972). Soils in the specific Project area are generally substantially compromised by the existing roads; the potential for intact buried deposits is considered low.

4.3 Field Survey Results

Dudek archaeologist Ross Owen inspected all portions of the APE on July 22, 2021, using standard archaeological procedures and techniques that meet the Secretary of Interior's Standards and

Guidelines for cultural resources inventory. Exposed ground surfaces were observed for surface artifacts, undisturbed areas, archaeological deposits, or geological exposures. Subsurface exposures from erosion were opportunistically inspected for indications of soils with the potential to contain deposits.

4.2.1 Previously Recorded Resources

Emigrant Trail (P-31-000825)

The majority of the Emigrant Trail mapped within the APE has been destroyed by the development of infrastructure associated with Sugar Bowl Resort. During survey of the Project APE within Sugar Bowl Resort, two potential intact segments of the Emigrant Trail (P-31-000825) were identified. Feature 1 (50ft x 8ft) is located south of Corn Lilly Lane and west of Fiddleneck Place. This feature has been impacted along the eastern and western end, with the adjacent portions of the Emigrant Trail destroyed by residential development and gravel roads. Feature 2 (32ft x 8ft) is located west of Paintbrush Hill Court. This feature has also been impacted along the eastern and western ends, with adjacent portions of the Emigrant Trail destroyed by residential development and gravel roads. The features manifest as flattened areas approximately 8ft wide, slightly depressed (<1ft), with earthen berms approximately 6in high on either side. Vegetation growth within the trail footprint, and natural weathering has led to erosion of the features.

Existing residences and associated infrastructure do not pose a threat to the integrity of the two segments at this time. No associated artifacts were identified at either of the two feature locations. Outside of these two features, no other traces of the Emigrant Trail were observed within the APE, however the ground surface is obscured by vegetation and pine duff. These features have not been evaluated for NRHP listing, and are recommended to be avoided by project design.

Figure 3. Segment of Emigrant Trail (P-33-000825), facing ESE

Figure 4. Emigrant Trail (P-33-000825), facing E

4.4 Tribal Coordination

The NAHC was contacted by Dudek on July 15, 2021 to request a current Assembly Bill (AB) 52 contact list and search of the Sacred Lands File. A response was sent on July 28, 2021 noting that the search indicated that the NAHC has information on file with regard to Native American resources being previously reported within the search area, which included the APE and the surrounding one-mile Sections. The NAHC further suggested that tribal representatives identified in their response should be contacted for additional information. The Project is subject to compliance with AB 52 (PRC 21074), which requires consideration of impacts to "tribal cultural resources" as part of the CEQA process, and that the lead agency notify California Native American Tribal representatives (that have requested notification) who are traditionally or culturally affiliated with the geographic area of the proposed Project. In compliance with this requirement, all NAHC-listed tribal representatives were sent letters by Donner Summit Public Utility District. The letters contained a project description, outline of AB 52 timing, invitation to participate in consultation, and contact information for the appropriate lead agency representative. A record of this outreach is on file with the Donner Summit Public Utility District.

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5 SUMMARY AND MANAGEMENT CONSIDERATIONS

The current cultural resources inventory was completed to satisfy the requirements of CEQA and Section 106 of the NHPA. Dudek's Phase I cultural resources inventory of the APE suggests that there is a low potential for inadvertent impacts to unanticipated cultural resources or deposits. The NAHC Sacred Lands File Search indicated that Native American resources have been previously reported in the search area, which included the APE and the surrounding area. The NAHC-listed tribes have been contacted by the Donner Summit Public Utility District; a record of this coordination will be maintained by this agency. Intensive-level pedestrian survey of the APE did not result in the identification of any newly recorded cultural resources. The NCIC records search identified no prehistoric resources within or in the immediate vicinity of the APE. One historic-era resource, consisting of two potentially intact segments of the Emigrant Trail, were noted to have been previously recorded within the APE. These segments were confirmed to be present within the larger APE and re-documented,

Based on these results, no cultural resources will be impacted (No Historic Properties Affected) by the Project. Recommended management strategies to be applied through the duration of Project earth disturbing activities include establishing an exclusionary ESA boundary (See Appendix D, ESA Maps) along the edge of the existing road within 50 feet of the two Emigrant Trail segments and application of standard archaeological measures in the event of an unanticipated discovery.

Unanticipated Archaeological Resources

All construction staff should be alerted to the required avoidance of the ESA areas and the potential to encounter archaeological material. It is recommended that an ESA boundary be established along the edge of the existing road approximately 50 feet from the two Emigrant Trail segments. This should be installed by the contractor prior to construction using the ESA Maps provided in the cultural resources technical report for reference and should be sufficiently robust to be present through the duration of construction. No ground disturbance, staging, vehicle use, or other project-related activity will be permitted within the ESA areas.

In the unlikely event that cultural resources (sites, features, or artifacts) are exposed during trenching and utility installation activities, all construction work occurring within 100 feet of the find shall immediately stop and Donner Summit Public Utility District shall be contacted. A qualified specialist, meeting the Secretary of the Interior's Professional Qualification Standards, will be assigned to review the unanticipated find, and evaluation efforts of this resource for NRHP and CRHR listing will be initiated in consultation with the City of Roseville. Prehistoric archaeological deposits may be indicated by the presence of discolored or dark soil, fire-affected

material, concentrations of fragmented or whole freshwater bivalves shell, burned or complete bone, non-local lithic materials, or the characteristic observed to be atypical of the surrounding area. Common prehistoric artifacts may include modified or battered lithic materials; lithic or bone tools that appeared to have been used for chopping, drilling, or grinding; projectile points; fired clay ceramics or non-functional items; and other items. Historic-age deposits are often indicated by the presence of glass bottles and shards, ceramic material, building or domestic refuse, ferrous metal, or old features such as concrete foundations or privies. Depending upon the significance of the find, the archaeologist may simply record the find and allow work to continue. If the discovery has potential to be significant, i.e. may be eligible for CEQA and/or NRHP listing, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

Unanticipated Human Remains

Should human remains be discovered, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to the ACOE (if applicable) and County Coroner. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner reviews the regulatory conditions and has determined, within 2 working days of notification of the discovery, if the remains are human and the appropriate additional actions. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant from the deceased Native American. The most likely descendant shall provide recommendations with regard to treatment within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

6 REFERENCES

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APPENDIX A

Key Personnel Resumes

Adam Giacinto, MA, RPA

Archaeologist and Ethnographer

Adam Giacinto is cultural resources specialist with more than 16 years' experience preparing cultural resource reports, site records, and managing archaeological survey, evaluation, and data recovery-level investigations. His research interests include prehistoric hunter-gatherer cultures and contemporary conceptions of heritage. His current research focuses on the social, historical, archaeological, and political mechanisms surrounding heritage values. He has gained practical experience in archaeological and ethnographic field methods while conducting research in the Southwest, Mexico, and Eastern Europe.

Education

San Diego State University
MA, Anthropology

Sonoma State University
BA, Anthropology/Linguistics

Santa Rosa Junior College
AA, Anthropology

Professional Affiliations

Register of Professional Archaeologists

Society for California Archaeology
American Anthropological Association Institute of Archaeomythology

American Anthropological Association

Project Experience

Martis Creek Restoration Project, Truckee River Watershed Council, Truckee, California. As ethnographic researcher and principal archaeological investigator, managed archaeological monitoring and investigations at Martis Type Site CA-PLA-5, conducted verbal, semi-structured interviews with 4 elders from the Washoe Tribe of California and Nevada, synthesized transcriptions of themes expressed concerning tribal histories and values within larger investigation.

Royal Gorge Trails Project, Donner Summit, Donner Land Trust, Placer County, California. As Principal archaeological investigator, Mr. Giacinto coordinated and completed a North Central Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy meeting federal, state, and local standards was developed and provided to the client for this negative cultural inventory.

West Lake Tahoe Regional Treatment Plant Project, Tahoe City Public Utility District, South Lake Tahoe, California. As principal archaeological investigator, coordinated NAHC and Native American coordination, pedestrian and underwater archaeological survey, and preparation of a technical report. Coordinated underwater documentation of remaining components of McKinney Station, a historic-era steamer landing. An appropriate mitigation strategy meeting federal, state, and local standards was developed.

Donner Trail Elementary School Project, Truckee, Placer and Nevada County, California. As archaeologist, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy meeting state and local standards was developed and provided to the client for this negative cultural inventory.

Tahoe Lake Elementary School Project, South Lake Tahoe, California. As archaeological investigator, Mr. Giacinto assisted with report preparation and project coordination, as well as prepared geoarchaeological assessment for ACOE or project area.

Martis Trail Project, Northstar, Truckee, California. As Principal Investigator, Mr. Giacinto coordinated a NCIC, NAHC, and Native American correspondence, archaeological survey, and prepared a technical report. An appropriate mitigation strategy meeting state and local standards was developed and provided to the client for this negative cultural inventory. CEQA and Section 106.

Whitewolf Project, Private owner, Alpine Meadows, California- 2018-2019. As Principal Investigator, Mr. Giacinto coordinated a NCIC, NAHC, and Native American correspondence, archaeological survey, and prepared a technical report. An appropriate mitigation strategy meeting state and local standards was developed and provided to the client for this negative cultural inventory. CEQA and Section 106.

Floriston Water Purifcation Project, Floriston, Placer County, California - 2018. As Principal archaeologist, Mr. Giacinto coordinated a NCIC, NAHC, and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy meeting state and local standards was developed and provided to the client for this negative cultural inventory. CEQA and Section 106.

Yokohl Ranch Development Project, The Yokohl Ranch Company, LLC, Tulare County, California. As co-principal investigator and field director, managed 15 archaeologists in conducting significance evaluation of 118 historical and prehistoric cultural resources throughout the 12,000 acre Yokohl Valley area. Operated as tribal interface, and facilitated the respectul handling and reburial of sensitive cultural material with the tribes, applicant, and NAHC.

Auburn Recycled Wastewater Treatment Plant Secondary Process Upgrade Improvement Project, City of Auburn, California. As principal investigator, Mr. Giacinto managed the survey, archival searches, tribal correspondence, and reported mangement recommendations for a cultural resources inventory. Considerations included compliance under CEQA and Section 106 of the NHPA.

El Dorado Irrigation 2017 Flume Replacement Project, Riverton, El Dorado County, California. As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical report under CEQA regulatory context. An appropriate mitigation strategy was developed for this cultural inventory, including updates to the El Dorado Canal, Olgiby Grade, and additional historic-era sites.

El Dorado Irrigation District Pacific Tunnel Replacement Project, Riverton, El Dorado County, California. As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical report under CEQA and Section 106 regulatory context. An appropriate mitigation strategy was developed for this cultural inventory, including management of historical EID components and segments of the Mormon-Carson Emigrant.

El Dorado Irrigation District Emergency Tree Harvest, El Dorado, California. As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical report for CalFire and EID under CEQA regulatory context. An appropriate mitigation strategy was developed for this cultural inventory, including updates to the El Dorado Canal.

Steephollow Creek and Bear River Restoration, Nevada County, California. As principal investigator, assisted with management of field efforts and preperation of a technical report for a cultural inventory. Resources were evaluated for significance under CEQA, and Section 106 of the NHPA.

Emergency Helipad Project, Tahoe-Truckee Airport District, South Lake Tahoe, Placer County, California. As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a

technical report. An appropriate mitigation strategy meeting federal, state, and local standards was developed and provided to the client for this negative cultural inventory.

Fish Springs, Washoe County, Nevada. As co-principal archaeological investigator, Mr. Giacinto conducted a BLM and Nevada Cultural Resource Information System (NVCRIS) records search and prepared a critical issues analysis for cultural resources, managed team in preperation of BLM archaeological report. Acted as field directore and coordinated five archaeologists completing more than 2,300 acres of intensive-level survey within areas known to be highly sensitive for prehistoric cultural resources associated the pluvial lake formations.

Dodge Flats Power Project, Pyramid Lake, Nevada. As principal investigator, Mr. Giacinto coordinated a the Nevada Cultural Resource Information System (NVCRIS) records search, prepared a study of prehistoric and historical-era constraints, oversaw drone photography, predictive analyses (slope, aspect, drainage, eleveation, geomorphic), archaeologial survey sampling, and prepareda full report with appropriate mitigation.

Dodge Flatt II, Washoe County, Nevada. As Principal archaeological investigator, Mr. Giacinto completed NVCRIS records seach, completed reconnaisance survey on private and Pyramid Lake Piute Tribe reservation. Coordiated with tribe, assessed sensitivity for cultural resources, and prepared constraints-level analysis.

California High Speed Rail, Fresno-Bakersfield, California. As Principal Investigator, implemented, and reported upon cultural inventory, evaluation, data recovery and compliance efforts under Section 106 of the NHPA, Federal Rail Authority, CEQA, and local Guidelines for Fresno to Bakersfield section. Oversight of Native American monitors, built environment specialists and archaeologists, management of cultural monitoring implementation and site treatment, client reporting, meetings and report preperation. Implementation of mitigation included exploratory archaeological investigations at multiple NAHC-eligible resources.

Water Tank No. 8 Project, City of Rohnert Park, Sonoma County, California. As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. Project involved extended phase I exploratory probing of identified resources and high-probability areas for unidentified resources, site recordation, a geomorphic analysis, and preperation fo a monitoring plan meeting both CEQA considerations and Section 106 compliance for USACE review.

Napa Roundabouts Project, City of Napa, California. As Principal archaeological investigator completed Native American coordination, preperation of an ASR and HRER, review of historical and geoarchaeological documentation, and successfully developed, implemented, and reported upon an XPI Investigation, including preperation of a XPI Proposal and technical report. Work included survey, the use of mechanical geoprobes and hand excavation with the intent of identifying the potential for both prehistoric and historical-era resouces within the NRHP-eligible West Napa Historic District.

San Pablo Broadband Project, City of San Pablo, California. As principal cultural investigator, coordinated a records search, NAHC sacred lands file search, tribal outreach, and preparation of a constraints study, report and monitoring plan, and IS/MND under CEQA and Section 106. Included City-wide model known and buried cultural resoures by applying a weigheted geologic, soils, geotechnical, slope, landscape, and previous technical study innformation. Area includes NRHP/CRHR-listed archaeological (Nelson Mound sites) and built environment resources.

Pure Water Plan Constraints Study and PEIR, City of San Diego, California. As principal investigator and field director, Mr. Giacinto managed preparation of a constraints study for the Pure Water Project. Work involved a records search of over 100 mile linear miles of San Diego. Site record information from more than 1,236 cultural resources was processed, coded, and integrated within a geospatial sensitivity model to identy archaeological and built environment constraints throughout the proposed alignment. Maps were then generated using generalized grid units to provide a visual model of relative archaeological resource sensitivity while maintaining the appropriate level of confidentiality for public dissemination to assist in planning.

SFO Rental Car Center/Air Train Project/Runway Improvements Projects, San Francisco, California. As Principal archaeological investigator, Mr. Giacinto managed and completed archaeological work for the SFO Rental Car Center/Air Train and Runway Improvements Projects included a NWIC records search, NAHC sacred lands file search, tribal outreach, and preparation of a constraints study, ARMR-style technical report for compliance with CEQA and Section 106. Work included an assessment of known resources and potential for unanticipated buried cultural resources by consulting geologic, soils (including marine resources), historical map, geotechnical, slope, landscape, and previous technical study information. Preparation of a report and maps that met State Historic Preservation Office, FAA and Airport staff needs was completed.

Lake Cahuilla Cultural Resources Management Plan, ASM PARC, Riverside County, California. As lead analyst, Mr. Giacinto developed a standardized database associated with ancient Lake Cahuilla (now Salton Sea Basin) and the surrounding archaeological and ecological landscape. Performed GIS data integration and predictive analysis, data entry of site record information, and completed multi-day, multi-person record search covering 17 USGS quadrangle in Riverside County. The project was finalized with the preparation of a management document submitted to the Friends of the San Jacinto Mountains.

Alameda County Water District Project, California. As principal cultural investigator, coordinated a records search, NAHC sacred lands file search, tribal outreach, and preparation of a constraints study, report and monitoring plan, and IS/MND under CEQA and Section 106. Included 100 square mile sensitivity model of known and buried cultural resources by applying a weighted geologic, soils, geotechnical, slope, landscape, and previous technical study information.

Ross Owen, MA, RPA

Archaeologist

Ross Owen is an Archaeologist with 6 years' experience conducting Phase I and II archaeological surveys. Working on identification-level surveys Mr. Owen has acclimated to working on a diverse range of site types and landforms which has contributed to his knowledge of material culture, site formation processes, and soil development, primarily in the mid-Atlantic region, California, and Nevada.

In his role as a field/lab technician and as a field director, Mr. Owen has been involved in all stages of completing Phase I and II surveys and evaluation for compliance with Section 106 of the NHPA as well as CEQA. He also carries experience in records searches and archival work, tribal consultation, data management, field excavation, and laboratory processing. Outside of work he has sought out opportunities to present research in academic settings, speak with the public about archaeology to better communicate archaeological significance to the public.

Education

Indiana University of Pennsylvania
MA, Applied Archaeology

Boston University
BA, Archaeology

Certifications

Register of Professional Archaeologists (RPA), No. 18014

Professional Affiliations

Society for American Archaeology

Project Experience

Martis Wildlife Area Restoration Project, Placer County, California. Performed demarcation of Environmentally Sensitive Areas (ESAs) in advance of construction association with wetland restoration efforts for the U.S. Army Corps of Engineers, Sacramento District and Truckee River Watershed Council. Archaeological monitoring during construction. Fieldwork to prepare a Performance Work Statement (PWS) for the Army Corps of Engineers to assess impacts to CA-PLA-5. Preparation of reports documenting monitoring and PWS efforts and results.

Martis Valley Trail Segment 3F, Placer County, California. Conducted in-person records search and review at the North Central Information Center and compiled results in report. Pedestrian archaeological survey of project area. Preparation of report documenting negative findings. Tribal correspondence soliciting information on known resources within project area and project-related concerns.

Robinson Mine Conditional Use Permit Modification, Placer County, California. Conducted in-person records search and review at the North Central Information Center and compiled results in report. Pedestrian archaeological survey of project area.

El Dorado Irrigation District Pacific Tunnel Rehabilitation, El Dorado County, California. Conducted in-person records search and review at the North Central Information Center and compiled results in report. Pedestrian archaeological survey of project area. Preparation of report documenting negative findings, and DPR update to portion of the Mormon-Carson Emigrant Trail re-located but not impacted by project design. Tribal correspondence soliciting information on known resources within project area and project-related concerns.

Fish Springs Ranch Solar Energy Center Project, Washoe County, Nevada. Performed 4 months of monitoring. Completed survey and recordation of archaeological sites. Attribute analysis in field of prehistoric and historic resources. Conducted records search review and compilation for report. Reporting of field survey results for Nevada Bureau of Land Management, and preparation of Intermountain Antiquities Computer System (IMACS)

forms documenting new sites and updates to previously recorded sites. Guided field view of resources recorded on private lands with Next Era and Pyramid Lake Paiute Tribal Historic Preservation Officer.

Nevada Street Phase II, City of Auburn, Placer County, California. Performed archaeological monitoring of intersection realignment and utility work along Nevada Street in Auburn, California. Reported monitoring actions and results to City of Auburn and NexGen.

Round Mountain Area Project – Table Mountain Site, Butte County, California. Conducted archaeological survey and reporting for a proposed power generation facility in Butte County.

Heartland Solar Development Project, Fresno County, California. Led crew for survey of 2,000+ acre archaeological survey of a proposed solar energy project.

Gonzaga Wind Repowering Project, Merced County, California. Performed archaeological survey for California Department of Parks and Recreation Four Rivers District proposed wind farm, associated access roads and transmission lines.

Dodge Flat Solar Energy Center, Washoe County, Nevada. Prepared and reviewed BLM submission packet containing final drafts of report and BLM-required digital data. Submitted to Nevada BLM Sierra Front Field Office.

Blythe Solar Power Project, Riverside County, California. Compiled monitoring logs and weekly monitoring summaries to submit to client.

J. Chen Stone Ave Tech Studies 4050 Grange Road, Sonoma County, California. Conducted in-person records search and review at the Northwest Information Center and compiled results in report. Pedestrian archaeological survey of project area. Preparation of report documenting negative findings. Tribal correspondence soliciting information on known resources within project area and project-related concerns.

Cloverdale Unified School District Project, Sonoma County, California. Conducted archaeological survey and reporting for proposed athletic facilities for the Cloverdale Unified School District. Tribal correspondence soliciting information on known resources within project area and project-related concerns.

California State University – Chico Master Plan EIR, Butte County, California. Conducted archaeological survey and reporting of survey results. Assisted in compilation of archaeological report for Master Plan EIR document.

Woodland Community College Performing Arts and Culinary Services Facility Project, Yolo County, California. Conducted archaeological survey and reporting for a proposed university facilities expansion in Yolo County.

Arlington Solar Energy Project, Riverside County, California. Assisted in relocating, sketching and sub-meter accuracy GPS recording of WWII-era military training features as required by a Historic Preservation Treatment Plan drafted to mitigate adverse effects on National Register-eligible archaeological resources.

Dowdell Industrial Park, City of Rohnert Park, Sonoma County, California. Conducted records search review and integrated results into report meeting United States Army Corps of Engineers standards for Section 106 and CEQA compliance.

Ebbetts Pass Reach 1 Water Transmission Pipeline Capital Improvement Project, Calaveras County, California. Performed archaeological monitoring during construction of waterline by Calaveras County Water District. Conducted an evaluation for eligibility for the National Register of Historic Places for an unanticipated discovery found during construction. Prepared DPR site form and report documenting the site and site evaluation efforts. Consultation with the Calaveras Band of Mi-Wuk Indians and Caltrans District 10 throughout monitoring and site evaluation efforts.

APPENDIX B (CONFIDENTIAL)

NCIC Records Search Results
and DPR Form Update

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

7/20/2021 NCIC File No.: PLA-21-47

Nicholas Hanten
Dudek
853 Lincoln Way, #208
Auburn, CA 95603

Re: 13349: DSPUD Sugar Bowl Sewer Collection System Project

The North Central Information Center (NCIC) received your records search request for the project area referenced above, located on the Norden USGS 7.5' quad. The following reflects the results of the records search for the project area and a ½-mi radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☒ shapefiles

Recorded resources within project area: Recorded resources outside project area, within radius:	P-31-825 See list below
Known reports within project area: Known reports outside project area, within radius:	2307 7317 7332 7707 7978 9958 11886 See list below

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Copies: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Built Environment Resources Directory: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Archaeological Determinations of Eligibility: ☒ enclosed ☐ not requested ☐ nothing listed/NA

CA Inventory of Historic Resources (1976): ☐ enclosed ☐ not requested ☒ nothing listed/NA

Caltrans Bridge Survey:	☐ enclosed	☐ not requested	☒ nothing listed/NA
Ethnographic Information:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Historical Literature:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Historical Maps:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Local Inventories:	☐ enclosed	☐ not requested	☒ nothing listed/NA
GLO and/or Rancho Plat Maps:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Soil Survey Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA

Please forward a copy of any resulting reports and resource records from this project to NCIC as soon as possible. The lead agency/authority and cultural resources consultant should coordinate sending documentation to NCIC. Please note that local planning agencies rarely, if ever, send reports and resource records to our office. Digital materials are preferred and can be sent to our office through our file transfer system or on a CD by mail via USPS to the address on the top of the first page. Hard copies may also be mailed. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

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

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

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

Sincerely,

Paul Rendes, Coordinator
North Central Information Center

Recorded resources outside project area, within radius:

P-31-000903
P-31-000964
P-31-001042
P-31-001064
P-31-001065
P-31-001295
P-31-002718
P-31-002720
P-31-002721
P-31-002722
P-31-002726
P-31-002916
P-31-002917
P-31-006374
P-31-006375
P-31-006376
P-31-006377
P-31-006378
P-31-006379
P-31-006380
P-31-006381
P-31-006382
P-31-006383

Known reports outside project area, within radius:

001856
002521
002935
005785
007319
007320
007334
007342
007346
007347
008619
010434
010752
011371
011387
012448
012499

APPENDIX C

NAHC and Record of Tribal Information Requests

Local Government Tribal Consultation List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

■ **CEQA Tribal Consultation List (AB 52)** – ***Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2***

☐ **General Plan (SB 18)** - ***Per Government Code § 65352.3.***

Local Action Type:

☐ **General Plan** ☐ **General Plan Element** ☐ **General Plan Amendment**

☐ **Specific Plan** ☐ **Specific Plan Amendment** ☐ **Pre-planning Outreach Activity**

Required Information

Project Title: DSPUD Sugar Bowl Sewer Collection System Project

Local Government/Lead Agency: Donner Summit PUD

Contact Person: Nicholas Hanten (Dudek)

Street Address: 853 Lincoln Way #208

City: Auburn **Zip:** 95603

Phone: (916) 584-7824 **Fax:**

Email: nhanten@dudek.com

Specific Area Subject to Proposed Action

County: Placer **City/Community:** Sugar Bowl

Project Description:

The Donner Summit Public Utility District proposes installation of a new sewer collection system in the Sugar Bowl area.

Additional Request

■ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): Norden

Township: 17N **Range:** 14E, 15E **Section(s):** 20, 25, 36

NATIVE AMERICAN HERITAGE COMMISSION

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

July 28, 2021

Nicholas Hanten
Dudek

Via Email to: nhanten@dudek.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, DSPUD Sugar Bowl Sewer Collection System Project, Placer County

Dear Mr. Hanten:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

  All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was positive. Please contact all the tribes on the attached list for more information.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Sarah.Fonseca@nahc.ac.gov.

Sincerely,

Sarah Fonseca
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
Placer County
7/28/2021

Tsi Akim Maidu
Grayson Coney, Cultural Director
P.O. Box 510 — Maidu
Browns Valley, CA, 95918
Phone: (530) 383 - 7234
tsi-akim-maidu@att.net

Tsi Akim Maidu
Don Ryberg, Chairperson
P.O. Box 510 — Maidu
Browns Valley, CA, 95918
Phone: (530) 383 - 7234
tsi-akim-maidu@att.net

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road — Maidu, Miwok
Auburn, CA, 95603
Phone: (530) 883 - 2390
Fax: (530) 883-2380
bguth@auburnrancheria.com

Washoe Tribe of Nevada and California
Darrel Cruz, Cultural Resources Department
919 Highway 395 North — Washoe
Gardnerville, NV, 89410
Phone: (775) 265 - 8600
darrel.cruz@washoetribe.us

Washoe Tribe of Nevada and California
Serrell Smokey, Chairperson
919 Highway 395 North — Washoe
Gardnerville, NV, 89410
Phone: (775) 265 - 8600
serrell.smokey@washoetribe.us

Wilton Rancheria
Jesus Tarango, Chairperson
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 683-6015
jtarango@wiltonrancheria-nsn.gov

Wilton Rancheria
Steven Hutchason, THPO
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 863-6015
shutchason@wiltonrancheria-nsn.gov

Wilton Rancheria
Dahlton Brown, Director of Administration
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
dbrown@wiltonrancheria-nsn.gov

Colfax-Todds Valley Consolidated Tribe
Clyde Prout, Chairperson
P.O. Box 4884 none — Maidu, Miwok
Auburn, CA, 95604
Phone: (530) 577 - 3558
miwokmaidu@yahoo.com

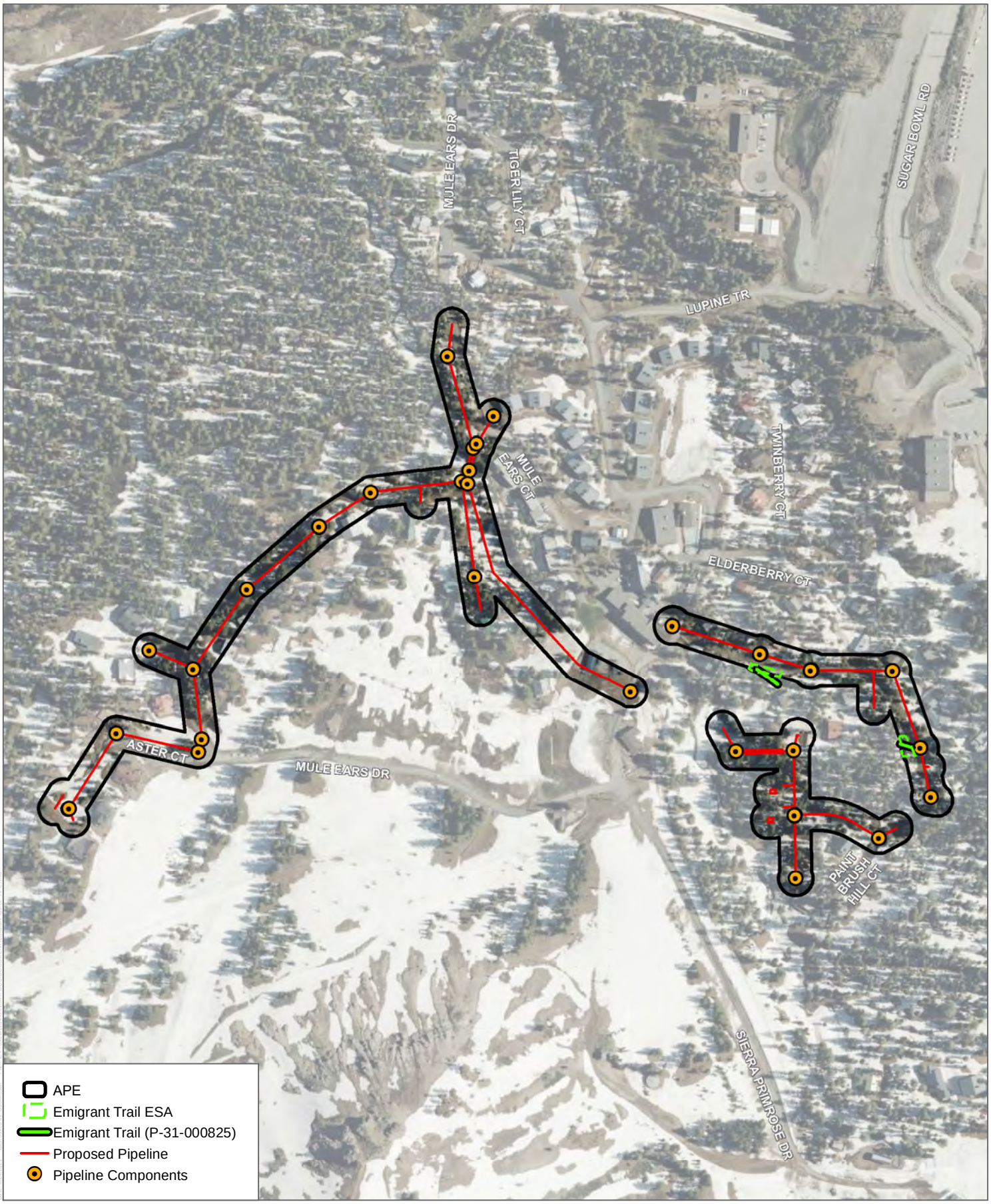
Colfax-Todds Valley Consolidated Tribe
Pamela Cubbler, Treasurer
P.O. Box 4884 — Maidu, Miwok
Auburn, CA, 95604
Phone: (530) 320 - 3943
pcubbler@colfaxrancheria.com

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

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed DSPUD Sugar Bowl Sewer Collection System Project, Placer County.

APPENDIX D

Environmentally Sensitive Area Maps



SOURCE: Bing Maps (Accessed 2021), Placer County 2017

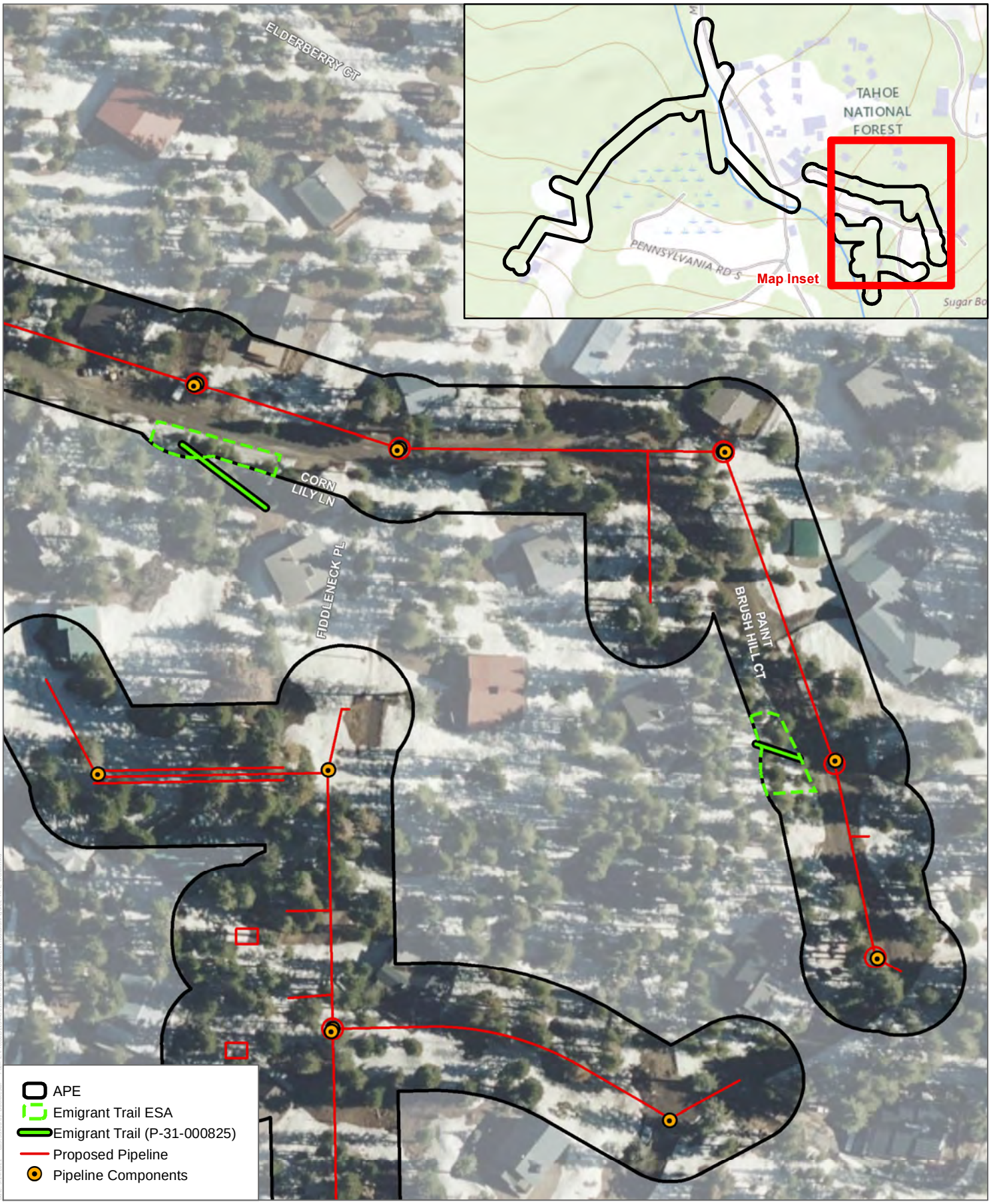
DUDEK

0 200 400 Feet
0 55 110 Meters
1:4,800

Appendix D

ESA Map

DSPUD Sugar Bowl Sewer Collection System Project



SOURCE: Bing Maps (Accessed 2021), Placer County 2017

DUDEK

0 50 100 Feet
0 12.5 25 Meters
1:1,200

Appendix D

ESA Map - Detailed

DSPUD Sugar Bowl Sewer Collection System Project

APPENDIX B (CONFIDENTIAL)

NCIC Records Search Results
and DPR Form Update

APPENDIX C

NAHC and Record of Tribal Information Requests

APPENDIX D

Environmentally Sensitive Area Maps

Appendix F

F - Geotechnical Engineering Report

GEOTECHNICAL ENGINEERING REPORT
SUGAR BOWL PROPERTY OWNERS SEWER PLAN – PHASE 1 AND 2

SUGAR BOWL VILLAGE
SODA SPRINGS/PLACER COUNTY, CALIFORNIA

SEPTEMBER 23, 2021

PREPARED FOR:

AUERBACH ENGINEERING CORPORATION
WALLY AUERBACH
PO BOX 5399
TAHOE CITY, CALIFORNIA 96145

NV5
10775 PIONEER TRAIL, SUITE 213
TRUCKEE, CALIFORNIA 96161

PROJECT NO. 42906.00

Project No. 42906.00
September 23, 2021

Auerbach Engineering Corporation
Wally Auerbach
PO Box 5399
Tahoe City, California 96145

Reference: **Sugar Bowl Property Owners Sewer Plan – Phase 1 and 2**
Sugar Bowl Village
Soda Springs/Placer County, California

Subject: **Geotechnical Engineering Report**

Dear Mr. Auerbach:

This report presents the results of our geotechnical engineering investigation for the proposed Sugar Bowl Property Owners (SBPO) Sewer Plan project to be constructed in the Sugar Bowl Village area in Norden/Placer County, California. Project plans were in the preliminary stages at the time this report was prepared. We understand the proposed project will involve construction of new sewer main lines to service 53 parcels within the Sugar Bowl Village area and offsite sewer facilities involving crossing the South Yuba River.

NV5 (previously Holdrege & Kull) has completed numerous subsurface investigations throughout the Sugar Bowl area and is very familiar with soil conditions. We previously prepared geotechnical engineering reports for the North Village and Crow's Nest subdivisions, the Sugar Bowl Academy Relocation project, the Gondola Addition project, the Village Hall project, as well as numerous individual lots within the Sugar Bowl area.

Based on our subsurface investigation, we anticipate that it will be possible to excavate underground utility trenches using conventional earthmoving equipment across the majority of the project area. During our subsurface investigation we encountered granitic rock at a depth of approximately 8 feet below the existing ground surface (bgs) between Old Donner Summit Road and the South Yuba River. However, the Takeuchi TB2150 excavator was able to excavate the rock to the maximum depth explore of 10 feet bgs. Our previous subsurface investigations throughout the Phase 1 and Phase 2 project areas encountered granitic rock at depths as shallow as 5 feet bgs. Confined excavations for footings and underground utilities that extend into rock will likely be difficult. A large track-mounted excavator equipped with a ripper tooth or hydraulic hammer, or spot blasting may be required where rock is encountered during excavations for footings and utilities. A significant amount of boulders and over-sized material should be anticipated in onsite excavations.

Groundwater was encountered at depths of approximately 3 to 5 feet bgs during our subsurface investigation. We anticipate that the groundwater level in the vicinity of the South Yuba River will be located at or slightly above the water level of the river. Groundwater may also perch on near-surface rock. Groundwater will likely create difficult excavation and backfill conditions during sewerline installation near the river, particularly during seasonal runoff in the spring.

If a directional boring for the pipe to be placed under the South Yuba River, as would be required for Options B1 and B2, is to be incorporated into project design, we recommend performing additional subsurface investigation to the depth of the planned boring. The additional investigation should be performed prior to construction to help identify subsurface conditions in the bore zone and may involve exploratory borings.

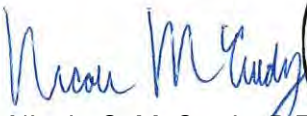
With the exception of the aforementioned issues, our professional opinion is that the site is suitable for the proposed development using conventional earthwork grading and foundation construction techniques. No highly compressible or potentially expansive soil conditions were encountered during our subsurface exploration. Specific recommendations regarding the geotechnical aspects of project design and construction are presented in the following report.

The findings presented in this report are based on our subsurface exploration, laboratory test results, and experience in the project area. We recommend retaining our firm to provide construction monitoring services during earthwork and foundation excavation to observe subsurface conditions encountered with respect to our recommendations provided in this report. As plans develop, we should be consulted concerning the need for additional services.

Please contact us if you have any questions regarding this report or if we can be of additional service.

Sincerely,
NV5

Prepared by:



Nicole C. McCurdy, P.E.
Project Engineer

Reviewed by:

Allison K. Hathon, P.E.
Senior Engineer

TABLE OF CONTENTS

FIGURES

APPENDICES

1 INTRODUCTION

This report presents the results of our geotechnical engineering investigation for the proposed Sugar Bowl Property Owners (SBPO) Sewer Plan to be constructed in the Sugar Bowl Village area in Norden/Placer County, California. We performed our investigation in general accordance with our January 27, 2021 proposal for the project. A copy of the proposal is included as Appendix A of this report.

1.1 PURPOSE

The purpose of our work was to explore and evaluate the subsurface conditions at the project site and to provide our geotechnical engineering conclusions and recommendations for project design and construction.

Our findings are based on our subsurface exploration, laboratory test results, and our experience in the project area. We recommend retaining our firm to provide construction monitoring services during earthwork and foundation excavation to observe subsurface conditions encountered with respect to our recommendations.

1.2 SCOPE OF SERVICES

To prepare this report we performed the following scope of services:

- We performed a site reconnaissance, literature review, and subsurface exploration involving test pits excavated with a mini-excavator.
- We logged the subsurface conditions encountered and collected bulk soil samples for classification and laboratory testing.
- We performed laboratory tests on selected soil samples obtained during our subsurface investigation to evaluate material properties.
- Based on our subsurface exploration and the results of our laboratory testing, we performed engineering analyses to develop geotechnical engineering recommendations for project design and construction.

1.3 SITE DESCRIPTION AND PROPOSED IMPROVEMENTS

Information about the proposed project was obtained from our site visits, conversations with you, and review of preliminary Phase 1 and Phase 2 civil project plans prepared by Auerbach Engineering Corporation (AEC) dated May 2018 and January 2020, respectively. The project will involve construction of new sewer line within the Sugar Bowl Village area designated as Phase 1 and Phase 2.

Phase 1 sewerline construction began in 2017 and will involve completion of approximately 1,500 lineal feet of a 6-inch sewer main to service 25 parcels. The proposed Phase 1 sewerline services residential units on Corn Lily Lane, Fiddleneck Road, and Paintbrush Hill. New Phase 1 sewer lines will connect to an existing sewer main within Mule Ears Drive.

Phase 2 work has not started and will involve installation of approximately 2,341 lineal feet of new 6-inch sewer main that will service 28 parcels. The proposed Phase 2 sewerline will service residential units on Mule Ears Drive, Aster Court, and Pennyroyal Drive. In addition, Phase 2 includes off site sewer facilities. There are currently three layout alternatives for the Phase 2 off site facilities (Options B1, B2, and B3), of which one will be chosen. Options B1 and B3 require a force main and lift station. Option B2 would be a gravity line. Options B1 and B2 require crossing the South Yuba River. Phase 2 sewer lines will connect to existing sewer mains within Old Donner Summit Road (Option B1 and B2) or Mule Ears Drive (Option B3).

The South Yuba River conveys drainage in a general south to north direction through the center of the project area. Phase 1 improvements are generally located east of the river and Phase 2 improvements are generally located west of the river. The approximate location of the project site is shown on Figure 1, Site Vicinity Map. A plan view of the project site is shown on Figure 2, Test Pit Location Plan.

The project site is located within the Sugar Bowl Village area. The Sugar Bowl Ski Resort is generally located south and east of the project area. The project area generally slopes south to north. The project area in the vicinity of Phase 2 generally slopes gently to moderately down toward the river. Steeply sloping river banks up to approximately 4 vertical feet are located adjacent to the river. Surface water drainage generally consists of overland flow and concentrated flow in the South Yuba River. Vegetation consists of scattered grass, brush, and conifer trees. Dense riparian vegetation is located in the vicinity of the river. Granitic, volcanic, and metamorphic cobbles and boulders are located throughout the project site.

2 LITERATURE REVIEW

We reviewed available geologic and soil literature in our files to evaluate geologic and anticipated subsurface conditions at the project site.

2.1 SITE GEOLOGY

We reviewed the geologic map and report titled *Geologic Map of the North Lake Tahoe-Donner Pass Region, Northern Sierra Nevada, California*, by Arthur Gibbs Sylvester et al., California Geological Survey, 2012. The geologic map indicates that the site is generally underlain by Holocene and Pleistocene aged colluvium and glacial drift deposits comprised of unsorted silt, sand, cobbles, and boulders. Based on our subsurface investigation, described below, near-surface soil conditions are consistent with the mapped geology.

2.2 REGIONAL FAULTING

The project is located in a potentially active seismic area. To evaluate the location of mapped faults relative to the project site, we reviewed the following maps:

- *Fault Activity Map of California <http://maps.conservation.ca.gov/ cgs/fam/>;* by Charles W. Jennings and William A. Bryant, California Geological Survey, Geologic Data Map No. 6, 2010.
- Google Earth/KMZ files provided by USGS Earthquakes Hazards Program. Quaternary Faults & Folds in the U.S. Retrieved September 9, 2021. *https://www.usgs.gov/natural-hazards/earthquake-hazards/faults*

The potential risk of fault rupture is based on the concept of recency and recurrence. The more recently a particular fault has ruptured, the more likely it will rupture again. The California State Mining and Geology Board define an “active fault” as one that has had surface displacement within the past 11,000 years (Holocene). Potentially active faults are defined as those that have ruptured between 11,000 and 1.6 million years before the present (Quaternary). Faults are generally considered inactive if there is no evidence of displacement during the Quaternary period.

The referenced geologic maps show several active and potentially active faults located near the project site, including the Dog Valley Fault (active, approximately 6 miles northeast), a group of unnamed faults southeast of Truckee (active and potentially active, approximately 8.5 miles east), the Polaris Fault (active, approximately 10 miles northeast), the West Tahoe-Dollar Point Fault zone (potentially active, approximately 10.5 miles southeast), the West Tahoe Fault (active, approximately 19 miles southeast), the Tahoe-Sierra Frontal Fault Zone (potentially active, approximately 8 miles southeast), and the North Tahoe Fault (active, approximately 18.5 miles southeast). Earthquakes associated with these faults may cause strong ground shaking at the project site.

2.3 POTENTIAL SEISMIC HAZARDS

Primary hazards associated with earthquake faults include strong ground motion and surface rupture. No faults are mapped as crossing or trending towards the site; therefore, the potential for surface rupture at the site is considered low. Earthquakes centered on regional faults in the area, such as the West Tahoe Fault, would likely result in higher ground motion at the site than earthquakes centered on smaller faults that are mapped closer to the site.

Secondary seismic hazards include liquefaction, lateral spreading, and seismically induced slope instability. These potential hazards are discussed below.

2.3.1 Soil Liquefaction

Liquefaction is a phenomenon where loose, saturated, granular soil deposits lose a significant portion of their shear strength due to excess pore water pressure buildup. Cyclic loading, such as that caused by an earthquake, typically causes an increase in pore water pressure and subsequent liquefaction. Based on the results of our subsurface investigation and previous subsurface investigations in the project area, near-surface soil at the site consists of medium dense to dense silty Sand with gravel (SM) and silty Gravel with sand (GM). This soil profile will have a low potential for liquefaction.

2.3.2 Lateral Spreading

Lateral spreading is the lateral movement of soil resulting from liquefaction of subadjacent materials. Since we anticipate that there is a low potential for liquefaction of soil at the site, the potential for lateral spreading to occur is also considered low.

2.3.3 Slope Instability

Slope instability includes landslides, debris flows, and rock fall. No landslides, debris flows or rock fall hazards were observed in the project area. Due to the granular and rocky nature of the proposed site and general surrounding area, the potential for slope instability is considered low.

3 SUBSURFACE EXPLORATION

We performed our subsurface exploration to characterize typical subsurface conditions at the site.

3.1 FIELD EXPLORATION

We explored subsurface conditions at the site on June 9, 2021 by excavating 3 exploratory test pits to depths ranging from 5.5 to 10 feet below the ground surface (bgs). Test pits were excavated with a Takeuchi TB2150 excavator equipped with a 24-inch bucket. Test pits were located in the vicinity of the proposed Phase 2 Options B1, B2, and B3 and based on site access.

An engineer from our firm logged the soil conditions exposed in the test pits, visually classified soil, and collected bulk soil samples for laboratory testing. Soil samples were packaged and sealed in the field to reduce moisture loss and were returned to our laboratory for testing. Upon completion, test pits were backfilled with the excavated soil. The approximate locations of our test pits are shown on Figure 2, Test Pit Location Plan.

If a directional boring for the pipe to be placed under the South Yuba River, as would be required for Options B1 and B2, is to be incorporated into project design, we recommend performing additional subsurface investigation to the depth of the planned boring. The additional investigation should be performed prior to construction to help identify subsurface conditions in the bore zone and may involve exploratory borings.

3.2 SUBSURFACE SOIL CONDITIONS

In Test Pit TP-1, we encountered approximately 1.5 feet of existing fill consisting of loose to medium dense silty Sand with gravel (SM) containing trash. Underlying the existing fill, Test Pit TP-1 encountered dense silty Sand with gravel (SM) overlying highly weathered, closely fractured, weak to moderately strong granitic rock.

Near-surface soil encountered in Test Pits TP-2 and TP-3 consisted of 3 to 4 inches of loose silty Sand with gravel (SM) containing organic material (topsoil). Underlying the topsoil, we encountered medium dense to dense silty Sand (SM) overlying medium dense to dense silty Gravel with sand (GM). More detailed descriptions of the subsurface conditions observed are presented in our Test Pit Logs in Appendix B.

NV5 (previously Holdrege & Kull) previously prepared geotechnical engineering reports for the Summit Crossing subdivision (Project No. 41099-02), Village Hall (Project No. 36-25), and a residential lot located on Paintbrush Hill (Project No. 42245-01), which are located in the vicinity of the Phase 1 and 2 sewer line improvements. Based on our subsurface investigations for these reports, we anticipate subsurface conditions in the vicinity of the Phase 1 and 2 improvements generally consist of coarse-grained soil types overlying near surface granitic rock.

3.3 GROUNDWATER CONDITIONS

We observed groundwater during our subsurface exploration at depths ranging from approximately 3 to 5 feet bgs in the vicinity of the South Yuba River. Fluctuations in soil moisture content and groundwater levels should be anticipated depending on precipitation, irrigation, runoff conditions, and other factors. Based on our experience in the project area, seasonal saturation of near-surface soil should be anticipated, especially during and immediately after seasonal snowmelt.

4 LABORATORY TESTING

We performed laboratory tests on bulk soil samples collected from our exploratory test pits to evaluate their engineering properties. We performed the following laboratory tests:

- Atterberg Limits / Plasticity (ASTM D4318)
- Sieve Analysis (ASTM D422)

Sieve analysis and Atterberg limits data resulted in Unified Soil Classification System (USCS) classifications of silty Sand with gravel (SM) and silty Gravel with sand (GM). More specific soil classification and laboratory test data is included in Appendix C. USCS classifications and Atterberg indices are summarized below.

Table 4.1 – Summary of Laboratory Test Results

Test Pit Number	Depth (feet)	USCS Classification	Percent Passing #200 Sieve	Liquid Limit	Plasticity Index
TP-1	2.5 - 3	Silty Sand with Gravel (SM)	34	Non-Plastic	Non-Plastic
TP-2	8 – 8.5	Silty Gravel with Sand (GM)	24	--	--
TP-3	2 – 2.5	Silty Gravel with Sand (GM)	29	--	--

5 CONCLUSIONS

The following conclusions are based on our field observations, laboratory test results, and our experience in the area.

1. Soil conditions encountered during our field investigation generally consisted of medium dense to dense coarse-grained soil types of low plasticity overlying near-surface granitic rock. No highly plastic, compressible, or potentially expansive soil was encountered. The soil and rock should provide suitable foundation support for proposed sewer lift stations on conventional shallow spread foundations. If a directional boring under the South Yuba River is to be incorporated into project design, we recommend performing additional subsurface investigation to the depth of the planned boring. The additional investigation should be performed prior to construction to help identify subsurface conditions in the boring zone and would likely involve exploratory borings.
2. Based on our previous subsurface investigations performed in the project area, we anticipate that soil conditions throughout the Phase 1 and Phase 2 project areas generally consist of coarse-grained soil types overlying near-surface rock.
3. It appears that approximately 1.5 feet of existing fill is located between Old Donner Summit Road and the South Fork Yuba River. The existing fill material will be suitable for re-use as structural fill material provided any trash, debris exceeding eight inches in maximum dimension, and all organic material is removed prior to placement. Existing fill does not appear to be present in the proposed lift station locations. However, if encountered in these areas, existing fill should be removed in areas that will support foundation elements, earth retention structures, and concrete slabs-on-grade. Existing fill should be anticipated in the vicinity of existing roads and development throughout the Phase 1 and Phase 2 project areas. We have provided recommendations for the existing fill in the *Earthwork* section of this report.
4. We anticipate that it will be possible to excavate underground utility trenches using conventional earthmoving equipment across the majority of the project area. The Takeuchi TB2150 excavator used for our field exploration encountered granitic rock at a depth of approximately 8 feet bgs between Old Donner Summit Road and the South Fork Yuba River. Previous subsurface investigations performed throughout the Phase 1 and Phase 2 project areas encountered granitic rock at depths as shallow as 5 feet bgs. Confined excavations for footings and underground utilities that extend into rock will likely be difficult. A large track-mounted excavator equipped with a ripper tooth or hydraulic hammer, or spot blasting may be required where rock is encountered during excavations for footings and utilities. A significant amount of boulders and over-sized material should be anticipated in onsite excavations.
5. With the exception of the organic surface soil, site soil is generally suitable for reuse as structural fill. However, processing to remove oversized material will likely be necessary. Based on our previous experience in the area, uniformly moisture conditioning soil to within two percent of the optimum moisture content may be difficult. Additional

compaction effort may be necessary to reach the specified compaction. Moisture content, dry density, and relative compaction of structural fill should be evaluated by our firm at regular intervals during structural fill placement.

6. Groundwater was encountered at depths of 3 to 5 feet bgs during our subsurface exploration. We anticipate that the groundwater level in the vicinity of the South Yuba River will be located at or slightly above the water level of the river. Groundwater may also perch on near-surface rock. Groundwater will likely create difficult excavation and backfill conditions during sewer line installation near the river. We have provided recommendations for trench dewatering in the *Recommendations* section of this report.

6 RECOMMENDATIONS

The following geotechnical engineering recommendations are based on our understanding of the project as currently proposed, our field observations, results of our laboratory tests, engineering analyses, and our experience in the area.

6.1 EARTHWORK

The following sections present our recommendations for site clearing and grubbing, preparation for and placement of fill material, temporary excavations, utility trench construction, and construction dewatering.

6.1.1 Clearing and Grubbing

Areas proposed for fill placement and building areas should be cleared and grubbed of vegetation and other deleterious materials. Existing vegetation, organic topsoil, and any debris should be stripped and hauled offsite or stockpiled outside the construction limits. Based on our subsurface exploration, we expect that 4 inches may be used as a reasonable estimate for average depth of stripping. Organic surface soil may be stockpiled for future use in landscape areas, but is not suitable for use as structural fill. We anticipate that the actual depth of stripping will vary across the site and may be greater in wooded areas.

Man-made debris and backfill soil in our exploratory test pits or any other onsite excavations should be over-excavated to underlying, competent material and replaced with compacted structural fill. Grubbing may be required where concentrations of organic soil or tree roots are encountered during site grading.

Existing fill was encountered during our subsurface investigation between Old Donner Summit Road and the South Yuba River. Existing fill is also likely present in the vicinity of existing roads and development. Based on our field observations, we do not anticipate existing fill is located in the areas of the proposed lift stations (for Options B1 and B3). However, if encountered in these areas, existing fill should be removed in areas that will support foundation elements, earth retention structures, and concrete slabs-on-grade. Existing fill should either be replaced with compacted structural fill or improvements may be founded directly on properly prepared underlying native soil. Preparation of the subgrade exposed by over-excavation and requirements for structural fill should be in accordance with recommendations provided below.

All rocks greater than 8 inches in greatest dimension (oversized rock) should be removed from the top 12 inches of soil, if encountered. Oversized rock may be used in landscape areas, rock faced slopes, or removed from the site. Oversized rock should not be placed in fill without prior approval by the project geotechnical engineer.

6.1.2 Preparation for Fill Placement

Prior to fill placement, all areas of existing fill material, man-made debris, or backfill soil should be removed to expose non-expansive native soil as discussed in the previous section.

Where fill placement is planned, the near-surface soil should be scarified to a depth of about 12 inches or to competent material and then uniformly moisture conditioned to within 2 percent of the optimum moisture content. Scarified and moisture conditioned soil should be recompacted with appropriate compaction equipment and proof rolled with a loaded, tandem-axle truck under the observation of an NV5 representative. Any areas that exhibit pumping or rutting should be over-excavated and replaced with compacted structural fill placed according to the recommendations below.

6.1.3 Fill Placement

All fill placed beneath structural improvements (e.g., foundation elements and utility lines) and as part of a fill slope or retaining structure should be considered structural fill. Material used for structural fill should consist of uncontaminated, predominantly granular, non-expansive native soil or approved import soil. Structural fill should consist of granular material, nearly free of organic debris, with a liquid limit of less than 40, a plasticity index less than 15, 100 percent passing the 8-inch sieve, and less than 30 percent passing the No. 200 sieve. Based on our subsurface investigation, the near-surface soil generally has an average of about 30 percent passing the No. 200 sieve. This site soil may be used for structural fill; however, uniformly moisture conditioning the soil to within two percent of optimum moisture content and compacting it to meet project specifications may be difficult. Importing structural fill that meets the recommendations above will likely improve ease of moisture conditioning and compaction.

Based on our previous experience in the area, site soil may be above optimum moisture content even in late summer and may require air drying or additional compaction effort to reach the specified compaction. Moisture content, dry density, and relative compaction of fill should be evaluated by our firm at regular intervals during fill placement. Rock used in fill should be broken into fragments no larger than eight inches in diameter. Rocks larger than eight inches are considered oversized material and should be stockpiled for offhaul, later use in rock-faced slopes, or placement in landscape areas.

Imported fill material should be predominantly granular, non-expansive, and free of deleterious or organic material. Import material that is proposed for use on site should be submitted to NV5 for approval and laboratory analysis at least 72 hours prior to import.

If site grading is performed during periods of wet weather, near-surface site soil may be significantly above its optimum moisture content. These conditions could hamper equipment maneuverability and efforts to compact fill materials to the recommended compaction criteria. Fill material may require drying to facilitate placement and compaction, particularly during or following the wet season or spring snowmelt. Suitable compaction results may be difficult to obtain without processing the soil (e.g., discing during favorable weather, covering stockpiles during periods of precipitation, etc.).

Compaction requirements (maximum dry density and moisture content) specified in this report reference ASTM D1557 – *Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort*. Structural fill should be uniformly moisture

conditioned to within 2 percent of the optimum moisture content and placed in maximum 8-inch thick, loose lifts (layers) prior to compacting. Structural fill should be compacted to at least 90 percent of the maximum dry density. Moisture content, dry density, and relative compaction of fill should be evaluated by our firm at regular intervals during fill placement. The earthwork contractor should assist our representative by preparing test pads with the onsite earth moving equipment.

Structural fill material with more than 30 percent rock larger than ¾-inch cannot be reliably tested using conventional compaction testing equipment. We recommend that a procedural approach, or method specification, be used for quality assurance during rock fill placement rather than a specified relative compaction. The procedural requirements will depend on the equipment used, as well as the nature of the fill material, and will need to be determined by the geotechnical engineer on site. Based on our experience in the area, we anticipate that the procedural specification will require a minimum of six passes with a Cat 563 or similar, self-propelled vibratory compactor to compact a maximum 8-inch thick loose lift. Processing or screening of the fill may be required to remove rocks larger than 8-inches in maximum dimension. Continuous observation by an NV5 representative will be required during fill placement to confirm that procedural specifications have been met.

6.1.4 Temporary Unconfined Excavations

Based on our understanding of the proposed project, temporary unconfined excavations deeper than four feet will likely be necessary. The following criteria may be used for construction of temporary cut slopes at the site.

Table 6.1.5.1 – Unconfined Excavation Slopes

Temporary Slope Inclination (Horizontal to Vertical)	Depth Below Ground Surface (feet)
01H:1V	0-4
0.5H:1V	4-10

These temporary slope inclinations may require modification in the field during construction or where loose soil, groundwater seepage, or existing fill is encountered. We anticipate that unconfined excavations adjacent to the South Yuba River will be difficult where near-surface groundwater is encountered. NV5 should be consulted at the time of construction to provide slope inclinations where groundwater or loose soil is encountered.

Unconfined excavation slopes should be scaled of loose cobbles and boulders. Higher slopes should be covered with strong wire or fabric, firmly secured to prevent roll down of cobbles or other deleterious materials. The contractor is responsible for the safety of workers and should strictly observe federal and local Occupational Safety and Health Administration (OSHA) requirements for excavation shoring and safety. Some raveling of temporary cut slopes should be anticipated. During wet weather, surface water runoff should be prevented from entering

excavations. To reduce the likelihood of sloughing or failure, temporary cut slopes must not remain over the winter.

6.1.5 Underground Utility Trenches

We anticipate that the contractor will be able to excavate underground utility trenches using conventional earthmoving equipment across the majority of the site. The Takeuchi TB2150 excavator used for our field exploration encountered granitic rock at a depth of approximately 8 feet bgs between Old Donner Summit Road and the South Yuba River. Previous subsurface investigations performed throughout the Phase 1 and Phase 2 project areas encountered granitic rock at depths as shallow as 5 feet bgs. Confined excavations for footings and underground utilities that extend into rock will likely be difficult. A large track-mounted excavator equipped with a ripper tooth or hydraulic hammer, or spot blasting may be required where rock is encountered during excavations for footings or utilities. A significant amount of boulders and over-sized material should be anticipated in onsite excavations. An excavator with a "thumb" attachment may increase ease of boulder removal at the site.

We expect that some caving and sloughing of utility trench sidewalls will occur. OSHA requires all utility trenches deeper than five feet bgs be shored with bracing equipment or sloped back prior to entry.

Shallow subsurface seepage may be encountered in trench excavations, particularly if utility trenches are excavated during the spring or early summer and in areas near the South Yuba River. The earthwork contractor may need to employ dewatering methods as discussed in the *Construction Dewatering* section below to excavate, place, and compact trench backfill materials.

Soil used as trench backfill should be non-expansive and should not contain rocks greater than 3 inches in maximum dimension. Trench backfill should consist of uniformly moisture conditioned soil and be placed in maximum 8-inch thick loose lifts prior to compacting. Unless otherwise specified by the applicable local utility district, pipe bedding and trench backfill should be compacted to at least 90 percent of the maximum dry density. Trench backfill placed within 8 inches of building subgrade and driveway areas should be compacted to at least 95 percent of the maximum dry density. The moisture content, density, and relative compaction of fill should be tested by NV5 at regular intervals during fill placement.

6.1.6 Construction Dewatering

During our subsurface exploration, we encountered groundwater seepage in our exploratory test pits in the vicinity of the South Yuba River. If grading is performed during or immediately following the wet season or spring snowmelt, seepage may be encountered during grading. We should observe those conditions, if they are encountered, and provide site specific subsurface drainage recommendations. The following recommendations are preliminary and are not based on a groundwater flow analysis.

We anticipate that dewatering of excavations can be performed by gravity or by constructing sumps to depths below the excavation and removing water with pumps. To maintain stability

of the excavation when placing and compacting trench backfill, groundwater levels should be drawn down at least two feet below the lowest point of the excavation.

If seepage is encountered during trench excavation, it may be necessary to remove underlying saturated soil and replace it with free draining, open-graded, crushed rock (drain rock). Soil backfill may be placed after backfilling with drain rock to an elevation higher than encountered groundwater.

6.2 STRUCTURAL IMPROVEMENT DESIGN CRITERIA

The following sections provide design criteria for foundations, seismic design, slabs-on-grade, retaining walls, and pavement sections.

6.2.1 Foundations

Our opinion is that shallow spread foundations are suitable for support of the proposed lift stations. The following paragraphs discuss foundation design parameters and construction recommendations.

Exterior foundations should be embedded a minimum of 24 inches below the lowest adjacent exterior finish grade for frost protection and confinement. The bottom of interior footings should be at least 12 inches below lowest adjacent finish grade for confinement. Reinforcing steel requirements for foundations should be determined by the project structural engineer.

Foundations founded in competent, undisturbed native soil or compacted fill may be designed using an allowable bearing capacity of 3,500 psf for dead plus live loads. Allowable bearing pressures may be increased by 33 percent for transient loading such as wind or seismic loads.

Resistance to lateral loads (including transient loads) may be provided by frictional resistance between the bottom of concrete foundations and the underlying soil, and by passive soil pressure against the sides of foundations. Lateral resistance derived from passive earth pressure can be modeled as a triangular pressure distribution ranging from 0 psf at the ground surface to a maximum of 350d psf, where d equals the depth of the foundation in feet. A coefficient of friction of 0.4 may be used between poured-in-place concrete foundations and the underlying native soil. Lateral load resistance provided by passive soil pressure and friction may be used in combination without reduction.

Total settlement of individual foundations will vary depending on the plan dimensions of the foundation and actual structural loading. Based on anticipated foundation dimensions and loads, we estimate that total post-construction settlement of footings designed and constructed in accordance with our recommendations will be on the order of ½ inch. Differential settlement between similarly loaded, adjacent footings is expected to be less than ¼ inch, provided footings are founded on similar materials (e.g., all on structural fill, native soil, or rock). Differential settlement between adjacent footings founded on dissimilar materials (e.g., one footing on soil and an adjacent footing on rock) may approach the maximum anticipated total settlement. Settlement of foundations is expected to occur rapidly and should be essentially complete shortly after initial application of loads.

Loose material remaining in footing excavations should be removed to expose firm, unyielding material or compacted to at least 90 percent relative compaction. Footing excavations should be moistened prior to placing concrete to reduce risk of problems caused by wicking of moisture from curing concrete. NV5 should observe footing excavations prior to reinforcing steel and concrete placement.

6.2.2 Seismic Design Criteria

In accordance with the 2019 California Building Code (CBC), the seismic design criteria shown in the table below should be used for the project site. The values were obtained for the site using the online Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps tool found at https://seismicmaps.org. Input values included the site's approximate latitude and longitude obtained from Google Earth and the Site Class. Site Class selection was based on our literature review, our subsurface investigation, our experience in the area, and the Site Class definitions provided in Chapter 20 of ASCE 7-16.

Table 6.2.2.1 – 2019 CBC Seismic Design Parameters

Description	Value	Reference
Approximate Latitude/Longitude	39.3030°N/120.3372°W	Google Earth
Site Class	C	Table 20.3-1, ASCE 7-16
Mapped Short-Period Spectral Response Acceleration Parameter	S_S = 1.039 g	Figure 1613.2.1(1), 2019 CBC
Mapped 1-Second Period Spectral Response Acceleration Parameter	S_1 = 0.342 g	Figure 1613.2.1(2), 2019 CBC
Short Period Site Coefficient	F_A = 1.2	Table 1613.2.3(1), 2019 CBC
1-Second Period Site Coefficient	F_V = 1.5	Table 1613.2.3(2), 2019 CBC
Site Adjusted Short-Period Spectral Response Acceleration Parameter	S_{MS} = 1.247 g	Equation 16-36, 2019 CBC
Site Adjusted 1-Second Period Spectral Response Acceleration Parameter	S_{M1} = 0.514 g	Equation 16-37, 2019 CBC
Design Short-Period Spectral Response Acceleration Parameter	S_{DS} = 0.831 g	Equation 16-38, 2019 CBC
Design 1-Second Period Spectral Response Acceleration Parameter	S_{D1} = 0.342 g	Equation 16-39, 2019 CBC
Peak Ground Acceleration	PGA = 0.444 g	Figure 22-7, ASCE 7-16
Risk Category	II	Table 1604.5, 2019 CBC
Seismic Design Category	D	Tables 1613.2.5 (1) & (2) 2019 CBC

6.2.3 Slab-on-Grade Construction

Concrete slabs-on-grade may be used in conjunction with perimeter concrete footings for the proposed lift station. Slabs-on-grade should be a minimum of four inches thick. If floor loads higher than 250 psf, intermittent live loads, or vehicle loads are anticipated, the project structural engineer should provide slab thickness and steel reinforcing requirements.

Prior to constructing concrete slabs, the upper eight inches of slab subgrade should be scarified, uniformly moisture conditioned to within two percent of optimum moisture content and compacted to at least 90 percent of the maximum dry density. Scarification and compaction may not be required if floor slabs are placed directly on undisturbed compacted structural fill.

Slabs should be underlain by at least four inches of Class 2 aggregate base placed over the prepared subgrade. The aggregate base should be compacted to a minimum of 95 percent of the maximum dry density. If a subdrain is installed as described below, slabs may be constructed over the crushed gravel layer provided a moisture barrier will be placed over the gravel.

To reduce the potential for groundwater intrusion, the project architect and/or owner should consider constructing a drain beneath concrete slabs-on-grade in areas where groundwater and/or saturated soil may be present during wet periods. Subdrains should consist of a minimum of four inches of clean crushed gravel placed over native subgrade leveled or sloped at two percent towards a 4-inch diameter perforated drain pipe. The drain pipe should be placed with perforations faced down in a minimum 12-inch wide gravel-filled trench. The depth of the trench may vary depending on cover requirements for the drain pipe and the slope required to drain water from beneath the slab to a properly constructed infiltration facility. A minimum of one pipe should be installed in each area of the slab surrounded by continuous perimeter foundation elements.

In slab-on-grade areas where moisture sensitive floor coverings are proposed, a vapor barrier (e.g., 15 mil Stego® Wrap) should be placed over the base course or gravel subdrain to reduce the migration of moisture vapor through the concrete slab. The vapor barrier should be installed in accordance with the manufacturer's instructions. Concrete should be placed directly on the vapor barrier. All slab concrete should have a water-cement ratio of 0.45 or less. Alternatively, two inches of spray insulation may be placed between the gravel layer and slab-on-grade.

Regardless of the type of vapor barrier used, moisture can wick up through a concrete slab. Excessive moisture transmission through a slab can cause adhesion loss, warping, and peeling of resilient floor coverings, deterioration of adhesive, seam separation, formation of air pockets, mineral deposition beneath flooring, odor, and fungi growth. Slabs can be tested for water transmissivity in areas that are moisture sensitive. Commercial sealants, moisture retarding admixtures, fly ash, and a reduced water-to-cement ratio can be incorporated into the concrete to reduce slab permeability. To further reduce the chance of moisture transmission, a waterproofing consultant should be contacted.

Exterior slabs-on-grade such as sidewalks should be placed on a minimum 6-inch thick compacted aggregate base section to help reduce the potential for frost heave. Deleterious material should be removed from floor slab subgrades prior to concrete placement. For exterior slabs, the upper eight inches of native soil should be scarified, moisture conditioned, and compacted to at least 90 percent of the maximum dry density. We recommend a minimum concrete thickness of four inches. Where traffic loads are possible, we recommend a minimum concrete thickness of six inches. Concrete used for sidewalk construction should meet the durability requirements of Section 1904 of the 2019 CBC. The Exposure Class should be F2 unless the surface will be exposed to deicing chemicals, in which case the Exposure Class should be F3.

Concrete slabs impart a relatively small load on the subgrade (approximately 50 psf). Therefore, some vertical movement should be anticipated from possible expansion, freeze-thaw cycles, or differential loading.

6.2.4 Retaining Wall Design Criteria

Retaining walls should be designed to resist lateral earth pressures exerted by retained soil plus additional lateral forces (i.e., surcharge loads) that will be applied to walls. Pressures exerted against retaining walls may be calculated by modeling soil as an equivalent fluid with unit weights presented in the following table. The equivalent fluid weights are for well-drained walls.

Table 6.2.4.1 – Equivalent Fluid Unit Weights*

Loading Condition	Retained Cut or Compacted Fill (Level Backfill)	Retained Cut or Compacted Fill (Backfill Slopes up to 2H:1V)
At-Rest Pressure (pcf)	55	75
Active Pressure (pcf)	35	55
Passive Pressure (pcf)	350	350
Coefficient of Friction	0.4	0.4

*Equivalent fluid unit weights presented are ultimate values and do not include a factor of safety. Passive pressures provided assume footings are founded in competent native soil or compacted and tested fill.

The values presented in Table 6.2.4.1 assume that the retained soil will not exceed approximately ten feet in height and that no surcharge loads (e.g., footings, vehicles) are anticipated within a horizontal distance of approximately six feet from the face of the wall. Fifty percent of any uniform areal surcharge placed at the top of a restrained wall (at-rest condition) may be assumed to act as a uniform horizontal pressure over the entire height of the wall. This may be reduced to 30 percent for unrestrained walls (active condition). In addition, we can provide retaining wall and rockery wall design criteria for specific loading and backfill configurations, if requested.

The use of the tabulated active pressure unit weight requires that the wall design accommodate sufficient deflection for mobilization of the retained soil to occur. Typically, a wall yield of at least 0.1 percent of the wall height is sufficient to mobilize active conditions in granular soil (*Caltrans Bridge Design Specifications*, August 2004). If the walls are rigid or restrained to prevent rotation, at-rest conditions should be used for design.

We recommend including additional lateral loading (ΔP_{ae}) on retaining structures due to seismic accelerations when designing walls greater than six feet in height. The USGS Seismic Design Maps tool was used to establish seismic design parameters and provides an estimated peak ground acceleration (PGA) corresponding to the maximum considered earthquake (MCE_R) ground motion.

For an earthquake producing a design PGA of 0.444g and a horizontal seismic coefficient (k_h) equal to one-third the PGA, and following the Mononobe-Okabe procedure to evaluate seismic loading on retaining walls, we recommend that the resulting additional lateral force applied to retaining structures with drained level backfill be estimated as $\Delta P_{ae}=4.2H^2$ (pounds per foot), where H is the height of the wall in feet. The additional seismic force may be assumed to be applied at a height of H/3 above the base of the wall. This seismic loading is for standard retaining walls with drained, level backfill conditions only. NV5 should be consulted to provide seismic loading values for more critical walls or walls with non-level or non-drained backfill conditions. The use of reduced factors of safety is often appropriate when reviewing overturning and sliding resistance during seismic events.

Heavy compaction equipment or other loads should not be used in close proximity to retaining walls unless the wall is designed or braced to resist the additional lateral forces. If planned surface loads are closer to the top of the retaining wall than one-half of its height, NV5 should review the loads and loading configuration.

Retaining wall backfill should consist of granular material, nearly free of organic debris, with a liquid limit less than 40, a plasticity index less than 15, 100 percent passing the 8-inch sieve, and less than 30 percent passing the No. 200 sieve. Backfill should be uniformly moisture conditioned to within two percent of the optimum moisture content and compacted with appropriate compaction equipment to at least 90 percent of the maximum dry density. If the retaining wall backfill will support foundations or rigid pavements, the backfill should be compacted to at least 95 percent of the maximum dry density. An NV5 representative should review and provide specific backfill criteria for all retaining walls over 10 feet in height. Utilities that run through retaining wall backfill should allow for vertical movement where they pass through the wall.

Retaining wall design criteria presented in Table 6.2.4.1 assume that retaining walls are well-drained to reduce hydrostatic pressures. Back-of-wall drainage consisting of graded gravel drains and geosynthetic blankets should be installed to reduce hydrostatic pressures. Gravel drains should consist of at least 18 inches of open-graded, crushed rock placed directly behind the wall, wrapped in non-woven geotextile filter fabric such as Mirafi 140N or approved equivalent. Drains should have a minimum 4-inch diameter, perforated drain pipe placed at

the base of the wall, inside the drain rock, with perforations placed down. The pipe should be sloped so that water is directed away from the wall by gravity. A geosynthetic drainage blanket such as Enkadrain™ or equivalent should also be placed against the back of the wall. Backfill must be compacted carefully so that equipment or soil does not tear or crush the drainage blanket.

We recommend that subsurface walls and slabs be treated to resist moisture migration. Moisture retarding material should consist of sheet membrane rubberized asphalt, polymer-modified asphalt, butyl rubber, or other approved material capable of bridging nonstructural cracks, applied in accordance with the manufacturers recommendations. A manufactured water-stop and/or key should be placed at all cold joints. The project architect or contractor may wish to consult with a waterproofing expert regarding additional options for reducing moisture migration into living areas.

6.3 PLAN REVIEW AND CONSTRUCTION MONITORING

Construction monitoring includes review of plans and specifications and observation of onsite activities during construction as described below. We should review final grading and foundation plans prior to construction to evaluate whether our recommendations have been implemented and to provide additional and/or modified recommendations, if necessary. We also recommend that our firm be retained to provide construction monitoring and testing services during site grading, foundation, retaining wall, underground utility, and road construction to observe subsurface conditions with respect to our engineering recommendations.

7 LIMITATIONS

Our professional services were performed consistent with generally accepted geotechnical engineering principles and practices employed in the site area at the time the report was prepared. No warranty, express or implied, is intended.

Our services were performed consistent with our agreement with our client. We are not responsible for the impacts of changes in environmental standards, practices, or regulations subsequent to performance of our services. We do not warrant the accuracy of information supplied by others or the use of segregated portions of this report. This report is solely for the use of our client. Reliance on this report by a third party is at the risk of that party.

If changes are made to the nature or design of the project as described in this report, then the conclusions and recommendations presented in the report should be reviewed by NV5 to assess the relevancy of our conclusions and recommendations. Additional field work and laboratory tests may be required to revise our recommendations. Costs to review project changes and perform additional field work and laboratory testing necessary to modify our recommendations are beyond the scope of services provided for this report. Additional work will be performed only after receipt of an approved scope of services, budget, and written authorization to proceed.

Analyses, conclusions, and recommendations presented in this report are based on site conditions as they existed at the time we performed our subsurface exploration. We assumed that subsurface soil conditions encountered at the locations of our subsurface explorations are generally representative of subsurface conditions across the project site. Actual subsurface conditions at locations between and beyond our explorations may differ. If subsurface conditions encountered during construction are different than those described in this report, we should be notified so that we can review and modify our recommendations as needed. Our scope of services did not include evaluating the project site for the presence of hazardous materials or petroleum products.

The elevation or depth to groundwater and soil moisture conditions underlying the project site may differ with time and location. The project site map shows approximate exploration locations as determined by pacing distances from identifiable site features. Therefore, exploration locations should not be relied upon as being exact.

The findings of this report are valid as of the present date. Changes in the conditions of the property can occur with the passage of time. These changes may be due to natural processes or human activity, at the project site or adjacent properties. In addition, changes in applicable or appropriate standards can occur, whether they result from legislation or a broadening of knowledge. Therefore, the recommendations presented in this report should not be relied upon after a period of two years from the issue date without our review.

8 REFERENCES

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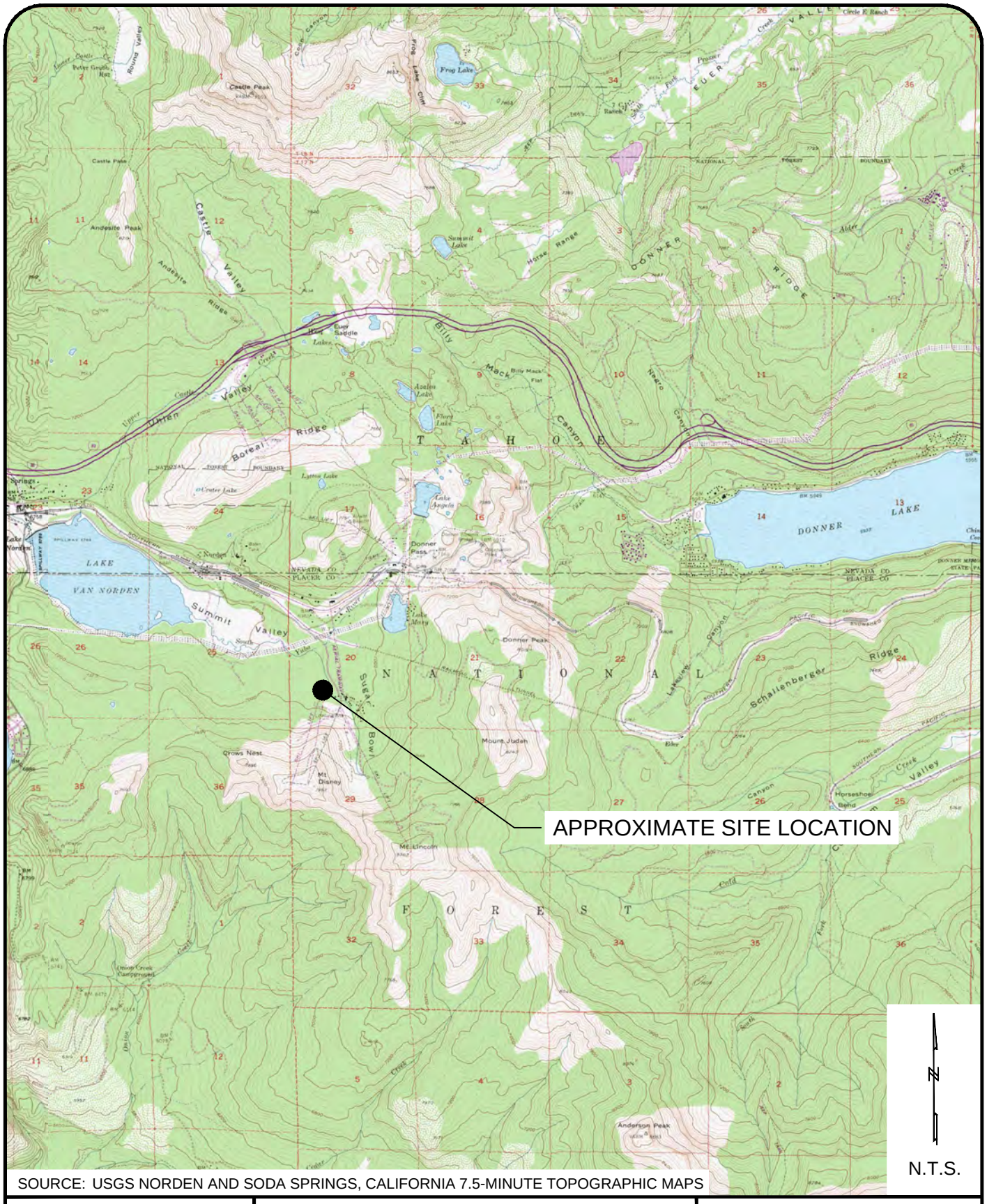
FIGURES



SOURCE: USGS NORDEN AND SODA SPRINGS, CALIFORNIA 7.5-MINUTE TOPOGRAPHIC MAPS

NV5

SITE VICINITY MAP

SUGAR BOWL PROPERTY OWNERS SEWER PLAN

NORDEN/PLACER COUNTY, CALIFORNIA

PROJECT NO.: 42906.00

DATE: SEPTEMBER 2021

FIGURE NO.: 1

LEGEND

TP-1 APPROXIMATE TEST PIT LOCATION AND DESIGNATION

40 0 40 80

SCALE IN FEET

1" = 80'

MODIFIED FROM PHASE 1 SITE PLAN (DATED MAY 2018) AND PHASE 2 SITE PLAN (DATED JANUARY 2020) PREPARED BY AUERBACH ENGINEERING.

NV5

TEST PIT LOCATION PLAN

SUGAR BOWL PROPERTY OWNERS SEWER PLAN

NORDEN/PLACER COUNTY, CALIFORNIA

DRAWN BY: NCM	CHECKED BY: AKH
PROJECT NO.: 42906.00	
DATE: SEPTEMBER 2021	
FIGURE NO.: 2	

APPENDIX A

Proposal

Proposal No. PT21002
January 27, 2021

Auerbach Engineering Corporation
PO Box 5399
Tahoe City, California 96145

Attention: Wally Auerbach

Reference: **Sugar Bowl Property Owners Sewer Plan**
Sugar Bowl Village
Norden, Placer County, California

Subject: **Proposal for Geotechnical Engineering Services**

This letter presents our proposal to prepare a geotechnical engineering report for the proposed Sugar Bowl Property Owners (SBPO) Sewer Plan to be constructed in the Sugar Bowl Village area in Norden, Placer County, California. The project will involve construction of new sewer main lines to service 53 parcels within the Sugar Bowl Village area and offsite sewer facilities involving the crossing of the Yuba River.

NV5 has completed numerous subsurface investigations throughout the Sugar Bowl area and are very familiar with soil conditions. We previously prepared geotechnical engineering reports for the North Village and Crows Nest subdivisions, the Sugar Bowl Academy Relocation project, the Gondola Addition project, the Village Hall project, as well as numerous individual lots within the Sugar Bowl area.

The purpose of our services will be to explore and evaluate subsurface conditions at the project site and to develop geotechnical engineering recommendations for project design and construction. We plan to utilize information previously obtained during our previous investigations completed at the project area to help prepare a geotechnical engineering report. We also plan to perform additional subsurface exploration in the area of the Yuba River crossing and possible lift station. Included in this proposal is a brief summary of our understanding of the project, the scope of services we intend to provide, and an estimate of our fees.

PROJECT DESCRIPTION

This proposal is based on conversations with you and review of project plans prepared by Auerbach Engineering Corporation dated May 2018 and January 2020. The project will involve construction of new sewer line within the Sugar Bowl Village area designated as Phase 1 and Phase 2. Phase 1 sewerline construction began in 2017 and will involve completion of approximately 1,500 lineal feet of a main sewerline to service approximately 25 parcels a portion of Line A and all of Line B). Phase 2 work has not started but will involve installation of approximately 2,341 lineal feet of new sewer main that will provide service to 28 parcels. In addition, Phase 2 includes off site sewer faciilties currently identified as one of three options (B1, B2, and B3). Two of these options will require a force main and lift station, and

one is a gravity sewer option. A crossing under the Yuba Rivier is also planned for Phase 2 construction.

ANTICIPATED CONDITIONS

In preparation of this proposal, we reviewed geologic maps and reports in our files regarding subsurface conditions in the vicinity of the site. Based on this information and our experience in the area, we anticipate that subsurface soil conditions will consist of a relatively thin soil consisting of silty sand with gravel, cobbles, and boulders overlying near-surface volcanic rock.

We anticipate that groundwater may be seasonally present at relatively shallow depths and may affect the proposed construction. We anticipate that the site can be accessed by track-mounted equipment.

SCOPE OF SERVICES

Review of Available Literature

Prior to our subsurface exploration, we will review our previous geotechnical engineering reports prepared within and near the project area and review geologic maps covering the project area. Our field exploration locations will be selected based on site access and the anticipated project layout. We will concentrate our subsurface exploration in the area of planned lift stations and Yuba River crossing.

Field Exploration

Prior to conducting our subsurface investigation, we will mark the site for Underground Service Alert (USA) and contact this agency to locate underground public utilities on and adjacent to the site.

We propose to explore the subsurface conditions at the project site by excavating 3 to 5 test pits where the sewer line will cross under the Yuba River and at planned lift stations. We anticipate that our test pits will be excavated to depths up to approximately 12 feet below the existing ground surface or refusal on rock. The test pits will be excavated using a track-mounted excavator. The test pits will be visually logged by a field representative who will obtain bulk soil samples for classification and laboratory testing. Upon completion, the test pits will be backfilled with excavated soil.

Laboratory Testing

The purpose of laboratory testing is to evaluate the physical and engineering properties of the soil samples collected in the field. We anticipate the laboratory testing program will consist of tests for soil classification (gradations and plasticity).

Analysis and Report

Based on the results of our field exploration and laboratory testing, we will provide our opinions and recommendations regarding the following:

- General soil and groundwater conditions at the project site, with emphasis on how the conditions are expected to affect the proposed construction;
- Anticipated excavation conditions along the sewer line routes;
- Discussion of special geotechnical engineering constraints such as existing fill, highly expansive or compressible soil, near-surface groundwater, and/or near-surface rock;
- Recommendations for earthwork construction, including site preparation recommendations, a discussion of reuse of existing near-surface soil as structural fill, and a discussion of remedial earthwork recommendations, if warranted;
- Recommendations for temporary excavations, construction dewatering, and trench backfill;
- Recommendations for conventional shallow spread foundation design including soil bearing values, minimum footing depth, resistance to lateral loads and estimated settlements, and California Building Code Site Class and seismic coefficients for use in structural design;
- Lateral earth pressures and drainage recommendations for short retaining structures; and
- Subgrade preparation for slab-on-grade concrete for proposed lift stations.

We will present our opinions and recommendations in a written report complete with a test pit location plan, logs of our test pits, and laboratory test results.

SCHEDULE AND FEES

Due to current snow coverage and anticipated snow fall over the course of this winter, we anticipate that our subsurface exploration can be completed sometime during the Spring of 2021, depending on weather conditions and availability of excavating equipment and an operator. If weather, access, or site conditions restrict our field operations, we may need to revise our scope of services and fee estimate. We anticipate submitting our final written report within two to three weeks after completion of our subsurface exploration. If requested, we can provide preliminary verbal information with respect to our anticipated conclusions and recommendations prior to completion of our final report.

We will provide the scope of services described above for a lump sum fee of $9,200. This cost includes the excavation equipment and operator we plan to use for our subsurface exploration. We recommend that if directional boring is planned for the Yuba River crossing, that we perform borings to provide subsurface information at greater depth. We estimate that exploring with borings as opposed to an excavator will be $4,000 more for a total cost of $13,200. Billing will be monthly on a percent complete basis. Additional services beyond the scope of this proposal performed at the client's request will be billed on a time and expense basis using the fee schedule applicable at the time the services are provided.

Prior to initiating our subsurface exploration, all site utilities and utility easements must be accurately located in the field, on a scaled map, or both. This information must be made available to NV5 by the client before beginning our subsurface exploration. Our fee is not adequate to compensate for both the performance of the services and the assumption of risk of damage to such structures. NV5 will not accept responsibility for damage to existing utilities not accurately located in the manner described above. Services rendered by NV5 to repair them will be billed at cost.

In order to defray the initial mobilization costs of the excavation equipment, we are requesting a retainer in the amount of $3,000 at the time of contract signing. All remittances should be sent to our Truckee office at the following address:

Accounts Receivable
NV5
10775 Pioneer Trail, Suite 213
Truckee, CA 96161

Remittances should reference this proposal number, PT21002.

CLOSING

NV5 will perform its services in a manner consistent with the standard of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity at the time the services are performed. No warranty or guarantee, express or implied, is part of the services offered by this proposal.

We anticipate that Auerbach Engineering Corporation will provide an agreement as authorization to proceed.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you have any questions or need additional information, please contact the undersigned.

Sincerely,
NV5

Pamela J. Raynak, P.G.
Senior Geologist

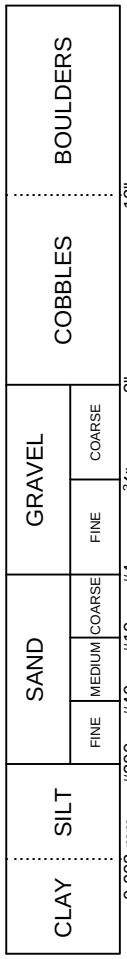
John K, Hudson, P.E., C.E.G.
Associate Engineer

APPENDIX B

Test Pit Logs

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

COARSE GRAINED SOIL More than 50% of the soil is retained on the No. 200 sieve	GRAVEL More than 50% coarse fraction is larger than the No. 4 sieve size	Clean Gravel with less than 5% fines*	GW	WELL GRADED GRAVEL, GRAVEL SAND MIXTURES
			GP	POORLY GRADED GRAVEL, GRAVEL SAND MIXTURES
		Gravel with more than 12% fines*	GM	SILTY GRAVEL, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVEL, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
	SAND More than 50% coarse fraction is smaller than the No. 4 sieve size	Clean Sand with less than 5% fines*	SW	WELL GRADED SAND, GRAVELY SAND
			SP	POORLY GRADED SAND, GRAVELY SAND
		Sand with more than 12% fines*	SM	SILTY SAND, POORLY GRADED SAND-SILT MIXTURE
			SC	CLAYEY SAND, POORLY GRADED SAND-SILT MIXTURE
FINE GRAINED SOIL More than 50% of the soil passes the No. 200 sieve	SILT AND CLAY Liquid limit less than 50		ML	INORGANIC SILT & VERY FINE SAND, ROCK FLOUR, SILTY OR CLAYEY FINE SAND, OR CLAYEY SILT WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAY OF LOW TO MEDIUM PLASTICITY, GRAVELY CLAY, SANDY CLAY, SILTY CLAY, LEAN CLAY
			OL	ORGANIC CLAY AND ORGANIC SILTY CLAY OF LOW PLASTICITY
	SILT AND CLAY Liquid limit greater than 50		MH	INORGANIC SILT, MIMCACEOUS OR DIATOMACIOUS FINE SANDY OR SILTY SOIL, ELASTIC SILT
			CH	INORGANIC CLAY OF HIGH PLASTICITY, FAT CLAY
			OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILT
HIGHLY ORGANIC SOIL			Pt	PEAT AND OTHER HIGHLY ORGANIC SOIL
ROCK			RX	ROCK



* Hybrid classifications are used when the fines content is between 5% and 12% (e.g, SP-SM, GP-GM, SW-SC, GW-GC, etc.)

SAMPLE DESIGNATION

- MODIFIED CALIFORNIA SAMPLER (3" OUTSIDE DIAMETER)
- MODIFIED CALIFORNIA SAMPLER (2-1/2" OUTSIDE DIAMETER)
- STANDARD PENETRATION SPLIT SPOON SAMPLER (2" OUTSIDE DIAMETER)
- BULK OR CLASSIFICATION SAMPLE
- SHELBY TUBE (3" OUTSIDE DIAMETER)

KEY TO SYMBOLS

▽	OBSERVED GROUNDWATER
▼	STABILIZED GROUNDWATER LEVEL
LL	LIQUID LIMIT
PL	PLASTIC LIMIT
PI	PLASTICITY INDEX
Gs	SPECIFIC GRAVITY
PERM	PERMEABILITY
CONSOL	CONSOLIDATION
SA	SIEVE ANALYSIS
-200	PERCENT PASSING NO. 200 SIEVE

NON-COHESIVE (GRANULAR) SOIL

RELATIVE DENSITY	SPT BLOWS PER FOOT (N)
VERY LOOSE	0 - 4
LOOSE	5 - 10
MEDIUM DENSE	11 - 30
DENSE	31 - 50
VERY DENSE	51 +

COHESIVE (CLAYEY) SOIL

COMPARATIVE CONSISTENCY	SPT BLOWS PER FOOT (N)	UNCONFINED COMPRESSIVE STRENGTH (TSF)
VERY SOFT	0 - 2	0 - 0.25
SOFT	3 - 4	0.25 - 0.50
MEDIUM STIFF	5 - 8	0.50 - 1.00
STIFF	9 - 15	1.00 - 2.00
VERY STIFF	16 - 30	2.00 - 4.00
HARD	31 +	4.00 +

BLOW COUNTS

BLOW COUNTS REPRESENT THE NUMBER OF BLOWS REQUIRED TO DRIVE THE SAMPLER EVERY 6 INCHES OF AN 18-INCH DRIVE OR FRACTION INDICATED. BLOW COUNTS PRESENTED ON LOGS HAVE NOT BEEN ADJUSTED.

SOIL CONTACTS

- ——— SOLID - WELL-DEFINED CHANGE
- - - - - - DASHED - GRADATIONAL OR APPROXIMATE CHANGE

MOISTURE CONTENT

CLASSIFICATION	DESCRIPTION
DRY	FREE OF MOISTURE, DUSTY, DRY TO THE TOUCH
SLIGHTLY MOIST	BELOW THE SOIL'S OPTIMUM MOISTURE CONTENT, BUT NOT DRY
MOIST	NEAR THE SOIL'S OPTIMUM MOISTURE CONTENT
VERY MOIST	ABOVE THE SOIL'S OPTIMUM MOISTURE CONTENT, BUT NOT WET
WET	VISIBLE FREE WATER, USUALLY SOIL IS BELOW WATER TABLE

CEMENTATION

CLASSIFICATION	DESCRIPTION
WEAK	CRUMBLES OR BREAKS WITH HANDLING OR SLIGHT FINGER PRESSURE
MODERATE	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE
STRONG	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE

MINOR CONSTITUENT QUANTITIES

QUALIFIER	DESCRIPTION
TRACE	PARTICLES ARE PRESENT, BUT ESTIMATED TO BE LESS THAN 5%
SOME	5 to 12%
WITH	12 to 30%

NV5

SOIL CLASSIFICATION KEY

SUGAR BOWL PROPERTY OWNERS SEWER PLAN

SODA SPRINGS/PLACER COUNTY, CALIFORNIA

PROJECT NO.: 42906.00

DATE: SEPTEMBER 2021

FIGURE NO.: C1

FRACTURING

SPACING	DESCRIPTION
>6 FT	VERY WIDELY
2 - 6 FT	WIDELY
8 - 24 IN	MODERATELY
2-1/2 - 8 IN	CLOSELY
$\frac{3}{4}$ - 2-1/2 IN	VERY CLOSELY

RQD

RQD (%)	ROCK QUALITY
90 - 100	EXCELLENT
75 - 90	GOOD
50 - 75	FAIR
25 - 50	POOR
0 - 25	VERY POOR

WEATHERING

WEATHERING	FIELD TEST
FRESH	NO VISIBLE SIGN OF DECOMPOSITION OR DISCOLORATION. RINGS UNDER HAMMER IMPACT.
SLIGHTLY WEATHERED	SLIGHT DISCOLORATION INWARDS FROM OPEN FRACTURES, OTHERWISE SIMILAR TO FRESH.
MODERATELY WEATHERED	DISCOLORATION THROUGHOUT. WEAKER MINERALS SUCH AS FELDSPAR DECOMPOSED. STRENGTH SOMEWHAT LESS THAN FRESH ROCK BUT CORES CANNOT BE BROKEN BY HAND OR SCRAPED WITH A KNIFE. TEXTURE PRESERVED.
HIGHLY WEATHERED	MOST MINERALS SOMEWHAT DECOMPOSED. SPECIMENS CAN BE BROKEN BY HAND WITH EFFORT OR SHAVED WITH KNIFE. CORE STONES PRESENT IN ROCK MASS. TEXTURE BECOMING INDISTINCT BUT FABRIC PRESERVED.
COMPLETELY WEATHERED	MINERALS DECOMPOSED TO SOIL BUT FABRIC AND STRUCTURE PRESERVED. SPECIMENS EASILY CRUMBLED OR PENETRATED.

COMPETENCY

CLASS	STRENGTH	FIELD TEST	APPROPRIATE RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TSF)
I	EXTREMELY STRONG	MANY BLOWS WITH GEOLOGIC HAMMER REQUIRED TO BREAK INTACT SPECIMEN	>2,000
II	VERY STRONG	HAND-HELD SPECIMEN BREAKS WITH PICK END OF HAMMER UNDER MORE THAN ONE BLOW	2,000 - 1,000
III	STRONG	CANNOT BE SCRAPED OR PEALED WITH KNIFE, HAND-HELD SPECIMEN CAN BE BROKEN WITH SINGLE MODERATE BLOW WITH PICK END OF HAMMER	1,000 - 500
IV	MODERATELY STRONG	CAN JUST BE SCRAPED OR PEELED WITH KNIFE. INDENTATIONS 1 MM TO 3 MM SHOW IN SPECIMEN WITH MODERATE BLOW WITH PICK END OF HAMMER	500 - 250
V	WEAK	MATERIAL CRUMBLES UNDER MODERATE BLOW WITH PICK END OF HAMMER AND CAN BE PEELED WITH A KNIFE, BUT IS HARD TO HAND-TRIM FOR TRIAXIAL TEST SPECIMEN	250 - 10
VI	FRIABLE	MATERIAL CRUMBLES IN HAND	N/A

NV5

ROCK CLASSIFICATION KEY

SUGAR BOWL PROPERTY OWNERS SEWER PLAN

SODA SPRINGS/PLACER COUNTY, CALIFORNIA

PROJECT NO.: 42906.00

DATE: SEPTEMBER 2021

FIGURE NO.: C2

TEST PIT NO. TP-1

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42906.00	SUGAR BOWL PROPERTY OWNERS SEWER PLAN	~6,916 FT MSL	6/9/2021	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
CLAUSS EXCAVATION	MIKE	TAKEUCHI TB2150 W/ 24 INCH BUCKET

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	NO	NO

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			1		SM [FILL]	BROWN SILTY SAND WITH GRAVEL (SM); DRY TO SLIGHTLY MOIST, LOOSE TO MEDIUM DENSE, CONTAINS ORGANIC MATERIAL AND TRASH [FILL]
			2		SM	BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST, DENSE, FINE TO COARSE GRAVEL, FREQUENT COBBLES AND BOULDERS TO 36 INCH DIAMETER, ABUNDANT ROOTS
1-1		34	3			- BECOMES ORANGE BROWN
			4			
			5			
			6			- BECOMES GRAYISH BROWN, DECREASING FINES
			7			
			8		RX	GRANITIC ROCK (RX); HIGHLY WEATHERED, CLOSELY FRACTURED, WEAK TO MODERATELY STRONG
			9			
			10			TEST PIT TERMINATED AT 10 FEET BGS
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

TEST PIT NO. TP-2

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42906.00	SUGAR BOWL PROPERTY OWNERS SEWER PLAN	~6,918 FT MSL	6/9/2021	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
CLAUSS EXCAVATION	MIKE	TAKEUCHI TB2150 W/ 24 INCH BUCKET

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	YES - 5 FEET BGS	YES

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			0		SM	BROWN SILTY SAND WITH GRAVEL (SM); DRY, LOOSE, CONTAINS ORGANIC MATERIAL [TOPSOIL, 3 TO 4 INCHES]
			1		SM	BROWN SILTY SAND (SM); MOIST, MEDIUM DENSE TO DENSE, FINE SAND, TRACE FINE TO COARSE GRAVEL, ABUNDANT ROOTS, ESTIMATE 20% FINES
			2			
			3		GM	BROWN SILTY GRAVEL WITH SAND (GM); MOIST TO WET, DENSE, FINE TO COARSE SAND, FINE TO COARSE GRAVEL, ABUNDANT COBBLES AND BOULDERS TO 24 INCH DIAMETER
2-1			4			
			5			- GROUNDWATER ENCOUNTERED AT 5 FEET BGS
			6			- BECOMES GRAYISH BROWN
			7			
			8			
2-2		24				
			9			TEST PIT TERMINATED AT 8.5 FEET BGS DUE TO CAVING
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

TEST PIT NO. TP-3

PROJECT NO.	PROJECT NAME	ELEVATION	DATE	PAGE
42906.00	SUGAR BOWL PROPERTY OWNERS SEWER PLAN	~6,916 FT MSL	6/9/2021	1 OF 1

EXCAVATING CONTRACTOR	OPERATOR	EXCAVATING METHOD AND BUCKET SIZE
CLAUSS EXCAVATION	MIKE	TAKEUCHI TB2150 W/ 24 INCH BUCKET

LOGGED BY	SAMPLING METHOD	GROUNDWATER ENCOUNTERED	CAVED
NCM	BULK	YES - 3 FEET BGS	YES

SAMPLE NO.	POCKET PEN. (TSF)	PERCENT PASSING #200 SIEVE	DEPTH (FEET)	GRAPHIC LOG	USCS	DESCRIPTIONS/REMARKS
			0		SM	BROWN SILTY SAND WITH GRAVEL (SM); MOIST, LOOSE, CONTAINS ORGANIC MATERIAL [TOPSOIL, 3 TO 4 INCHES]
			1		SM	BROWN SILTY SAND WITH GRAVEL (SM); MOIST TO WET, MEDIUM DENSE, FINE TO MEDIUM SAND, FINE TO COARSE GRAVEL, ABUNDANT COBBLES AND BOULDERS TO 24 INCH DIAMETER, ESTIMATE 25% FINES
3-1		29	2		GM	BROWN SILTY GRAVEL WITH SAND (GM); WET, MEDIUM DENSE, FINE TO COARSE SAND, FINE TO COARSE GRAVEL, ABUNDANT COBBLES AND BOULDERS TO 30 INCH DIAMETER - GROUNDWATER ENCOUNTERED AT 3 FEET BGS
			3			
			4			
			5			
			6			TEST PIT TERMINATED AT 5.5 FEET BGS DUE TO CAVING
			7			
			8			
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

APPENDIX C

Laboratory Test Data

PARTICLE SIZE DISTRIBUTION

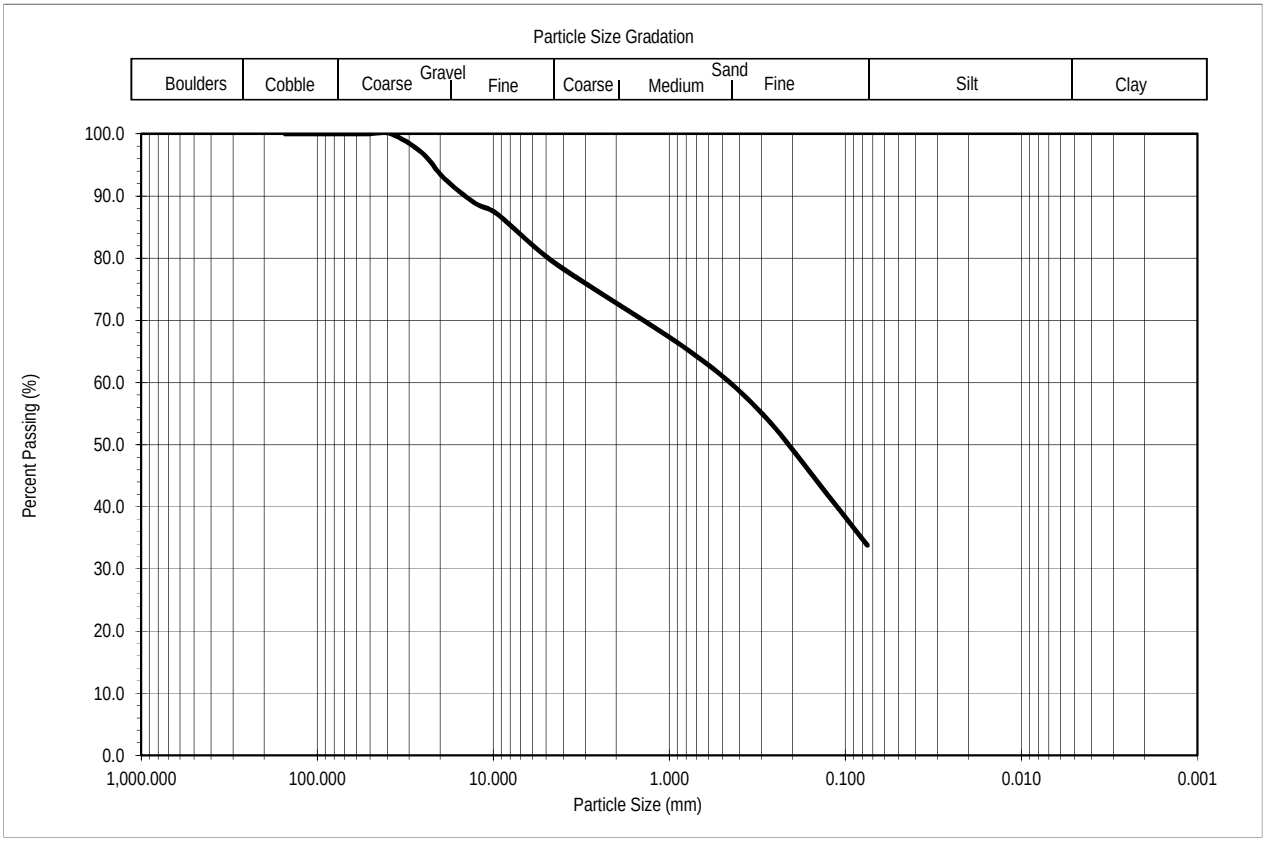
ASTM D422

DSA File #:

DSA Appl #:

Project No.:	**42906.00**	Project Name:	**Sugar Bowl Sewer**	Date:	**7/7/2021**
Sample No.:	**1-1**	Boring/Trench:	**TP-1**	Depth, (ft.): **2.5-3**	Tested By: **GWO**
Description:	**Brown Silty Sand with Gravel (SM)**				Checked By: **MLH**
Sample Location:	**n/a**				Lab. No.: **15-21-350**

Sieve Size	Particle Diameter		Dry Weight on Sieve			Percent
	Inches	Millimeter	Retained On Sieve	Accumulated On Sieve	Passing Sieve	Passing
(U.S. Standard)	(in.)	(mm)	(gm)	(gm)	(gm)	(%)
6 Inch	6.0000	152.4	0.00	0.0	2,167.1	100.0
3 Inch	3.0000	76.2	0.00	0.0	2,167.1	100.0
2 Inch	2.0000	50.8	0.00	0.0	2,167.1	100.0
1.5 Inch	1.5000	38.1	0.00	0.0	2,167.1	100.0
1.0 Inch	1.0000	25.4	66.00	66.0	2,101.1	97.0
3/4 Inch	0.7500	19.1	88.60	154.6	2,012.5	92.9
1/2 Inch	0.5000	12.7	87.20	241.8	1,925.3	88.8
3/8 Inch	0.3750	9.5	37.10	278.9	1,888.2	87.1
#4	0.1870	4.7500	159.40	438.3	1,728.8	79.8
#10	0.0787	2.0000	151.84	590.1	1,576.9	72.8
#20	0.0335	0.8500	148.32	738.5	1,428.6	65.9
#40	0.0167	0.4250	143.05	881.5	1,285.6	59.3
#60	0.0098	0.2500	145.16	1,026.7	1,140.4	52.6
#100	0.0059	0.1500	172.57	1,199.2	967.8	44.7
#200	0.0030	0.0750	235.13	1,434.4	732.7	33.8



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PARTICLE SIZE DISTRIBUTION

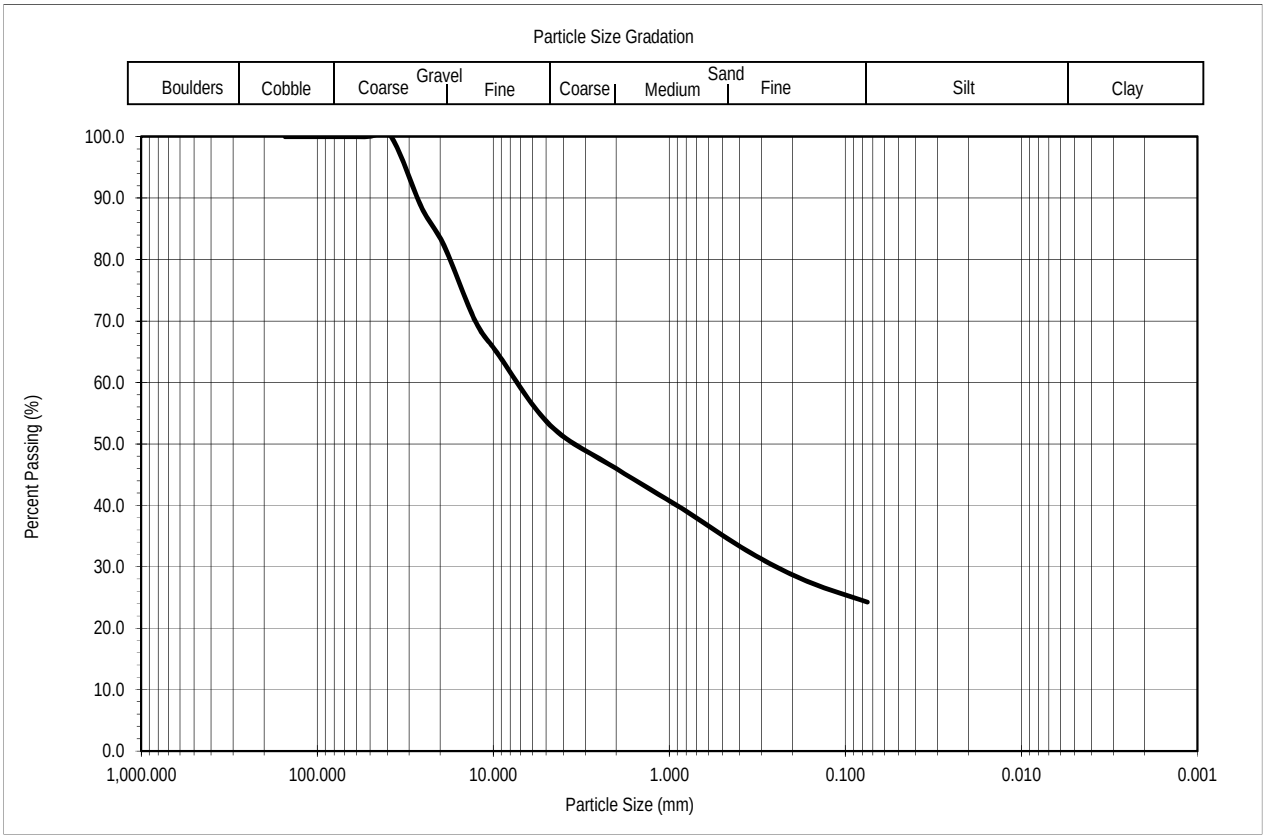
ASTM D422

DSA File #:

DSA Appl #:

Project No.:	**42906.00**	Project Name:	**Sugar Bowl Sewer**	Date:	**7/7/2021**
Sample No.:	**2-2**	Boring/Trench:	**TP-2**	Depth, (ft.): **8-8.5**	Tested By: **GWO**
Description:	**Brown Silty Gravel with Sand (GM)**				Checked By: **MLH**
Sample Location:	**n/a**				Lab. No.: **15-21-350**

Sieve Size	Particle Diameter		Dry Weight on Sieve			Percent
	Inches	Millimeter	Retained On Sieve	Accumulated On Sieve	Passing Sieve	Passing
(U.S. Standard)	(in.)	(mm)	(gm)	(gm)	(gm)	(%)
6 Inch	6.0000	152.4	0.00	0.0	3,406.0	100.0
3 Inch	3.0000	76.2	0.00	0.0	3,406.0	100.0
2 Inch	2.0000	50.8	0.00	0.0	3,406.0	100.0
1.5 Inch	1.5000	38.1	0.00	0.0	3,406.0	100.0
1.0 Inch	1.0000	25.4	397.00	397.0	3,009.0	88.3
3/4 Inch	0.7500	19.1	206.70	603.7	2,802.3	82.3
1/2 Inch	0.5000	12.7	415.60	1,019.3	2,386.7	70.1
3/8 Inch	0.3750	9.5	177.70	1,197.0	2,209.0	64.9
#4	0.1870	4.7500	403.40	1,600.4	1,805.6	53.0
#10	0.0787	2.0000	240.19	1,840.6	1,565.4	46.0
#20	0.0335	0.8500	220.15	2,060.7	1,345.3	39.5
#40	0.0167	0.4250	193.27	2,254.0	1,152.0	33.8
#60	0.0098	0.2500	128.08	2,382.1	1,023.9	30.1
#100	0.0059	0.1500	99.17	2,481.3	924.7	27.2
#200	0.0030	0.0750	98.66	2,579.9	826.1	24.3



PARTICLE SIZE DISTRIBUTION

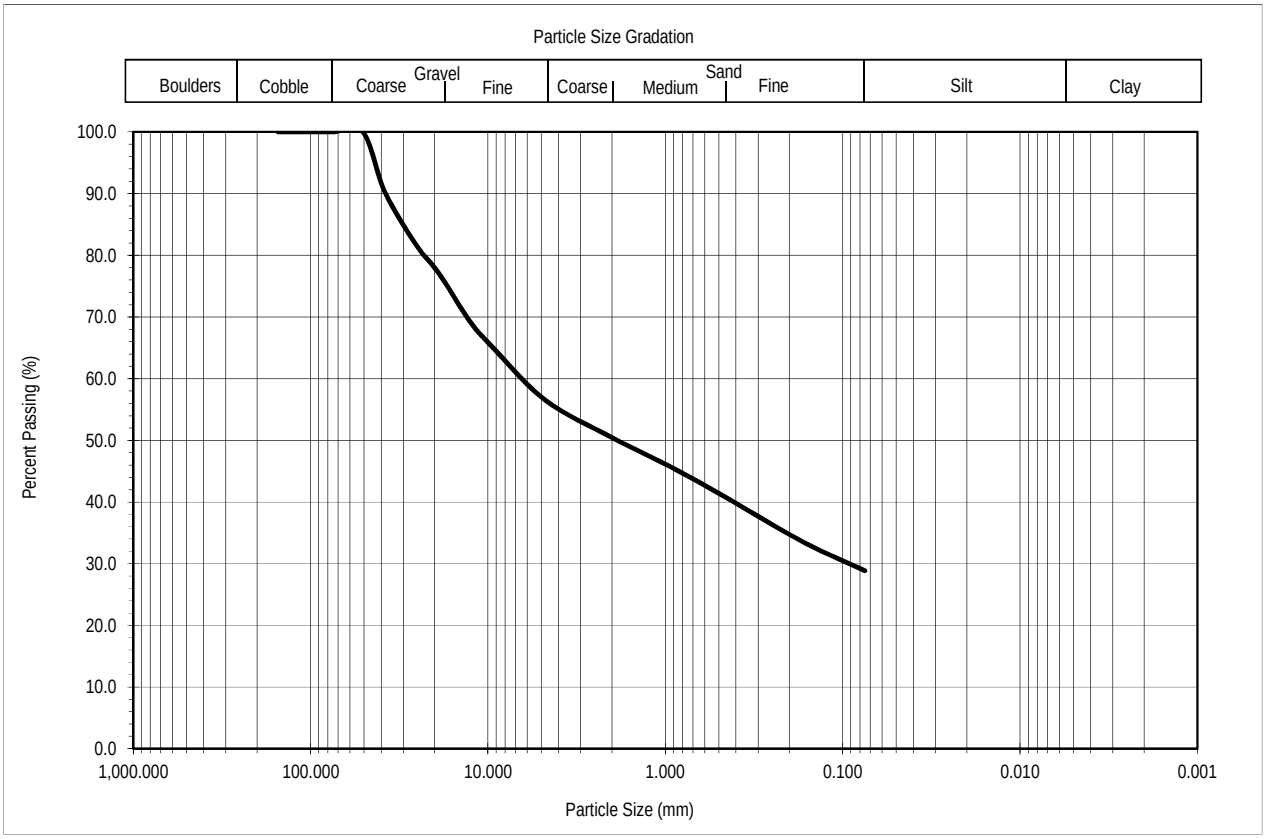
ASTM D422

DSA File #:

DSA Appl #:

Project No.:	**42906.00**	Project Name:	**Sugar Bowl Sewer**	Date:	**7/7/2021**
Sample No.:	**3-1**	Boring/Trench:	**TP-3**	Depth, (ft.): **2-2.5**	Tested By: **GWO**
Description:	**Brown Silty Gravel with Sand (GM)**				Checked By: **MLH**
Sample Location:	**n/a**				Lab. No.: **15-21-350**

Sieve Size	Particle Diameter		Dry Weight on Sieve			Percent
	Inches	Millimeter	Retained On Sieve	Accumulated On Sieve	Passing Sieve	Passing
(U.S. Standard)	(in.)	(mm)	(gm)	(gm)	(gm)	(%)
6 Inch	6.0000	152.4	0.00	0.0	3,419.7	100.0
3 Inch	3.0000	76.2	0.00	0.0	3,419.7	100.0
2 Inch	2.0000	50.8	0.00	0.0	3,419.7	100.0
1.5 Inch	1.5000	38.1	334.70	334.7	3,085.0	90.2
1.0 Inch	1.0000	25.4	292.10	626.8	2,792.9	81.7
3/4 Inch	0.7500	19.1	152.60	779.4	2,640.3	77.2
1/2 Inch	0.5000	12.7	268.50	1,047.9	2,371.8	69.4
3/8 Inch	0.3750	9.5	140.30	1,188.2	2,231.5	65.3
#4	0.1870	4.7500	298.90	1,487.1	1,932.6	56.5
#10	0.0787	2.0000	207.38	1,694.5	1,725.3	50.4
#20	0.0335	0.8500	183.06	1,877.5	1,542.2	45.1
#40	0.0167	0.4250	166.33	2,043.9	1,375.9	40.2
#60	0.0098	0.2500	133.11	2,177.0	1,242.8	36.3
#100	0.0059	0.1500	120.56	2,297.5	1,122.2	32.8
#200	0.0030	0.0750	135.20	2,432.7	987.0	28.9



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ATTERBERG INDICES

ASTM D4318

DSA File #:

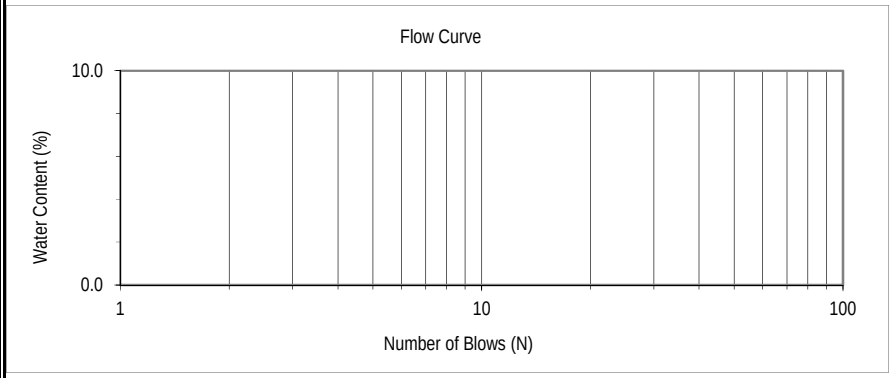
DSA Appl #:

Project No.:	**42906.00**	Project Name:	**Sugar Bowl Sewer**	Date:	**7/7/2021**
Sample No.:	**1-1**	Boring/Trench:	**TP-1** Depth, (ft.): **2.5-3**	Tested By:	**GWO**
Description:	**Brown Silty Sand with Gravel (SM)**			Checked By:	**MLH**
Sample Location:	n/a			Lab. No.:	**15-21-350**

Estimated % of Sample Retained on No. 40 Sieve: _____ Sample Air Dried: yes

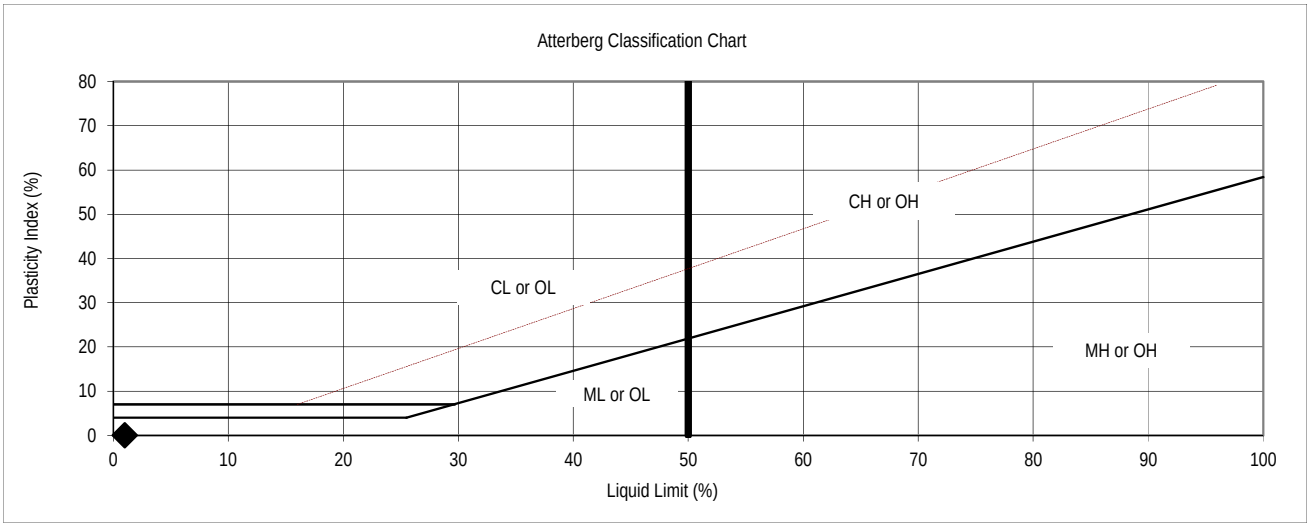
Test Method A or B: A

	LIQUID LIMIT:					PLASTIC LIMIT:		
Sample No.:	1	2	3	4	5	1	2	3
Pan ID:	15	18	22			14	38	
Wt. Pan (gr)	21.60	21.85	21.18			21.94	21.44	
Wt. Wet Soil + Pan (gr)								
Wt. Dry Soil + Pan (gr)								
Wt. Water (gr)	0.00	0.00	0.00			0.00	0.00	
Wt. Dry Soil (gr)	-21.60	-21.85	-21.18			-21.94	-21.44	
Water Content (%)	0.0	0.0	0.0			0.0	0.0	
Number of Blows, N								
			LIQUID LIMIT =	NP			PLASTIC LIMIT =	NP



Plasticity Index = NP

Group Symbol =



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