HELIX Environmental Planning

Eagle Scout Lake Bridge Replacement Project

Draft Initial Study/Mitigated Negative Declaration

City File No. PL23-0033

SCH # _____

May 2023 | 01391.00026.001

Prepared for:

City of Escondido
201 N Broadway
Escondido, CA 92025

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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Acronyms and Abbreviations

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ADT	average daily trips
AMSL	above mean sea level
APE	area of potential effects
APN	Assessor's Parcel Number
BMPs	best management practices
BRA	Biological Resources Assessment
BSA	biological study area
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emission Estimator Model
Caltrans	California Department of Transportation
CAP	City of Escondido Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH_4	methane
CHRIS	California Historical Resources Information System
City	City of Escondido
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	San Diego County
CRHR	California Register of Historical Resources
CSMP	Construction Site Monitoring Program
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
Draft MHCP	Draft Escondido Multiple Habitat Conservation Program
EFD	Escondido Fire Department
EPD	Escondido Police Department
EQR	Environmental Quality Regulations
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency

Acronyms and Abbreviations (cont.)

General Plan	City of Escondido General Plan
GHG	greenhouse gas
HELIX	HELIX Environmental Planning, Inc.
HFCs	hydrofluorocarbons
HFPA	Hardline Focused Planning Area
HRA	Health Risk Assessment
I-	Interstate
IBC	International Building Code
in/sec	inches per second
IS/MND	Initial Study/Mitigated Negative Declaration
JURMP	Jurisdictional Urban Runoff Management Plan
L_{EQ}	one-hour average equivalent sound level
LID	low-impact development
LOS	Level of Service
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MCAS	Marine Corps Air Station
MLD	Most Likely Descendant
mph	miles per hour
MS4	Municipal Separate Storm Sewer Systems
MT	metric ton
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCTD	North County Transit District
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
OHWM	ordinary high water mark
Park	Kit Carson Park
PFCs	perfluorocarbons
PM_{10}	Particulate matter 10 microns or less in diameter
$PM_{2.5}$	Particulate matter 2.5 microns or less in diameter
PPV	peak particle velocity
PRC	Public Resources Code
PVC	polyvinyl chloride

Acronyms and Abbreviations (cont.)

RAQS	Regional Air Quality Strategy
RCNM	Road Construction Noise Model
REAP	Rain Event Action Plan
ROG	reactive organic gas
RWQCB	San Diego Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIC	South Coast Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SDG&E	San Diego Gas and Electric Company
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	sulfur oxides
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	Storm Water Quality Management Program
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCA Tribes	Native American tribes that are traditionally and culturally affiliated with the project location (Kumeyaay and Luiseño tribes)
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VdB	vibration decibel
VMT	vehicle miles traveled

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CITY OF ESCONDIDO
Planning Division
201 North Broadway
Escondido, CA 92025-2798
(760) 839-4671
www.escondido.org

DRAFT MITIGATED NEGATIVE DECLARATION

Eagle Scout Lake Bridge Replacement Project
City File No. PL23-0033

An Initial Study Environmental Checklist was prepared for this Project and is included with this Draft Initial Study/Mitigated Negative Declaration (IS/MND). The information contained in the Initial Study Environmental Checklist will be used by the City of Escondido to assess this Project as required by the California Environmental Quality Act (CEQA) and state CEQA Guidelines, as well as related City Ordinances and Regulations.

This IS/MND assesses the environmental effects of the proposed Eagle Scout Lake Bridge Replacement Project located at 3341 Bear Valley Parkway, Escondido, CA 92025 (Assessor's Parcel Number 760-244-37-00). The 0.33-acre Project site is located on the northeastern side of Eagle Scout Lake within the 285-acre Kit Carson Park. The Project proposes to design and construct a new bridge to replace the existing damaged crossing and address deficiencies with the current design. The existing damaged 72-inch by 44-inch corrugated steel oval "squash" pipe (measuring 17 feet in length) would be removed and a new cast-in-place, double wall, 34-foot by 16-foot concrete box culvert would be constructed. The Project additionally includes the relocation of a portion of an 18-inch-diameter reclaimed water line and a 4-inch-diameter fiber optic conduit located in the vicinity of the existing culvert.

As mandated by state CEQA Guidelines Section 15105, affected public agencies and the interested public may submit comments on the Draft IS/MND in writing before the end of the 30-day public review period starting **May 25, 2023** and end on **June 23, 2023**. Written comments on the Draft IS/MND should be submitted to the following address by 5:00 p.m., on **June 23, 2023**.

City of Escondido
Planning Division
201 North Broadway
Escondido, CA 92025-2798

Contact: Jay Paul, Senior Planner
Telephone: (760) 839-4074
Fax: (760) 839-4313
Email: jpaul@escondido.org

All comments received will be considered with the Final IS/MND in determining whether to approve the Project. A printed copy of this document and associated plans and/or documents are available for review during normal operation hours for the duration of the public review period at the City of Escondido Planning Division at the address shown above, and also available on the City's Website at: https://www.escondido.org/eagle-scout-lake-bridge-project. The City of Escondido General Plan Update (2012); Final Environmental Impact Report (2012); and Climate Action Plan are incorporated by reference pursuant to Section 15150 of the state CEQA Guidelines. These documents are available for review at, or can be obtained through, the City of Escondido Planning Division or on the City of Escondido website.

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1.0 Introduction

1.1 INITIAL STUDY INFORMATION SHEET

1.	Project title:	Eagle Scout Lake Bridge Replacement Project, City Case No. PL23-0033
2.	Lead agency name and address:	City of Escondido, 201 North Broadway, Escondido, CA 92025
3.	Contact person and phone number:	Jay Paul, Senior Planner, (760) 839-4537, jpaul@escondido.org
4.	Project location:	Kit Carson Park, 3341 Bear Valley Parkway Escondido, California 92025
5.	General plan designation:	Public Lands/Open Space
6.	Zoning:	Open Space/Parks (OS)

7. Description of project:

Kit Carson Park (Park) is located in the City of Escondido (City) at 3341 Bear Valley Parkway, within Assessor's Parcel Number (APN) 760-244-37-00 (see Figure 1, *Regional Location*, Figure 2, *USGS Topography*, and Figure 3, *Aerial Photograph*). The Park is approximately 285 acres, including open space, public amenities, and parking areas. The Park has three ponds, one of which is the centrally located Eagle Scout Lake. The Arroyo Del Oro tributary of Kit Carson Creek is an open channel drainage that conveys runoff from the north end of the Park and flows south through the Park terminating at Eagle Scout Lake. The existing culvert crossing bridge where Arroyo Del Oro Creek enters Eagle Scout Lake supports heavy pedestrian use and provides access for City maintenance trucks working in the Park. Over time, the existing culvert bridge has been undermined by heavy creek flows, exposing the existing culvert that transports water under the crossing to Eagle Scout Lake, as well as exposing the fiber optic and recycled water lines beneath the structure. Portions of the path adjacent to the channel have collapsed and consequently have been closed for use to ensure public safety.

Eagle Scout Lake (formerly named Sand Lake) was intended to function as a sedimentation (desilting) pond for the upstream watershed. To function properly, Eagle Scout Lake and the existing Arroyo Del Oro Creek culvert bridge crossing requires regular maintenance to remove accumulated sediment and debris to allow flow within the culvert to the lake. The purpose of the proposed Project is to design and construct a new culvert bridge to replace the existing damaged crossing and address hydraulic deficiencies with the current design. The new structure would improve safety for Park patrons by repairing the crossing and associated path for pedestrian use and incorporating handrails that complement existing handrails on nearby crossings. The design provides for City personnel to easily conduct maintenance activities for desilting and for access to the reclaimed water and fiber optic lines. The crossing's integrated maintenance features would improve safety for City operations personnel responsible for regular facility maintenance.

The Project is located within a 0.33-acre Project Area where replacement of the existing culvert bridge, relocation of existing utilities, regrading of the drainage channel, and repair/replacement of the pedestrian crossing over the culvert would occur. A site plan and perspective view of the proposed bridge, culvert, and relocated utilities are shown in Figure 4, *Site Plan*, and Figure 5, *Perspective View of Replacement Bridge.* The Project would remove the existing damaged 72-inch by 44-inch corrugated steel oval "squash" pipe (measuring 17 feet in length) and construct a new cast-in-place, double cell, 34-foot by 16-foot wide, 5-foot-tall concrete box culvert. All existing concrete would be removed. Existing riprap on the north side of the bridge would be removed, salvaged, and re-installed after channel grading to improve flow. A portion of an existing 18-inch-diameter reclaimed water line and a 4-inch-diameter polyvinyl chloride (PVC) fiber optic conduit located in the vicinity of the existing culvert would be removed and relocated to the southerly side of the new bridge.

During construction, the Arroyo Del Oro Creek would need to be re-routed. This may be accomplished by dewatering activities utilizing temporary berms (e.g., gravel bag or earthen berms) and gas-powered portable pump equipment. A dewatering plan would be prepared pursuant to the California Stormwater Best Management Practices (BMP) Handbook, as well as City and Regional Water Quality Control Board (RWQCB) requirements and would be submitted for approval by the City prior to construction. The plan would identify the dewatering methodology to be utilized, sediment controls and BMPs to be implemented, and inspection and maintenance requirements.

Construction staging and site access would be located largely within existing parking areas and along existing asphalt-paved roadways within the Park. The Construction Contractor would also be granted access along some existing earth roadways within the Park. The Project Area can be accessed via Casteneda Drive from Las Palmas Avenue and Entrance Drive from Bear Valley Parkway, with regional access from Interstate 15 (I-15) to the west of the Park. The Project location, extent, and access is displayed on Figures 2 and 3.

BMPs would be specified on construction plans and implemented during construction for stormwater pollution prevention and dust control, pursuant to the City's Municipal Code and RWQCB standards. Stormwater and erosion control BMPs may include, but are not limited to:

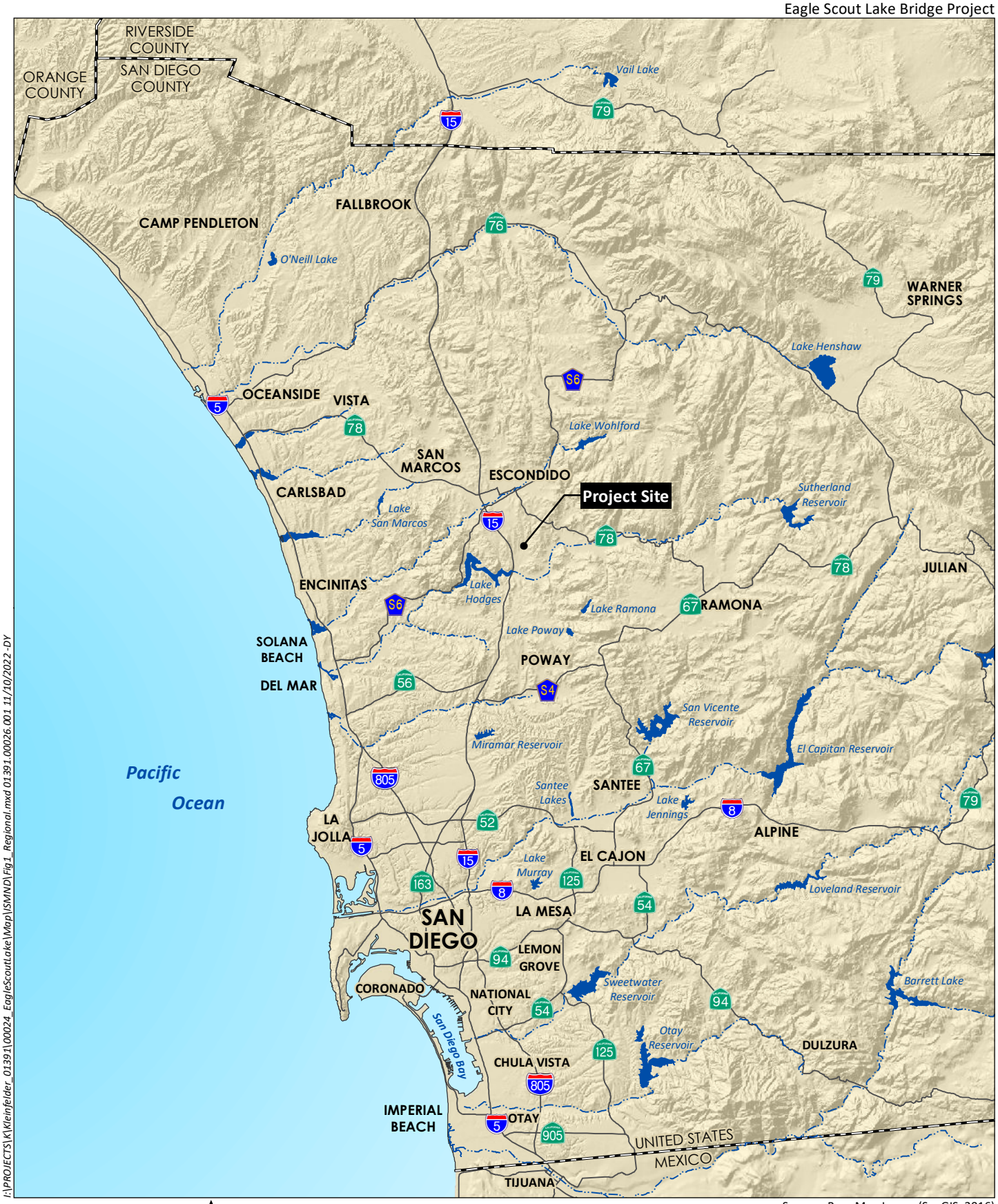
- Use of biodegradable straw wattles free from weed seed, silt fencing, hydroseeding, and/or fiber blankets/bonded fiber matrix on slopes and/or exposed soil.

- Installation of storm drain inlet protection at on-site storm drain inlets and desiltation basins at drainage outlets during grading.

- Protection and stabilization of all active and inactive slopes and eroded areas prior to rain events.

- Implementation of erosion prevention measures such as lining and installing velocity check dams at regular intervals at unpaved channels.

- Street sweeping vehicles with vacuums and water tanks to keep paved areas free of dirt and/or construction debris.



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Source: Base Map Layers (SanGIS, 2016)

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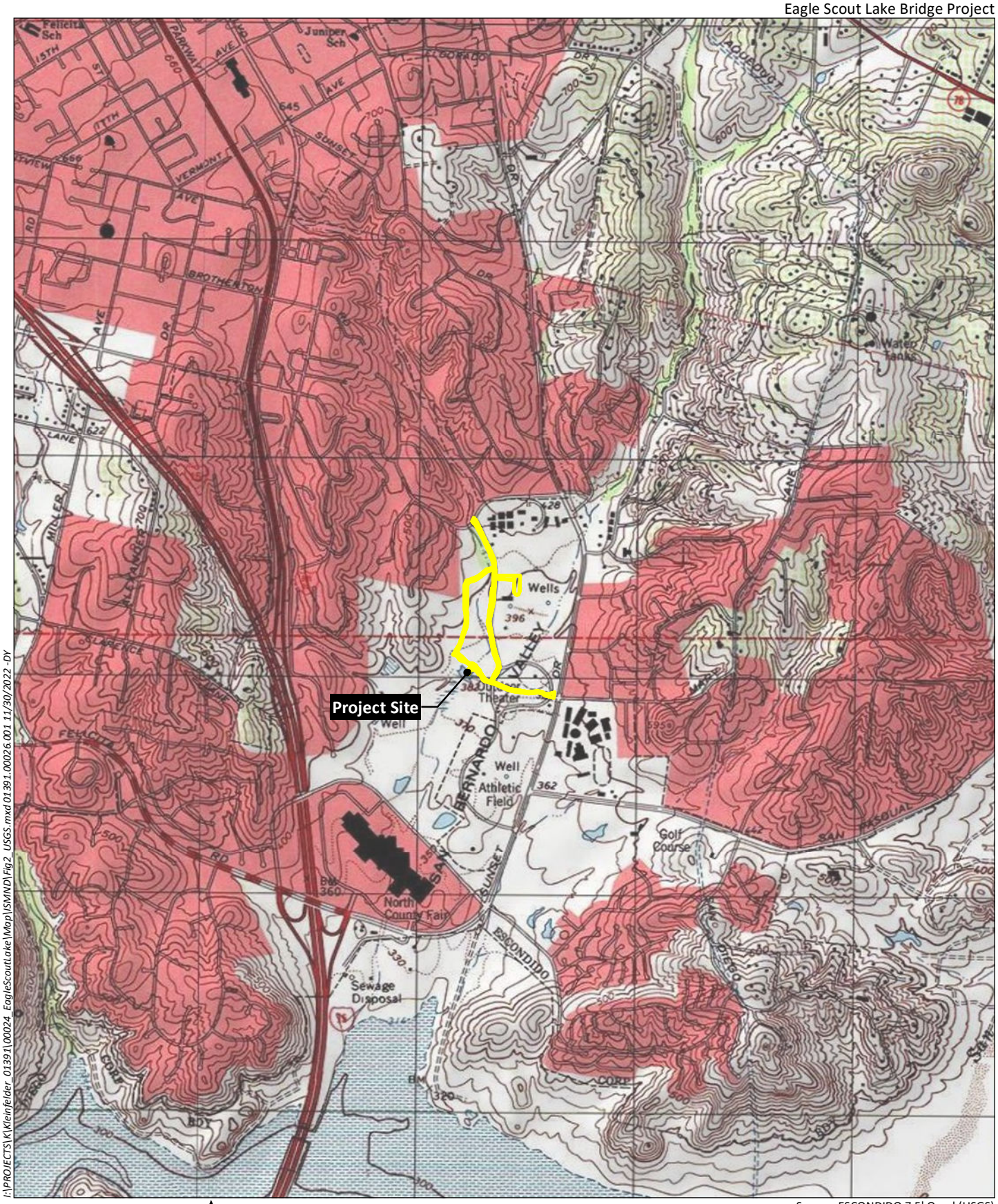
Regional Location

Figure 1



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Source: ESCONDIDO 7.5' Quad (USGS)

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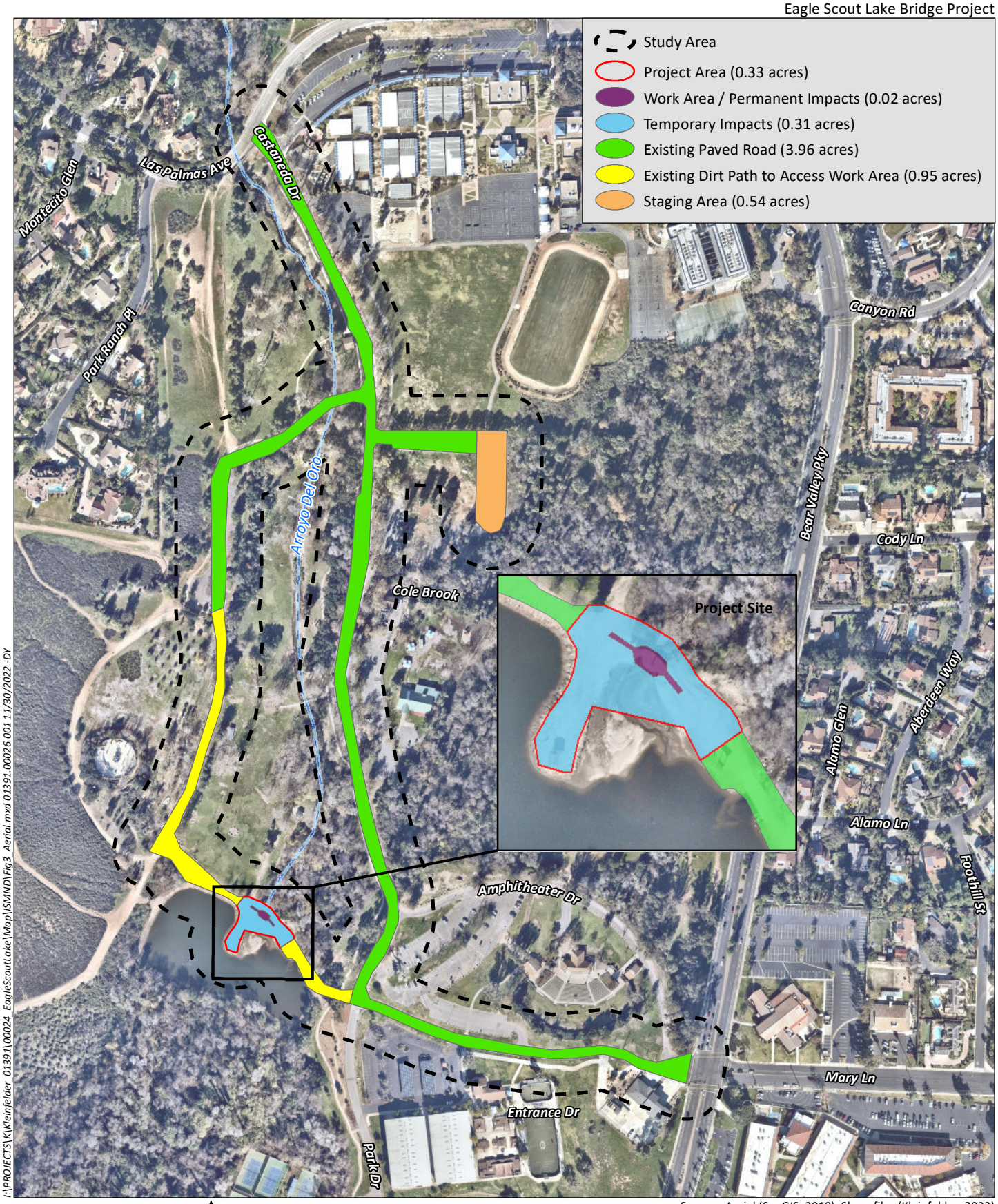
USGS Topography

Figure 2



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0 375 Feet

Source: Aerial (SanGIS, 2019), Shapefiles (Kleinfelder, 2022)

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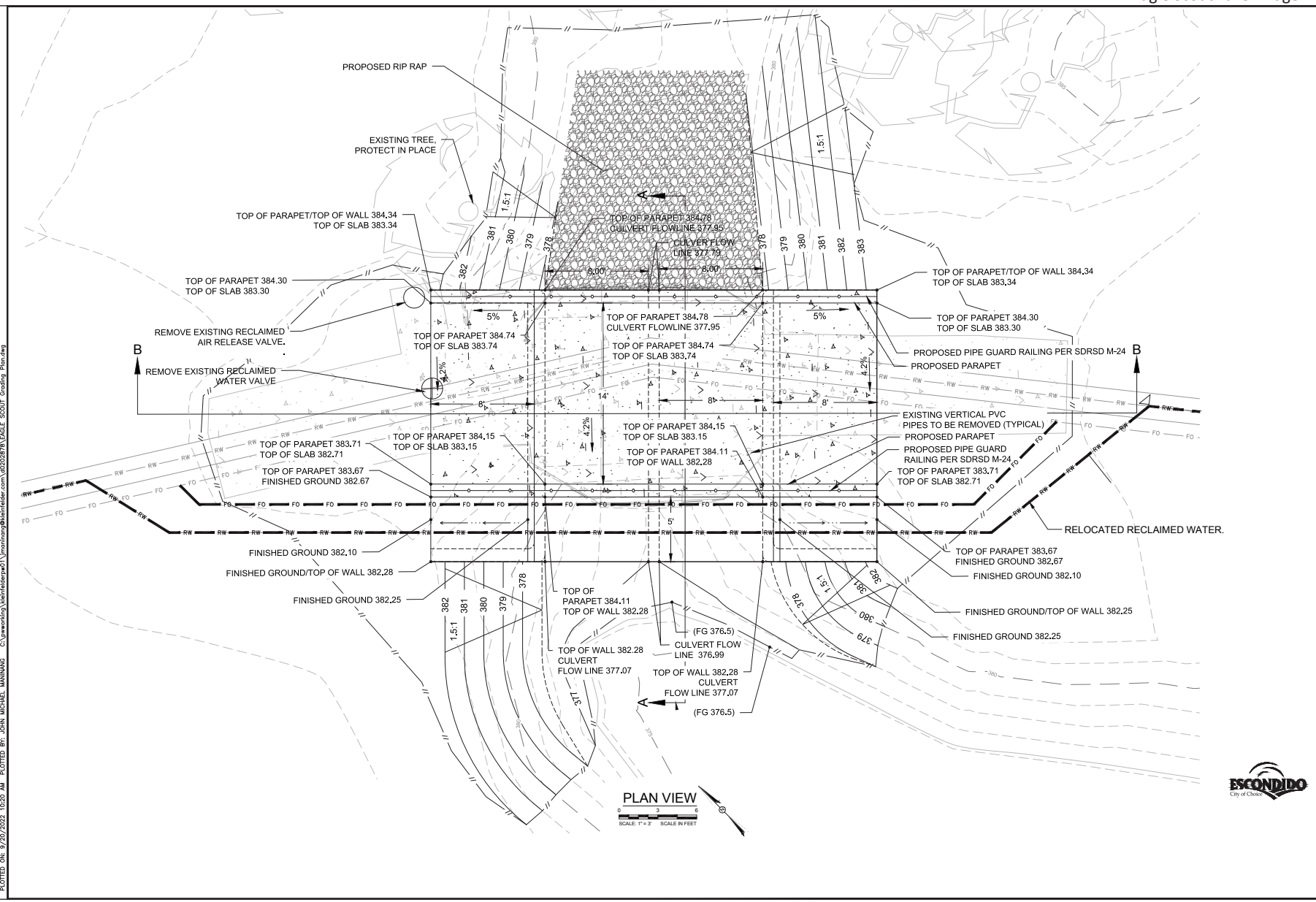
Aerial Photograph

Figure 3



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Source: KLEINFELDER, 2022

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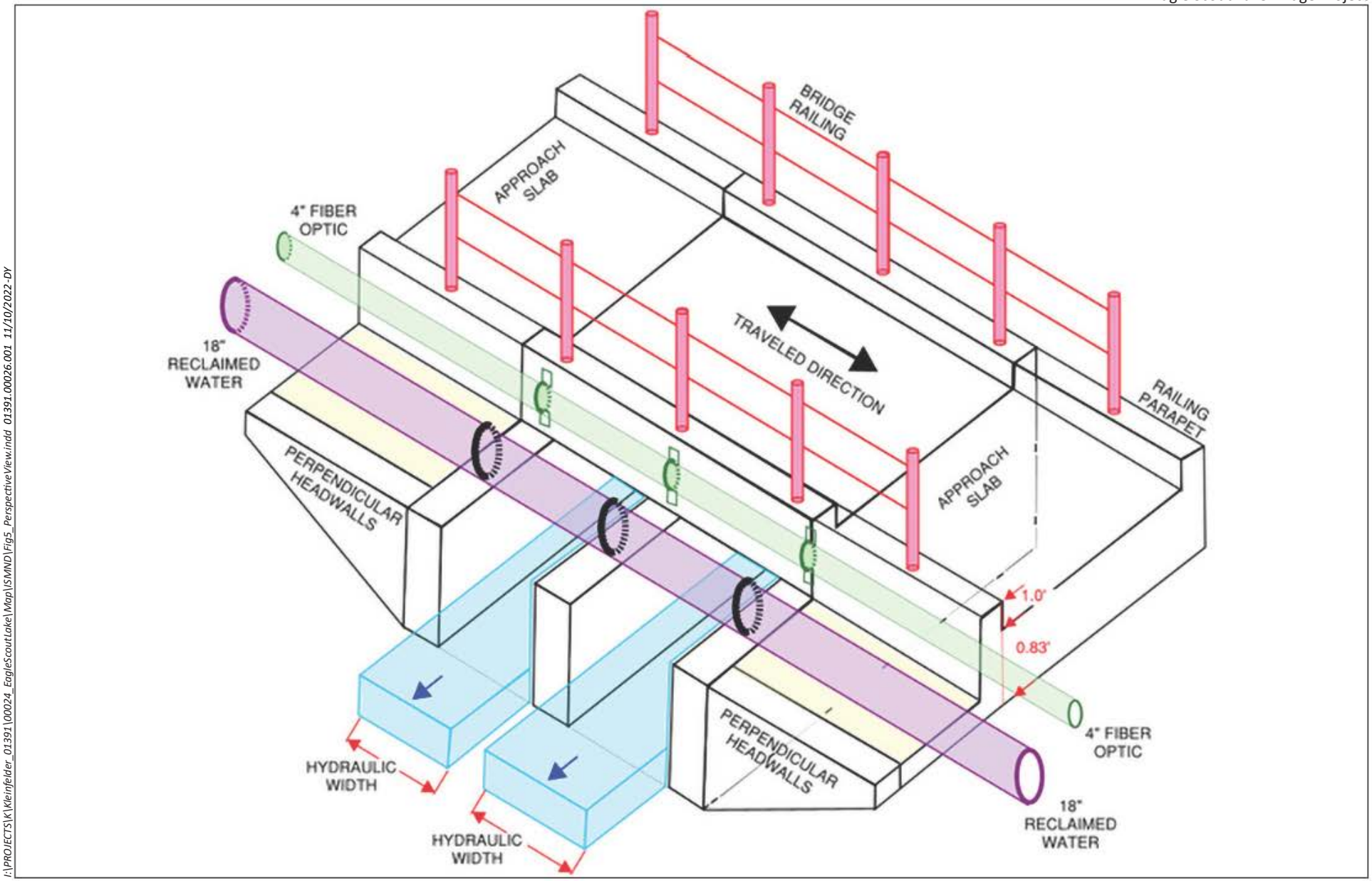
Site Plan

Figure 4



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Perspective View of Replacement Bridge

Figure 5

During grading activities, the on-site construction superintendent would ensure implementation of standard BMPs to reduce the emissions of fugitive dust. Such measures may include, but are not limited:

- Utilize water trucks and other equipment to minimize airborne dust created from grading and hauling or excessive wind conditions. Water exposed soil areas a minimum of twice per day, or as allowed under imposed drought restrictions. On windy days or when fugitive dust can be observed leaving the construction site, apply additional water at a frequency to be determined by the on-site construction superintendent.

- Cover stockpiles at the end of each working day and prior to forecasted rain with plastic or equivalent material, to be determined by the on-site construction superintendent, or spray them with a non-toxic chemical stabilizer.

- Operate all vehicles on the construction site at speeds less than 15 miles per hour (mph).

Project construction is anticipated to begin in fall of 2023 with demolition of the existing damaged culvert. Construction of the Project is expected to occur over a period of nine months and is anticipated to be completed around Summer/Fall of 2024. Construction activities include demolition, riprap removal, grading, installation of underground infrastructure and utilities, and construction of the culvert. Grading is estimated to require approximately 50 cubic yards of cut and 40 cubic yards of fill; the 10 cubic yards of excess material is expected to be distributed within the Study Area. Construction equipment expected to be utilized during demolition and construction includes a backhoe, front-loader, excavator, concrete breaker, dump trucks, equipment trucks, air compressors, hydraulic pumps, concrete boom pump trucks, and concrete delivery trucks.

8. Surrounding land uses and setting:

The Project is located within Kit Carson Park in the City of Escondido within San Diego County (County). Eagle Scout Lake is centrally located within Kit Carson Park just west of the parking area and Casteneda Drive (see the Study Area delineated on Figure 3). Regional access to the Park is provided by I-15, which runs in a north-south direction approximately 0.5-mile west of the Project area. The Project is located within the San Dieguito River watershed. The Arroyo Del Oro tributary of Kit Carson Creek is an intermittent, seasonally flooded streambed that drains through the Project Area into the northern portion of Eagle Scout Lake. A second drainage, Kit Carson Creek, also flows into Eagle Scout Lake to the southeast. In high water conditions, Eagle Scout Lake overflows into wetland areas in the southern portion of the Park. Flow from the Lake enters Lake Hodges from a tributary and associated wetlands approximately 2.5 miles southwest of the Project Area, and then eventually to the San Dieguito River approximately 7 miles to the southwest of the Project Area at the Lake Hodges Dam.

Approximately 100 acres of Kit Carson Park are developed for recreational use, including playgrounds; picnic areas; baseball, softball and soccer fields; tennis courts; hiking trails; and a 17-hole frisbee golf course. Other amenities at the Park include an outdoor amphitheater and a 5-acre arboretum. The area immediately surrounding the Project Area is relatively undeveloped; however, it is subject to human disturbance on a regular basis, as the public has access to walking trails and Eagle Scout Lake. Four vegetation communities were mapped within the Study Area but

outside of the Project Area, including southern cottonwood-willow riparian forest, southern willow scrub, coast live oak woodland, and non-native grassland. The majority of the Study Area (approximately 28.5 acres), including the 0.33-acre Project Area, consists of developed or disturbed land cover, including roads, play structures, parking lots, picnic areas, landscaped areas planted with ornamental vegetation, frisbee golf course, and the shore of Eagle Scout Lake. Structures within the larger Study Area include two restrooms and a children's play area along Casteneda Drive, and several picnic shelters within the Park, including two near the proposed construction location. Elevations throughout the Study Area vary between approximately 380 and 425 feet above mean sea level (AMSL). The Study Area is situated within the 7.5-minute U.S. Geological Survey (USGS) Escondido quadrangle (see Figure 2).

The areas surrounding the Study Area are primarily urban and developed with residential, recreational, commercial, and institutional uses. Adjacent land uses include the Westfield North County commercial development to the southwest; the Vineyard at Escondido golf course to the southeast; San Pasqual High School, The Classical Academy charter school, church, and residential development to the east; Bear Valley Middle School, L.R. Green Elementary School, and residential development to the north; and residential development to the east.

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

   The Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction of Land Disturbance Activities (State Water Resources Control Board [SWRCB] Order No. 2009-0009-DWQ, NPDES No. CA2000002; Construction General Permit), as well as related City requirements for storm water and erosion control.

   A jurisdictional delineation of the Project Area concluded that two aquatic features within the Delineation Area would be jurisdictional per the California Department of Fish and Wildlife (CDFW) in the context of California Fish and Game Code Section 1602, the RWQCB in the context of Section 401 of the Clean Water Act (CWA), and the United States Army Corps of Engineers (USACE) in the context of Section 404 of the CWA. These two features, Arroyo Del Oro Creek and Eagle Scout Lake, are hydrologically connected to Lake Hodges and the San Dieguito River. Potential impacts to these aquatic resources would require authorization from these regulatory agencies via the following regulatory permits: CDFW Streambed Alteration Agreement permit (Section 1602), USACE Section 404 permit, and RWQCB 401 Water Quality Certification.

10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

    In accordance with the requirements of Assembly Bill (AB) 52, the City sent notification to five Native American Tribes traditionally and culturally affiliated with the Project area on February 8, 2023. Please see Section XVIII of the Initial Study Environmental Checklist for more detail.

1.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☐ 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

1.3 DETERMINATION

On the basis of this initial evaluation:

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

JPaul

Signature

May 22, 2023

Date

Jay Paul, Senior Planner

Printed Name

City of Escondido

For

2.0 Environmental Initial Study Checklist

This section evaluates the potential environmental effects of the proposed Project, generally using the environmental checklist from the state CEQA Guidelines as amended and the City of Escondido Environmental Quality Regulations (Zoning Code Article 47). A brief explanation in the Environmental Checklist Supplemental Comments is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. All answers must take into account the whole action involved, including off-site, on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts and mitigation measures. Once the lead agency has determined that a particular physical impact might occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. The definitions of the response column headings include the following:

A. “Potentially Significant Impact" applies if there is substantial evidence that an effect might be significant. If there are one or more "Potentially Significant Impact" entries once the determination is made, an EIR shall be required.

B. “Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 2 below, "Earlier Analyses," may be cross-referenced). Measures incorporated as part of the Project Description that reduce impacts to a “Less than Significant” level shall be considered mitigation.

C. “Less Than Significant Impact” applies where the project creates no significant impacts, only less than significant impacts.

D. “No Impact" applies where a project does not create an impact in that category. “No Impact” answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

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

a. Earlier Analysis Used. Identify and state where it is available for review.

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

c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

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

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

The explanation of each issue should identify the significance of criteria or threshold, if any, used to evaluate each question, as well as the mitigation measure identified, if any, to reduce the impact to less than significant.

I. AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

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

Less Than Significant Impact. Scenic vistas are defined as views or vistas generally expansive or panoramic in nature, usually from an elevated point or open area, which possess visual and aesthetic qualities of high value to the community. For purposes of this analysis, a substantial adverse effect on a scenic vista or view would occur where the majority of an existing view would be blocked or substantially interrupted. The City of Escondido General Plan (General Plan) Resource Conservation Element (City 2012a) recognizes that views to and from hillsides and prominent ridgelines, unique landforms, and visual gateways are important visual resources for the community. Views within the park may be affected during the approximately nine-month construction period; however, visual impacts would be temporary, limited to the area immediately surrounding the Project area, and would not substantially block or otherwise affect scenic views. The post-construction conditions would be consistent with, if not elevated from, the existing conditions. The proposed culvert bridge would be more aesthetically pleasing than the current collapsing culvert bridge and constructed within the same footprint. The trees surrounding the Project site would be protected in place and would not be removed. The proposed Project would not result in a substantial adverse effect on scenic vistas, and impacts would be less than significant.

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

Less Than Significant Impact. State scenic highways are those highways that are either eligible for designation or officially listed by the California Department of Transportation (Caltrans) in the California Scenic Highway Program. There are no officially designated or eligible state scenic highways within the

vicinity of the Project (Caltrans 2011). The two closest eligible state scenic highways (not officially designated) are I-5, located approximately 14 miles west of the Project Area, and State Route (SR-) 76, located approximately 16 miles to the northwest.

There are no rock outcroppings or other such topographic features within the Project Area. The proposed Project would not impact historic buildings (see Section V for details on historical resources). The trees surrounding the Project Area would be protected in place and would not be removed. Therefore, no substantial damage to scenic resources with a state scenic highway would occur, and impacts would be less than significant.

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?

Less Than Significant Impact. CEQA defines the term urbanized area to mean, among other things, an incorporated city that has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons (Public Resources Code Section 21071). The proposed Project is within Kit Carson Park, an approximately 285-acre City managed park, with 100 acres developed for recreational use. The Park is located within the City of Escondido, which is considered an urbanized area with a population of approximately 153,000 people based on 2020 population estimates (San Diego Association of Governments [SANDAG] 2021). The Park is zoned as Open Space/Parks (OS). The Project proposes to replace an existing culvert bridge within the Park and would not introduce new uses that would conflict with the underlying zoning or other regulations governing scenic quality. Impacts would be less than significant.

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

Less Than Significant Impact. The proposed Project does not include operational lighting. Construction of the Project would occur during the day when no lighting would be needed. Should it be determined that temporary construction lighting is needed, lighting would comply with the Escondido Outdoor Lighting Ordinance (Escondido Municipal Code, Chapter 33, Article 35), which is intended to minimize glare, light, and artificial sky glow for the benefit of the community, as well as astronomical research at Palomar Observatory. Temporary lighting would be required to be shielded and oriented downward to minimize light spill. Based on these considerations, Project lighting would not contribute to a substantial new source of light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant.

II. AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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

No Impact. The California Department of Conservation's Farmland Mapping and Monitoring Program maps identify the Project Area as "Other Land" (CDC 2017). No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance occurs on or near the Project Area. The Project Area is within an existing public park and operations of the Project would be consistent with existing conditions. The Project Area does not contain active agricultural uses or resources. Therefore, the proposed Project

would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. No impact would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project Area is not zoned for agricultural use and no Williamson Act Contract lands are located on or near the Area. No impact would occur.

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

No Impact. There is no land zoned as forest land or timberland within the Project Area or vicinity. Therefore, the Project would not conflict with existing zoning for forest land or timberland. No impact would occur.

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

No Impact. See Section II(c). No impact would occur.

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

No Impact. See Section II(a). No impact would occur.

III. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management 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?	☐	☐	☒	☐

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

No Impact. The Project Area is located within the San Diego Air Basin (SDAB), which is governed by the San Diego Air Pollution Control District (SDAPCD). The SDAPCD develops and administers local regulations for stationary air pollutant sources within the SDAB, and also develops plans and programs to meet attainment requirements for both federal and state ambient air quality standards (National Ambient Air Quality Standards [NAAQS] and California Ambient Air Quality Standards [CAAQS], respectively). The SDAPCD and SANDAG are responsible for developing and implementing the clean air plan for attainment and maintenance of the Ambient Air Quality Standards (AAQS) in the SDAB. The SDAPCD has developed a series of policies and guidelines collectively known as the Regional Air Quality Strategy (RAQS). The RAQS was initially adopted in 1992 and last updated in 2016.The RAQS outlines the SDAPCD's plans and control measures designed to attain the state air quality standards, including applicable portions of the California State Implementation Plan (SIP).

Included in the RAQS are short- and long-term goals for pollutants that the SDAB is designated as a "nonattainment" area because the SDAPCD does not meet the NAAQS or CAAQS. Criteria pollutants of primary concern include ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter (including both respirable particulate matter 10 microns or less in diameter [PM_{10}] and fine particulate matter 2.5 microns or less in diameter [$PM_{2.5}$]), sulfur dioxide (SO_2), and lead. The SDAB is currently designated as a basic nonattainment area for the 8-hour NAAQS for ozone. The SDAB is designated as being in attainment for all other applicable criteria pollutants under the NAAQS. The SDAB is currently classified as a nonattainment area under the CAAQS for ozone, PM_{10}, and $PM_{2.5}$. It is in attainment for CO, NO_2, SO_2, and lead relative to state air standards.

The RAQS rely on SANDAG's growth projections, which are based in part on city and County general plans. As such, projects that propose development consistent with the growth anticipated by the applicable general plan(s) are consistent with the RAQS and applicable portions of the SIP. If a project proposes development that is less dense than anticipated within the applicable general plan, the project would likewise be consistent with the RAQS.

The Project involves minor construction within Kit Carson Park and replaces an existing culvert bridge. The Project would not conflict with the current zoning of the Project Area (OS) and would be consistent with the General Plan and the SANDAG growth projections identified for the City in the 2016 RAQS. Development consistent with the General Plan would be consistent with the RAQS and SIP. Therefore, the Project would not conflict with implementation of applicable air quality plans and no impact would occur.

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

Less Than Significant Impact. The screening thresholds for air quality impacts are established in the Escondido Municipal Code Chapter 33, Article 47, referred to as the Environmental Quality Regulations (EQR). The EQA implement CEQA and the CEQA Guidelines by applying the provisions and procedures contained in CEQA to projects proposed in Escondido (City 2013a). If a project proposes development that would exceed the City's Daily Emissions Screening Level Criteria identified in Section 33-924(a)(5) of the EQR, a significant air quality impact may occur, and additional analysis is warranted to fully assess the significance of potential impacts. A project that would not exceed the screening level criteria would have less than significant impacts related to air quality violations. The Project does not propose

habitable structures and is consistent with the current General Plan land use designation. Nevertheless, anticipated Project emissions were quantified to further demonstrate consistency with the EQR screening thresholds for air quality.

The Project's criteria pollutant emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 (South Coast Air Quality Management District [SCAQMD] 2020). CalEEMod is a computer program developed by the SCAQMD that can be used to estimate anticipated emissions associated with land development projects in California. For this analysis, the results are expressed in pounds per day (lbs/day) and are compared with the mass daily emissions thresholds published in the EQR, as derived from the SCAQMD's thresholds. The emission sources include construction (off-road vehicles and fugitive dust), mobile (on-road vehicles), area (consumer products and landscape maintenance equipment), and energy (on-site natural gas usage) sources.

Construction Emissions

Construction activities associated with the Project would generate short-term emissions of reactive organic gasses (ROGs), nitrogen oxides (NO_X), CO, sulfur oxides (SO_X), PM_{10}, and $PM_{2.5}$. Criteria pollutant emissions would be generated by stationary and mobile equipment, including off-road diesel equipment exhaust, material delivery vehicle exhaust, re-entrained paved road dust, and fugitive dust from land clearing/grading. Short-term air pollutant emissions would be generated during the entirety of construction. Construction is expected to begin July 2023 and require approximately nine months to complete. Construction activity is subject to the requirements established in Regulation 4, Rules 52, 54, 55, and 67 of the SDAPCD's rules and regulations.

Construction emissions calculated using CalEEMod Version 2020.4.0 are provided in Appendix A of this IS/MND. The results of the air pollutant emissions calculations for Project construction activities are shown in Table 1, *Estimated Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the City's EQR Screening Level Criteria. The modeling assumes that all construction equipment and vehicles would be required to be equipped with state-mandated emission control devices. The modeling also assumes that construction BMPs for dust control would be incorporated as a matter of Project design and in accordance with the EQR.

Table 1
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS

Construction Activity	Pollutant Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Grading 2023	0.95	7.29	10.47	0.02	0.46	0.35
Grading 2024	0.91	6.79	10.44	0.02	0.42	0.32
Maximum Daily Emissions	0.95	7.29	10.47	0.02	0.46	0.35
EQR Screening Level Criteria	75	250	550	250	100	55

Source: CalEEMod (model output data is provided in Appendix A; HELIX 2022a); significance thresholds based on the Escondido Municipal Code (City 2022).
ROG= reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; EQR = Environmental Quality Regulations

As shown in Table 1, emissions of all criteria pollutants would be below the maximum daily thresholds during construction. The Project would be required to adhere to standard dust control procedures to reduce construction-related particulate emissions. Construction dust control measures would be

included on all Project construction contracts, grading permits, improvement plans, and final maps. As noted in the Project Description in Section 7 of this IS/MND, standard BMPs required for development within the City's planning area boundary would be implemented during grading activities to reduce the emissions of fugitive dust. Therefore, the Project would not violate federal or state air quality standards or contribute to an existing air quality violation in the SDAB. Short-term, temporary construction emissions would cease upon completion of construction, and impacts would be less than significant.

Long-term Operational Emissions

Long-term air pollutant emissions would be attributed to mobile source emissions generated from Project-related traffic and stationary source emissions related to maintenance of the culvert bridge. Once operational, the new culvert bridge would have the same usage and function as the existing culvert bridge and would not result in an increase in traffic or associated changes to emissions compared to existing conditions. Therefore, operation of the Project would not violate an air quality standard or result in a cumulatively considerable net increase of a criteria pollutant for which the region is in non-attainment. Impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive populations (i.e., children, senior citizens, and acutely or chronically ill people) are more susceptible to the effects of air pollution than the general population. Land uses that are considered sensitive receptors typically include residences, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. Impacts to sensitive receptors are typically analyzed for operational CO hotspots and exposure to diesel particulate matter (DPM). The closest sensitive receptors to the Project Area include San Pasqual High School and single-family residences located approximately 0.3 mile east of the Project Area and L.R. Green Elementary School and Bear Valley Middle School located approximately 0.4 mile north of the Project area. An analysis of the Project's potential to expose sensitive receptors to these pollutants is provided below.

Carbon Monoxide Hotspots

Localized air quality effects can occur when emissions from vehicular traffic increase in local areas. The primary mobile source pollutant of local concern is CO, which is a direct function of vehicle idling time and, thus, traffic flow conditions. CO transport is extremely limited—it disperses rapidly with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations proximate to a congested roadway or intersection may reach unhealthful levels affecting local sensitive receptors. Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. If a project generates vehicular traffic that increases average delay at signalized intersections operating at level of service (LOS) E or F or causes an intersection that would operate at LOS D or better without the project to operate at LOS E of F with the project, the project could result in significant CO hotspot-related effects to sensitive receptors.

Due to the proposed Project being a replacement culvert bridge within a City park, Project operations would have the same usage and function as existing conditions. As a result, the Project is not anticipated to generate a substantial number of trips such that the local roadway network would be adversely affected, and a Local Mobility analysis was deemed not necessary for the proposed Project (see Section XVII). Therefore, the Project would not have the potential to result in a CO hotspot. Impacts would be less than significant.

Exposure to Diesel Particulates

Diesel engines emit a complex mixture of air pollutants, including gaseous material and DPM. DPM emissions would be released from operation of the on-site construction equipment used for Project construction. CARB has declared that DPM from diesel engine exhaust is a toxic air contaminant (TAC). Additionally, the Office of Environmental Health Hazard Assessment has determined that chronic exposure to DPM can cause carcinogenic and non-carcinogenic health effects. For this reason, although other pollutants would be generated, DPM would be the primary pollutant of concern.

The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, health risk assessments (HRAs), which determine the exposure of sensitive receptors to TAC emissions, should be based on a 30-year exposure period. However, such assessments should be limited to the period/duration of activities associated with a project.

There would be few pieces of off-road, heavy-duty diesel equipment operating at a given time during Project construction, and the construction period would be relatively short, especially when compared to 30 years. In addition, as shown above in Table 1, the highest daily emission of PM_{10} (which includes equipment emissions of DPM) during construction is estimated to be approximately 0.46 pounds per day, which would be well below the 100 pounds per day significance level threshold. As discussed above in Section III(b), these significance level thresholds were developed with the purpose of attaining the NAAQS and CAAQS, which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. Combined with the highly dispersive properties of DPM, construction-related emissions would not expose sensitive receptors to substantial emissions of TACs. Impacts would be less than significant.

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

Less Than Significant Impact. The Project could produce odors during construction activities resulting from minor amounts of odor compounds associated with heavy diesel equipment exhaust and ROGs. Emissions would disperse rapidly from the Project Area, reducing the effects of odors to the immediate vicinity. Standard BMPs to minimize equipment idling and maintain equipment would minimize the odor emissions from equipment exhaust and their associated impacts. Odors emitted during construction activities would be temporary, short-term, and intermittent in nature, and would cease upon completion of construction. Operation of the Project is not anticipated to result in emissions of objectionable odors. Therefore, odor impacts from implementation of the Project would be less than significant.

IV. BIOLOGICAL RESOURCES

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

The following analysis is based on the Biological Resources Assessment (BRA) for the Eagle Scout Lake Bridge Project prepared by Kleinfelder (Kleinfelder 2021a) and included as Appendix B to this IS/MND. The BRA evaluates a biological study area (BSA) that includes the approximately 0.33-acre Project Area, 0.54-acre staging area, and 4.91 acres of access roads (all of which are existing in the Park), including an area of potential effect (APE) buffer extending 100 feet around these areas. Within the Project Area, a total of 0.02-acre of permanent impacts would occur due to removal and replacement of the old culvert, and a total of 0.31-acre of temporary impacts would occur due to removal of excess sediment around the culvert, contractor equipment access, and removal and replacement of rip rap within the creek. The extent of the BSA can be found in Figure 6, *Vegetation Communities and Potentially Jurisdictional Features*. Would the Project:

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

Less Than Significant Impact with Mitigation Incorporated. The BRA investigated the potential impacts to special status plant and wildlife species in the vicinity of the Project Area resulting from implementation of the Project. Special status species include those that have been afforded special status and/or recognition by federal or state resource agencies, as well as the California Native Plant Society (CNPS) for plant species (CNPS 2021). In general, the principal reason an individual taxon (species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution resulting in most cases from habitat loss. Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been modeled after the definition in the federal Endangered Species Act and the section of the California Fish and Game Code dealing with rare or endangered plants and animals, and allows a public agency to undertake a review to determine if a significant effect on a species that has not yet been listed by either the United States Fish and Wildlife Service (USFWS) or the California Department of Fish and Wildlife (CDFW) (i.e., species of special concern) would occur. A summary of the status of sensitive species within the Project Area and vicinity, as well as potential impacts to these species, is presented below.

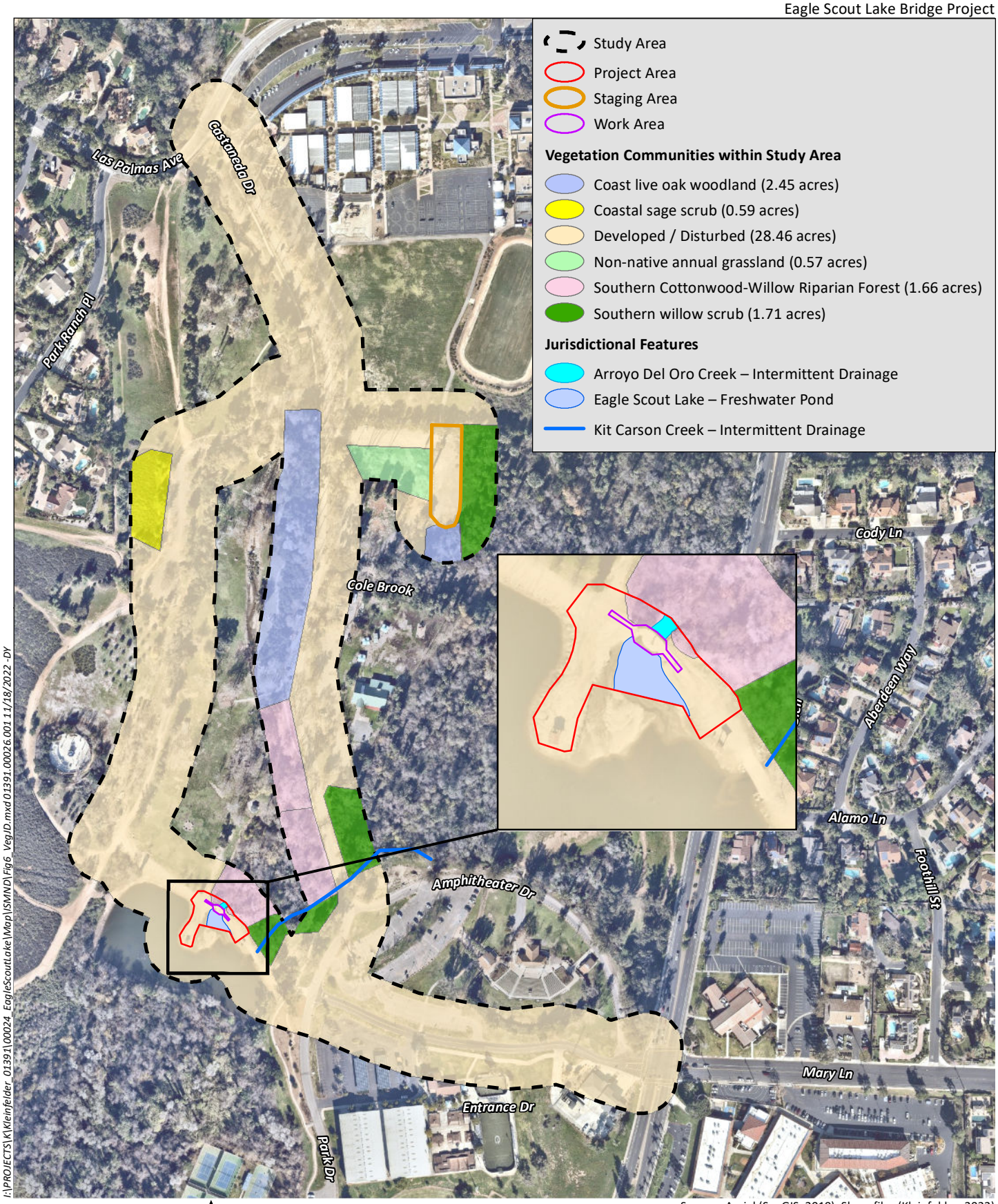
Special-status Wildlife Species

Special-status wildlife species include taxa designated as follows:

- Threatened, endangered, or candidate for listing under federal Endangered Species Act;
- Threatened, endangered, or rare under the California Endangered Species Act; and/or
- CDFW species of special concern or fully protected species.

As documented in the BRA prepared for the Project (Appendix B), there are 30 special-status wildlife species known to occur within a two-mile search radius of the BSA (CDFW 2021; USFWS 2021). Of these 30 species, 24 species are not expected to occur or have a low potential to occur within the Project BSA due to a lack of suitable habitat, or the site is outside of the species' known range. The remaining six special-status wildlife species were determined to have a moderate or greater potential to occur within the Project Area. These species include the western pond turtle (*Emys marmorata*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), coastal California gnatcatcher (*Polioptila californica californica*), pallid bat (*Antrozous pallidus*), and the western yellow bat (*Lasiurus xanthinus*). Additional details on each of these species, such as their typical habitats and observed occurrences within the Project vicinity, are provided in the BRA (Kleinfelder 2021a).

Only one sensitive wildlife species is known to be present within Eagle Scout Lake and was observed during the surveys conducted in 2021—a western pond turtle was observed basking on the shore of Eagle Scout Lake (Kleinfelder 2021a). Western pond turtles are also known to occur in the vicinity of the Project Area, upstream and downstream of Lake Hodges. They are known to nest up to 325 feet from suitable aquatic sites. The Project has the potential to impact western pond turtle habitat and individuals during construction of the culvert bridge; impacts occurring during the breeding season



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0 375 Feet

Source: Aerial (SanGIS, 2019), Shapefiles (Kleinfelder, 2022)

HELIX Environmental Planning

Vegetation Communities and Potentially Jurisdictional Features

Figure 6

would be significant. With the implementation of mitigation measure **BIO-1**, potential impacts to western pond turtle would be avoided or reduced to below a level of significance.

No other sensitive wildlife species were found to be present within the BSA during Project surveys. Four common bird species were detected during the field survey competed by Kleinfelder (Appendix B), including American crow (Corvus brachyrhynchos), acorn woodpecker (*Melanerpes formicivorus*), mourning dove (Zenaida macroura), and a possible audible detection of coastal cactus wren (*Campylorhynchus brunneicapillus*). In addition, several California ground squirrels (*Otospermophilus beecheyi*) and associated burrows were observed during the field survey. No common or special-status amphibians were detected during the field survey. Red-eared sliders (Trachemys scripta elegans) and painted turtles (*Chrysemys picta*) were also observed during the biological and jurisdictional field surveys.

As noted above, although no sensitive avian species were observed within the BSA, there is suitable riparian habitat for federally and state listed bird species adjacent to the Project Area, including southwestern willow flycatcher and least Bell's vireo, which are federally and state listed as endangered; and coastal California gnatcatcher, which is federally listed as threatened. In addition, critical habitat has been mapped for coastal California gnatcatcher within the BSA. A significant impact to these species may occur if removal of riparian habitat or construction during the breeding season would be required. All native birds in California are protected by the federal Migratory Bird Treaty Act (MBTA) and provisions of the California Fish and Game Code. Section 3503.5 of the California Fish and Game Code specifically protects raptors. Ground disturbance, noise, or removal of vegetation that would result in destruction of active bird nests or disruption of breeding/nesting activity could be a violation of the MBTA and the California Fish and Game Code, as well as a significant impact. The Project does not require removal of riparian habitat, therefore, no direct impacts to suitable habitat of sensitive avian species would occur. Implementation of mitigation measure **BIO-2**, which details breeding season avoidance measures, would reduce potential impacts associated with nesting birds to below a level of significance.

Another potential impact to special-status species may occur due to increased predation resulting from construction activities. Predators such as raccoons and American crows may be attracted to trash at the construction site, increasing the likelihood of impacts to sensitive wildlife species they may prey upon. Implementation of mitigation measure **BIO-3**, which requires the use of covered trash receptacles, would reduce potential impacts to below a level of significance.

Finally, suitable roosting and foraging habitat for two special-status bat species—pallid bat and western yellow bat—occurs within the BSA. Foraging habitat for western yellow bat includes open areas within and adjacent to the BSA; roosting could potentially occur within coast live oak woodlands and buildings within the BSA. For pallid bat, foraging and roosting habitat includes southern cottonwood-willow riparian forest and palm trees within the southern willow scrub in the BSA. Current plans do not require removal of trees within or adjacent to the Project Area. Should removal of trees be required to construct the Project, implementation of mitigation measure **BIO-4** would be required to reduce potential impacts to special-status bat species to below a level of significance.

Special-status Plant Species

Special-status plant species include taxa designated as follows:

- Threatened, endangered, or candidate for listing under the Federal Endangered Species Act (FESA);
- Threatened, endangered, or rare under the California Endangered Species Act; and/or
- Species with California Rare Plant Rankings as described below (CNPS 2021):
    - 1A – Plants presumed extinct in California;
    - 1B – Plants considered rare, threatened, or endangered in California and elsewhere; or
    - 2 – Plants considered rare, threatened, or endangered in California, but more common elsewhere.

As documented in the BRA (Appendix B), there are 19 special-status plant species known to occur within the two-mile search radius of the BSA (CDFW 2021, USFWS 2021, and CNPS 2021). Although there is potentially suitable habitat for three of these species in the marshy areas on the eastern side of the staging area, none of these species are expected to occur within the Project Area, staging area, or access roads due to the developed nature of these areas. Similarly, the remaining 16 species have a low potential to occur or are not expected to occur due to a lack of suitable habitat, a lack of occurrences in the vicinity of the Project Area, or the Project Area is outside of the species' known range. Therefore, impacts to special-status plant species would be less than significant.

Mitigation Measures

BIO-1 If construction must occur during the breeding season for western pond turtle (April through August), preconstruction surveys shall be performed by a qualified biologist within the Project Area and staging area (including a 50-foot buffer) to determine whether active western pond turtle nests are present. If active nests are present, they shall be flagged and avoided until the eggs have hatched or they are no longer active, as determined by the qualified biologist. To avoid impacts to western pond turtle, construction shall not occur within 50 feet of an active nest site (burrow). Prior to construction upslope of or within an intermittent stream or pond area located within the BSA, BMPs shall be installed to prevent runoff, siltation, or hazardous materials from entering these aquatic features. These BMPs shall include, but are not limited to, biodegradable straw waddles free from weed seed, silt fencing, hydroseeding, and/or biodegradable erosion control mats/blankets. Specific BMPs shall be defined and approved by the City prior to construction to ensure adequate protection of these aquatic features. Spill kits shall be available during construction activities in the event of an accidental hazardous materials release.

BIO-2 In order to avoid violation of the federal MBTA and California Fish and Game Code, Construction activities shall occur outside of the breeding bird season (September 16 through January 31) to avoid impacts to native nesting birds. If construction must occur during the nesting season, a nesting bird survey shall be completed by a qualified biologist no earlier than one week prior to construction activity during the nesting season (February 1 through September 15) to determine if native birds are nesting on or near the Project Area and/or staging area (including a 100-foot buffer). If the surveys conclude no active nesting,

work shall resume as planned. If project activities are delayed or suspended for more than seven days during the breeding season, surveys shall be repeated prior to re-initiating work. If active nests are observed during pre-construction surveys, a suitable avoidance buffer from the nests shall be determined by the qualified biologist based on species, location, and extent and type of planned construction activity. These nests would be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. Should removal of suitable nesting habitat (i.e., trees and vegetation) be required, it shall be conducted outside of the breeding bird season to avoid impacts to nesting birds.

BIO-3 To reduce predation activities during Project construction, all trash and waste items generated by construction activities shall be properly contained in a covered trash receptacle and removed from the Project Area and staging area daily.

BIO-4 To avoid impacts to foraging and roosting pallid bats or western yellow bats, construction activities shall be limited to daylight hours (one hour after sunrise to one hour before sunset). No more than three days (72 hours) prior to removal or trimming of trees with the potential to support roosting bats, qualified biologist shall conduct a pre-construction survey to determine if there is appropriate roosting habitat within them (e.g., cavities, crevices, peeling bark, canopy) and roosting bats are present. If bats are not detected during the pre-construction survey or determined to be absent from the proposed impact area, construction activities shall be allowed to proceed, and no additional measures would be necessary. If an active maternity roost is detected during the bat maternity season (April 15 through August 15), the biologist shall flag the active roost site and construction activities shall avoid the roost site until after the maternity season (August 16), or until the qualified biologist has determined young are self-sufficiently volant (able to fly). If bats are detected and determined to be roosting within the proposed impact area outside of the bat maternity season (August 16 through April 14), the biologist shall flag the active roost site and construction activities shall avoid roost sites until bats are no longer determined to be roosting as determined by the qualified biologist. Exclusion of roost sites, where feasible, outside of the bat maternity season may be conducted with approval of CDFW. Methods of roost exclusion shall be determined in consultation with CDFW.

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

Less Than Significant Impact with Mitigation Incorporated. Using the classifications described in *Preliminary Descriptions of the Natural Communities of California* (Holland 1986), five vegetation communities or land cover types were mapped within the Project BSA (see Figure 6). These are described in more detail below.

Southern Cottonwood-Willow Riparian Forest (1.64 acres). The areas of the BSA that are mapped as southern cottonwood-willow riparian scrub border the northern edge of the Project Area and extend northeast to Casteneda Drive along Arroyo Del Oro Creek. Dominant plant species found in the BSA that are indicative of this vegetation community include willow (*Salix* spp.), wild cucumber (*Echinocystis lobata*), wild grape (*Vitis sp.*), Fremont's cottonwood (*Populus fremontii*), giant reed (*Arundo donax*), and California mugwort (*Artemisia douglasiana*), along with mule fat (*Baccharis salicifolia*), perennial ragweed (*Ambrosia psilostachya*), and sacred datura (*Datura wrightii*). Some coast live oaks (*Quercus*

agrifolia) are found along the edges of this vegetation community. Riparian habitat is typically associated with stream channels and other aquatic features such as rivers and wetlands.

Riparian habitat within the BSA is considered sensitive by CDFW in the context of California Fish and Game Code Section 1602. Impacts to riparian habitat, including trimming or removal of vegetation, would be considered potentially significant. Impacts to these features would prompt the need for regulatory authorizations and mitigation in the form of establishment, re-establishment, and/or rehabilitation or preservation of similar habitat.

Southern Willow Scrub (1.71 acres). The areas of the BSA that are mapped as southern willow scrub are found primarily adjacent to the eastern edge of the staging area and in the southeastern portion of Casteneda Drive. This vegetation community within the BSA is generally dominated by willow and Mexican palm (*Washingtonia robusta*), also mule fat, date palm (*Phoenix dactylifera*), Fremont's cottonwood, eucalyptus (*Eucalyptus sp*.), perennial ragweed, coyote bush (*Baccharis pilularis*), telegraphweed (*Heterotheca grandiflora*), bristly oxtongue (*Helminthotheca echioides*), bull thistle (*Cirsium vulgare*), wild cucumber, and saltgrass (*Distichlis spicata*). The areas mapped as southern willow scrub within the BSA had standing water at the time of the survey.

Coast Live Oak Woodland (2.45 acres). The areas of the BSA that are mapped as coast live oak (*Quercus agrifolia*) woodland are composed of dense assemblages of coast live oak, mixed in with American sycamore (*Platanus occidentalis*), perennial ragweed, and Mexican elderberry (*Sambucus mexicanus*). Non-native grasses are typically found in the understory within this vegetation community within the BSA.

Non-Native Annual Grassland (0.57 acre). The area of the BSA mapped as non-native annual grassland is adjacent to the west side of the staging area and is comprised of non-native annual grasses such as brome (*Bromus* sp.) and wild oat (*Avena* sp.).

Developed/Disturbed Land Cover (28.48 acres). The areas of the BSA that are mapped as developed/disturbed are composed of developed park facilities that provide little to no habitat value for special-status plant and wildlife species and are commonly urbanized areas that experience regular human disturbance. These areas include roads, play structures, parking lots, picnic areas, landscaped areas planted with ornamental vegetation, a frisbee golf course, and the shore of Eagle Scout Lake (which lacks vegetation and is highly impacted by human disturbance within the Project Area).

The Project Area occurs entirely within developed/disturbed land; however, the northern edge abuts southern cottonwood-willow riparian forest habitat (Figure 6). Riparian habitat within the site is considered sensitive by CDFW in the context of California Fish and Game Code Section 1602. Although the Project has been designed to avoid and minimize impacts to jurisdictional resources to the extent practicable, potential impacts to riparian habitat, including trimming or removal of vegetation, may occur. Such impacts would be temporary, and avoidance of riparian communities would be implemented to the extent practicable while also accommodating adequate replacement of the existing culvert bridge. If avoidance is not possible, impacts to these features would prompt the need for regulatory authorizations and mitigation in the form of establishment, re-establishment, and/or rehabilitation or preservation of similar habitat. It is expected that the Project would utilize the Kit Carson Park Mitigation Area to fulfill these requirements, if necessary. Implementation of mitigation measure **BIO-5** would ensure that potential impacts to jurisdictional riparian habitat (as well as jurisdictional resources described in Section IV(c)) would be less than significant.

Mitigation Measures

BIO-5 Prior to Project impacts to potentially jurisdictional resources, demonstration that regulatory permits from the United States Army Corps of Engineers (USACE), CDFW, and San Diego Regional Water Quality Control Board (RWQCB) have been issued or that no such permits are required shall be provided to the City. Implementation of permit requirements, including additional mitigation, shall be required.

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?

Less Than Significant Impact with Mitigation Incorporated. A formal wetland delineation was performed by Kleinfelder biologist Wayne Vogler on August 25, 2021. Three aquatic features were mapped within the BSA during the field delineation that are likely under jurisdiction of the United States Army Corps of Engineers (USACE), CDFW, and the San Diego Regional Water Quality Control Board (RWQCB). Jurisdictional resources included intermittent drainages Arroyo Del Oro Creek and Kit Carson Creek and Eagle Scout Lake (a freshwater pond). These features were wet during the field survey, an ordinary high-water mark was present within the two intermittent streams, and riparian vegetation was observed along the banks of the streams.

Two features, Arroyo Del Oro Creek and Eagle Scout Lake, defined by the ordinary high water mark (OHWM) totaling 0.050 acre are potential waters of the U.S. subject to USACE jurisdiction under Section 404 of the CWA. The creek drains to Eagle Scout Lake and the lake is hydrologically connected to a tributary that flows to Lake Hodges that eventually enters the Pacific Ocean via the San Dieguito River.

Both Arroyo Del Oro Creek and Eagle Scout Lake as defined by the OHWM (0.050 acre) are subject to RWQCB jurisdiction under Section 401 of the CWA. Additional boundaries of Arroyo Del Oro Creek and Eagle Scout Lake, totaling 0.096 acre, are under state jurisdiction (CDFW) under Section 1602 of the California Fish and Game Code. This jurisdiction extends to the top of bank for both features and includes the riparian area associated with Arroyo Del Oro Creek. Table 2, *Potentially Jurisdictional Aquatic Resources*, provides details on these features.

Table 2
POTENTIALLY JURISDICTIONAL AQUATIC RESOURCES

Feature	Lat/Long Location	USACE/RWQCB Jurisdiction (acres/linear feet)	CDFW Jurisdiction (acres/linear feet)
Eagle Scout Lake – Palustrine Unconsolidated Bottom, Excavated	33°04'44.11" N; 117°03'41.35" W	0.040/ -	0.050/ -
Arroyo Del Oro Creek – Riverine Streambed, Intermittent	33°04'44.40" N; 117°03'41.13" W	0.010 / 40	0.046 / 40
Total:		**0.050 / 40**	**0.096 / 40**

Source: Kleinfelder 2021b

A project design that avoids and/or minimizes impacts to these aquatic resources under jurisdiction of USACE, RWQCB, and/or CDFW can avoid/minimize the need for compensatory mitigation requirements and resource agency permits. If avoidance is not possible, impacts to aquatic resources would require

authorization from the regulatory agencies listed above in the form of regulatory permits (e.g., CWA Section 404 Nationwide Permit, CWA Section 401 Water Quality Certification, and CFGC Section 1602 Lake and Streambed Alteration Agreement). Such permits typically include measures to avoid and minimize or mitigate impacts.

Prior to construction activity occurring upslope of or within the intermittent streams and pond located in the BSA, BMPs should be installed to prevent runoff and siltation from entering these features. Such BMPs may include, but are not limited to, biodegradable straw wattles free from weed seed, silt fencing, hydroseeding, or biodegradable erosion control mats/blankets. Specific BMPs should be defined prior to construction to protect streams within the Project Area, and spill kits should be available to all workers during construction activities. Depending on the type and extent of Project activities, impacts to these resources would be considered significant. Potentially significant impacts would include removal or degradation of these habitats, as well as temporary disturbances due to dewatering activities or fill being placed into these habitats. If construction of the Project involves dewatering, a dewatering plan would also be prepared per City and RWQCB requirements and reviewed by the City. Implementation of mitigation measure **BIO-5** would ensure that potential impacts to jurisdictional resources would be less than significant.

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

Less Than Significant Impact. Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as steppingstones for wildlife dispersal.

The BSA is not recognized as an important wildlife corridor by any regional or state agency or jurisdiction and is not considered critical to the ecological functioning of adjoining open space areas. However, because the BSA includes a portion of Arroyo Del Oro and Kit Carson creeks that are bordered by riparian habitat, it does provide value as a corridor that supports movement between similar patches of riparian habitat north and south of the BSA. The creek corridor likely supports local movement patterns of riparian wildlife species for foraging, cover, and shelter areas. No raptor nests or wildlife dens were observed during the field surveys (Kleinfelder 2021a). Common wildlife species adapted to life in proximity to human development, such as raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and striped skunk (*Mephitis mephitis*) are likely to move through the BSA on a regular basis for food and cover. Common native and non-native bird species also are likely to use the BSA for nesting and foraging. Temporary effects due to noise and increased human activity during Project construction activities would not adversely interfere with these local movement patterns or affect the ability of these species to forage or reproduce in the long term. Impacts would be less than significant.

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

Less Than Significant Impact. The Escondido Municipal Code Grading and Erosion Control Ordinance (Chapter 33, Article 55, Sections 33-1068 and 33-1069) places restrictions on the removal of vegetation and includes vegetation and replacement standards for impacts to mature and/or protected trees. The Project would not remove any existing trees; one tree located within the Project footprint would be

protected in place. In the unexpected event that trees would be required to be removed or pruned, the regulations in the Escondido Municipal Code would be adhered to by the Construction Contractor, as stipulated in the Project plans. Compliance with the requirements set forth in the Municipal Code would ensure significant impacts to ordinances protecting biological resources would not occur. Impacts would be less than significant.

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?

Less Than Significant Impact. The Project Area is located within the boundaries of the Draft Escondido Multiple Habitat Conservation Program (Draft MHCP) Subarea Plan; however, this plan has not yet been approved or adopted. The Project Area occurs entirely within a public park. Impacts to sensitive biological resources would be avoided as part of the Project or mitigated if avoidance is not feasible, as discussed in Sections IV(a) through IV(e). Kit Carson Park is located within the Hardline Focused Planning Area (HFPA) according to the Draft MHCP. For projects within the HFPA, the area that has been developed or is approved for development is outside the preserve, while the open space area is in the preserve and is conserved at 90 to 100 percent (depending on the types of approved activities). Although this Project would have minor impacts to biological resources, Project operations would be consistent with exiting conditions, and the current zoning and usage of the Project Area. Therefore, the Project would not conflict with a Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Impacts would be less than significant.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
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 dedicated cemeteries?	☐	☒	☐	☐

The following analysis is based on the Cultural Resources Identification Report (CRIR) completed by Kleinfelder in September of 2021 (Kleinfelder 2021c) and included as Appendix C to this ISMND. Would the Project:

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

Less Than Significant Impact. Under CEQA, a resource is considered “historically significant” if it meets the criteria for listing on the California Register of Historical Resources (CRHR; Public Resources Code Section 5024.1, Title 14 California Code of Regulations [CCR] Section 4852), including the following:

A. Is associated with events that have made a significant contribution to the broad pattern of California's history and cultural heritage;

B. Is associated with the lives of persons important in our past;

C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

D. Has yielded or may be likely to yield information important in prehistory or history.

According to Section 15064.5 of the CEQA Guidelines, a substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. The City policies regulating impacts to cultural resources are provided in the General Plan. Procedures and criteria for register listing or local landmark designation are provided in the Escondido Municipal Code, Article 40, Section 33-794.

According to the CRIR completed by Kleinfelder (Appendix C), cultural resources literature search through the California Historical Resources Information System (CHRIS) records search of the area of potential effect (APE) and a 0.25-mile buffer was conducted by the South Coast Information Center (SCIC) on July 6, 2021. Six previously recorded cultural resources on file with the SCIC were identified within a quarter of a mile of the APE, no resources were found to be located within the APE. The results also identified two previously recorded archaeological sites that were mapped outside the APE, which include P-37-000571/CA-SDI-000571 (habitation debris) and P-37-018684 (chimney). Additionally, Kleinfelder reviewed historical maps from the United States Geological Survey (USGS) repository, Historical Aerials, and the Library of Congress, and Old Maps Online to provide additional information regarding the potential for the presence of historic-era cultural resources within the APE. No significant historical resources were identified within the Project Area.

The APE has been disturbed by development of Kit Carson Park, periodic maintenance activities, and on-going recreational use of the Park. The pedestrian survey completed on August 4, 2021, reviewed the entire APE for new and/or previously recorded cultural resources; specifically, sites P-37-000571/CA-SDI-000571(habitation debris) and P-37-018684 (chimney), which were reported outside and adjacent to the APE (based on record search results). Both resources were investigated and there was no evidence these resources exist as they were not relocated during the survey (presumably destroyed). As such, sites P-37-000571/CA-SDI-000571 and P-37-018684 are recommended not eligible for listing on the National Register of Historic Places and/or CRHR under any criteria. Additionally, the location in which both resources were previously plotted occurs outside the APE and would be avoided during Project construction. Impacts to historical resources would be less than significant.

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

Less Than Significant with Mitigation Incorporated. On August 4, 2021, Kleinfelder archaeologist, Darryl Dang, B.A., completed an intensive pedestrian survey in search of cultural resources (new and previously recorded) within the APE. The ground visibility varied between 0 and 100 percent, with the overall average being about 60 percent due to the presence of vegetation and gravel/rock in some areas of the APE. The survey resulted in no (new or previously recorded) prehistoric or historic-period cultural resources within the APE. A record search also revealed no archeological sites recorded within the

Project Area. Based on the absence of recorded or observed resources within or adjacent to the Project Area, no adverse changes in the significance of an archaeological resource are anticipated; however, due to the proposed ground disturbance on site and alluvial soils beneath, it is possible that unrecognized archaeological resources may be discovered during grading and other ground-disturbing activities. Implementation of mitigation measures **CUL-1** through **CUL-10** are required to ensure that impacts to unidentified cultural resources are less than significant.

CUL-1 The City of Escondido shall enter into a Tribal Cultural Resource Treatment and Monitoring Agreement (also known as a pre-excavation agreement) with a tribe that is traditionally and culturally affiliated with the Project Area ("TCA Tribe") prior to issuance of a grading permit. The purposes of the agreement are (1) to provide the City with clear expectations regarding tribal cultural resources, and (2) to formalize protocols and procedures between the City and the TCA Tribe for the protection and treatment of, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and cultural items, located and/or discovered through a monitoring program in conjunction with the construction of the proposed Project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground disturbing activities.

CUL-2 Prior to issuance of a grading permit, the verify that a qualified archaeologist and a Native American monitor associated with a TCA Tribe have been retained to implement the monitoring program. The archaeologist shall be responsible for coordinating with the Native American monitor. This verification shall be presented to the City in a letter from the Project archaeologist that confirms the selected Native American monitor is associated with a TCA Tribe. The City, prior to any pre-construction meeting, shall approve all persons involved in the monitoring program.

CUL-3 The qualified archaeologist and a Native American monitor shall attend the pre-grading meeting with the Construction Contractor to explain and coordinate the requirements of the monitoring program.

CUL-4 During the initial grubbing, site grading, excavation or disturbance of the ground surface, the qualified archaeologist and the Native American monitor shall be on site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of tribal cultural resources as defined in California Public Resources Code Section 21074. Archaeological and Native American monitoring shall be discontinued when the depth of grading and soil conditions no longer retain the potential to contain cultural deposits. The qualified archaeologist, in consultation with the Native American monitor, shall be responsible for determining the duration and frequency of monitoring.

CUL-5 In the event that previously unidentified tribal cultural resources are discovered, the qualified archaeologist and the Native American monitor, shall have the authority to temporarily divert or temporarily halt ground disturbance operation in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed.

CUL-6 If a potentially significant tribal cultural resource is discovered, the archaeologist shall notify the City of said discovery. The qualified archaeologist, in consultation with the City, the TCA Tribe and the Native American monitor, shall determine the significance of the discovered resource. A recommendation for the tribal cultural resource's treatment and disposition shall be made by the qualified archaeologist in consultation with the TCA Tribe and the Native American monitor and be submitted to the City for review and approval.

CUL-7 The avoidance and/or preservation of the significant tribal cultural resource and/or unique archaeological resource must first be considered and evaluated as required by CEQA. Where any significant tribal cultural resources and/or unique archaeological resources have been discovered and avoidance and/or preservation measures are deemed to be infeasible by the City, then a research design and data recovery program to mitigate impacts shall be prepared by the qualified archaeologist (using professional archaeological methods), in consultation with the TCA Tribe and the Native American monitor, and shall be subject to approval by the City. The archaeological monitor, in consultation with the Native American monitor, shall determine the amount of material to be recovered for an adequate artifact sample for analysis. Before construction activities are allowed to resume in the affected area, the research design and data recovery program activities must be concluded to the satisfaction of the City.

CUL-8 As specified by California Health and Safety Code Section 7050.5, if human remains are found on the Project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Coroner's office. Determination of whether the remains are human shall be conducted on-site and in situ where they were discovered by a forensic anthropologist, unless the forensic anthropologist and the Native American monitor agree to remove the remains to an off-site location for examination. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the Coroner has made the necessary findings as to origin and disposition. A temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected, and consultation and treatment could occur as prescribed by law. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains in accordance with California Public Resources Code section 5097.98. The Native American remains shall be kept in-situ, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of a Native American monitor.

CUL-9 If the qualified archaeologist elects to collect any tribal cultural resources, the Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the qualified Archaeologist does not collect the cultural resources that are unearthed during the ground disturbing activities, the Native American monitor, may at their discretion, collect said resources and provide them to the TCA Tribe for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Any tribal cultural resources collected by the qualified archaeologist shall be repatriated to the TCA Tribe. Should the TCA Tribe or other traditionally and culturally affiliated tribe decline the collection, the collection shall be curated at the San Diego Archaeological Center. All other

resources determined by the qualified archaeologist, in consultation with the Native American monitor, to not be tribal cultural resources, shall be curated at the San Diego Archaeological Center.

CUL-10 Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusion of the archaeological monitoring program and any data recovery program on the Project site shall be submitted by the qualified archaeologist to the City. The Native American monitor shall be responsible for providing any notes or comments to the qualified archaeologist in a timely manner to be submitted with the report. The report will include California Department of Parks and Recreation Primary and Archaeological Site Forms for any newly discovered resources.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact with Mitigation Incorporated. No cemeteries, formal or informal, have been identified or are known to be present within the Project Area or vicinity; however, it is possible for human remains to be discovered during certain construction activities, such as grading. In the event that remains are identified on site, the Project would proceed in accordance with the procedures of Public Resources Code Section 5097.98, California Government Code Section 27491, and Health and Safety Code Section 7050.5. These regulations detail specific procedures to follow in the event of a discovery of human remains. Mitigation measure **CUL-4**, above, requires that an archaeologist and Native American monitor(s) are on site to monitor all ground-disturbing activities to ensure that buried human remains uncovered during grading are identified and handled in compliance with these regulations. Health and Safety Code Section 7050.5 requires that no further disturbance occurs until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendant (MLD). The MLD may inspect the site of the discovery of the Native American remains and may recommend means for treating, with appropriate dignity, the human remains and any associated grave goods. Compliance with these regulations would ensure that potential impacts to human remains would be less than significant.

VI. ENERGY

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

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

Less Than Significant Impact. Construction of the Project is anticipated to last approximately nine months. During construction, temporary electric power for lighting (if necessary) and electric-powered tools would be provided by San Diego Gas and Electric (SDG&E). The electricity used for construction activities would be temporary and minimal and would have a negligible contribution to the Project's overall energy consumption. Natural gas may be consumed as a result of Project construction; however, its use also would be temporary and negligible given the short construction duration and limited use. Fuels used for construction would primarily consist of diesel and gasoline. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction and would include the transportation of construction materials and construction worker commutes. Heavy-duty construction equipment associated with construction activities, as well as haul trucks involved in the removal of construction and demolition materials, would consume petroleum-based fuel. Construction workers would travel to and from the Project throughout the duration of construction, presumably in gasoline-powered vehicles. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. The petroleum consumed during Project construction would be typical of similar construction projects and would not require the use of new petroleum resources beyond what are typically consumed in California. Based on these considerations, construction of the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources.

Once operational, the new culvert bridge would have the same usage and function as the existing culvert bridge, and therefore, would not have substantial operational emissions outside existing park maintenance. Based on these considerations, petroleum consumption associated with the Project would not be considered inefficient or wasteful, and impacts would be less than significant.

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

Less Than Significant Impact. The Project would be built in accordance with all applicable regulations governing energy usage and efficiency. State plans for renewable energy and energy efficiency include CARB's 2017 Climate Change Scoping Plan, the 2019 California Energy Efficiency Action Plan, and the California Renewables Portfolio Standard Program. These state plans do not include regulations that would apply to a culvert bridge replacement project; therefore, the Project would not conflict with or obstruct a state plan for renewable energy or energy efficiency.

The Escondido Municipal Code contains provisions for energy efficiency, primarily focused on energy-efficient lighting, water efficient landscaping, etc. Construction activities associated with the Project would be required to comply with applicable regulations, including applicable requirements for diversion of construction and demolition debris. Accordingly, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant. Once operational, the new culvert bridge would have the same usage and function as the existing culvert bridge, and therefore would not result in new sources of energy use beyond the existing park maintenance. Accordingly, the Project would not conflict with existing energy standards or regulations, and impacts would be less than significant.

VII. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction 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?	☐	☐	☐	☒

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?

Less Than Significant Impact. No active faults (i.e., faults that exhibit evidence of ground displacement during the last 11,000 years) are known to underlie the Project Area. The closest known active fault is

the Warner's Ranch quadrant within the Elsinore fault zone located approximately 20 miles northeast of the Project Area. The Project Area is not located in an Alquist-Priolo Earthquake Fault Zone. As such, the probability of fault rupture is low. In addition, all earthwork would be conducted in accordance with the City's Grading and Erosion Control Ordinance. The proposed culvert bridge would be designed in accordance with the minimum seismic design parameters of the California Building Code (CBC; latest edition) and applicable ASTM International specifications upon which the CBC standards are based. Accordingly, the potential for ground rupture is very low and impacts related to the exposure of people or structures to geologic hazards associated with rupture of a known earthquake fault would be less than significant.

ii. Strong seismic ground shaking?

Less Than Significant Impact. The City, like the rest of southern California, is located within a seismically active region as a result of being located near the active margin between the North American and Pacific tectonic plates. Ground shaking as a result of movement along an active fault in the vicinity of the Project Area has the potential to affect the integrity of the Project components. The closest known active fault is the Warner's Ranch quadrant within the Elsinore fault zone located approximately 20 miles northeast of the Project Area. Construction of the Project would incorporate measures to accommodate projected seismic loading, pursuant to existing guidelines such as the International Building Code (IBC; International Code Council 2015) and CBC (CCR Title 24, Part 2). The CBC is based on the IBC, with appropriate amendments and modifications to reflect site-specific conditions in California. As noted on the Project plans, a Special Inspection Program would be implemented to the satisfaction of the City to provide special inspection and testing for seismic resistance as required by CBC Sections 1704 and 1705. Based on the incorporation of applicable measures into design and construction of the proposed Project, potential impacts associated with strong seismic ground shaking would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction is a process in which strong ground shaking causes soils in a saturated deposit to temporarily lose their strength and behave like a heavy fluid. This phenomenon generally occurs in areas of high seismicity where groundwater is shallow and loose granular soils or hydraulic fill soils subject to liquefaction are present. The factors known to influence liquefaction potential include soil type, relative density, grain size, confinement, depth to groundwater, and the intensity and duration of the seismic ground shaking. For liquefaction to occur, loose granular sediments below the groundwater table must be present and shaking of sufficient magnitude and duration must occur. Ground failure associated with liquefaction can result in severe damage to structures. According to the Community Protection Chapter (VI) of the Escondido General Plan, the Project Area is located within an area of potential Liquefaction Hazard (City 2012a).

Provisions to address potential impacts resulting from seismic related ground failure are included in the Project plans. As noted in Section VII(a)ii, a Special Inspection Program would be implemented to the satisfaction of the City as required by CBC Sections 1704 and 1705. A geotechnical engineer would perform an inspection to approve the footing excavations prior to construction. Findings would be submitted by the geotechnical engineer to the City. Soils removal, backfilling, and recompaction would be performed per soils report recommendations under the supervision of the geotechnical engineer's supervision and inspection. Therefore, impacts would be less than significant.

iv. Landslides?

No Impact. Landslide activity generally occurs in areas where slopes are steep (typically 30 percent or more) and lack vegetation. The Project Area and vicinity exhibit relatively flat topography; no steep slopes are located within or adjacent to the Project Area. Additionally, evidence of landslides and slope instabilities were not mapped within Figure VI-9 of the Community Protection Chapter (VI) of the Escondido General Plan (City 2012a). The potential for landslides or slope instabilities to occur within the Project Area is considered low and no impact would occur.

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

Less Than Significant Impact. Construction activities associated with grading or other ground disturbance has the potential to result in temporary erosion or sedimentation during construction. Potential short-term erosion and sedimentation impacts would be addressed through compliance with applicable regulations as specified by the RWQCB. As discussed in Section X, below, to address potential water quality impacts, the Project would comply with NPDES Municipal Separate Storm Sewer Systems (MS4) permit requirements to develop a Stormwater Quality Management Program (SWQMP), which would outline construction and permanent BMPs to be implemented, pursuant to the Escondido Storm Water Design Manual (City 2016). Specifically, this would entail implementing appropriate measures to comply with requirements of the following regulations: (1) Section 33 of Article 55 (Grading and Erosion Control) of the Escondido Municipal Code; (2) the City Jurisdictional Urban Runoff Management Plan (JURMP) and related storm water standards; and (3) the NPDES Construction General Permit (NPDES No. CAS000002, SWRCB Order 2009-0009-DWQ, as amended). Specific BMPs would be identified during preparation of the Project's final SWQMP. Construction stormwater BMPs are required to be shown on the Project grading plan and would be provided in the Storm Water Pollution Prevention Plan (SWPPP) for the Project.

Typical erosion and sediment control measures that may be required in the Project SWPPP include the following: (1) seasonal grading restrictions during the rainy season (October 1 to April 30) for applicable areas; (2) preparation and implementation of a Construction Site Monitoring Program (CSMP), and, if applicable, a Rain Event Action Plan (REAP) to provide enhanced erosion and sediment control measures prior to predicted storm events; (3) use of erosion control/stabilizing measures such as geotextiles, mats, fiber rolls, or soil binders; (4) use of sediment controls to protect the site perimeter and prevent off-site sediment transport, including measures such as silt fencing, fiber rolls, gravel bags, temporary sediment basins, street sweeping, stabilized construction access points and sediment stockpiles, and use of properly fitted covers for sediment transport vehicles; (5) compliance with local dust control measures, and (6) implementation of additional BMPs as necessary to ensure adequate erosion/sediment control and regulatory conformance.

Construction of the proposed Project would require the temporary diversion of the active creek to install the concrete culvert bridge. Methods to divert the creek may include temporary gravel bag berms, portable pump equipment, temporary pipe siphons, and earthen berms. Prior to construction, a creek diversion plan would be prepared in accordance with RWQCB requirements and submitted to the City for review. If construction of the Project involves dewatering, a dewatering plan would also be prepared per City and RWQCB requirements and reviewed by the City. The plan would include sediment controls and BMPs to address sedimentation, as well inspection and maintenance requirements.

The proposed Project design would include structural BMPs to manage operational and construction erosion. The Project would include storm drain inlet protection that would be installed at on-site storm drain inlets. This would prevent sediment from entering the storm drain system. Desiltation basins would also be included at drainage outlets from the graded site, where feasible. Additionally, erosion control measures would be implemented on slopes and exposed soil utilizing BMPs. These BMPs include installing fiber blankets and bonded fiber matrix, installing new vegetation, and/or maintaining existing vegetation. Eroded areas would be immediately repaired and stabilized, while inactive slopes would be protected and stabilized. All exposed soils including active and inactive slopes would be protected prior to rain events. Unpaved gravel channels would implement erosion prevention measures such as lining and installing velocity check dams at regular intervals. As described in Section X(a), below, construction and operational BMPs would be implemented in compliance with applicable stormwater regulations to reduce potential water quality impacts, including those associated with increased erosion and siltation.

Based on implementation of appropriate erosion and sediment control BMPs as part of, and in conformance with, the Project SWPPP and related City and NPDES requirements, associated potential erosion and sedimentation impacts would be less than significant.

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

Less Than Significant Impact. As discussed above in Section VII(a)iv, the Project would not be subject to landslide-related risks, as the site and surrounding area are topographically level, and no evidence of landslides or slope instabilities were observed within or adjacent to the Project Area. The site is, however, susceptible to liquefaction events, as discussed in Section VII(a)iii. To avoid potential impacts resulting from seismic related ground failure or other possible geologic impacts, a geotechnical engineer would perform an inspection to approve the footing excavations prior to construction. Findings would be submitted by the geotechnical engineer to the City. . The Project would implement all necessary recommendations contained in the soils report. Potentially less stable materials present within the Project area (fill and surficial alluvium) would be addressed through the required inclusion of geotechnical recommendations and conformance with applicable regulatory requirements. Such measures would include provisions related to the removal of unsuitable materials; composition and placement methodology (e.g., compaction) of materials used as backfill; and appropriate seismic, drainage, structure, foundation, and pavement design, pursuant to standards from regulatory/industry sources including the City and CBC. Conformance with the described geotechnical recommendations and regulatory/industry standards as a matter of Project design would effectively avoid or reduce potential effects from unstable soils. Impacts would be less than significant.

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?

Less than Significant Impact. Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, perched groundwater, drought, or other factors and may result in unacceptable settlement or heave of structures or pavements supported on grade. The Project Area is underlain mostly by Chino silt loam, as well as a small portion of Ramona sandy loam on the northwestern side of the Project Area (Kleinfelder 2021b). Chino silt loam is a moderately well-drained, slightly to moderately saline alluvium derived from granite, found on alluvial

fans. Ramona sandy loam is a well-drained alluvium derived from granite, also found on alluvial fans. Loam and sandy loam soils typically have a low clay content (below 30 percent). Accordingly, on-site soils are expected to have a very low expansion potential based on low clay content. The geotechnical engineer would perform an evaluation of on-site soils and submit the findings to the City. The Project would implement all necessary recommendations contained in the soils report. Therefore, impacts would be less than significant.

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

No Impact. The Project would not involve the use of septic tanks or alternative wastewater disposal systems. No related impacts would result from implementation of the Project.

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

No Impact. Impacts to paleontological resources generally occur from the physical destruction of fossil remains by excavation operations that cut into geologic formations. The potential for significant impacts to paleontological resources to occur is based on the extent that a geologic formation would be disturbed and the potential for those geologic formations to contain fossils. The Project Area is underlain by artificial fill and undifferentiated surficial deposits. The surrounding areas are underlain by mid-Cretaceous granitic rock (Escondido 2012b). According to the County of San Diego Guidelines for Determining Significance for Paleontological Resources (County 2007) and Chapter 4.5, *Cultural and Paleontological Resources*, of the Escondido General Plan, Downtown Specific Plan and Climate Action Plan EIR, no resource potential for producing fossil remains is assigned to geologic formations that are composed entirely of volcanic or plutonic igneous rock, such as basalt or granite. These formations have no paleontological resource potential. Based on the Project grading plans, it is anticipated that grading would extend up to eight feet below the existing ground surface elevation. At this depth in the mapped geologic unit, grading for the Project would be unlikely to yield intact fossil resources. The Project Area has been highly disturbed by prior grading construct the existing culvert bridge and Eagle Scout Lake. Ground disturbance would be relatively shallow and may primarily encounter fill material. Therefore, the impact on paleontological resources would be less than significant.

Unique geological features generally are defined to include geologic structures, formations, or other features that exhibit unusual or important characteristics in the context of scientific information (e.g., rare geologic/mineral assemblages or structural features), economic considerations (e.g., economically valuable mineral deposits), or cultural perception (e.g., prominent, unusual, and/or aesthetically pleasing rock outcrops or exposures). Because the Project Area does not encompass any distinct or unique geologic characteristics, information or features as described, no associated impacts would occur.

VIII. GREENHOUSE GAS EMISSIONS

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

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

Less Than Significant Impact. Project-specific greenhouse gas (GHG) emissions modeling was performed by HELIX Environmental Planning Inc. (HELIX) and is included as Appendix A to this IS/MND. GHGs are emitted by natural processes and human activities primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition. Emissions of GHGs in excess of natural ambient concentrations are thought to be responsible for the enhancement of the greenhouse effect and contributing to what is termed "global warming," the trend of warming of the Earth's climate from anthropogenic activities. Global climate change impacts are by nature cumulative; direct impacts cannot be evaluated because the impacts themselves are global rather than localized impacts.

The GHGs defined under California's AB 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). As individual GHGs have varying heat-trapping properties and atmospheric lifetimes, GHG emissions are converted to carbon dioxide equivalent (CO_2e) units for comparison. The CO_2e is a consistent unit for comparing GHG emissions because it normalizes various GHG emissions to a consistent measure.

The City's 2021 CAP was adopted on March 10, 2021 (City 2021). The 2021 CAP provides an update to the inventories, projections, and GHG reduction measures identified in the 2013 CAP (City 2013b). A lead agency may conclude that a project's GHG impact is not cumulatively significant if the project demonstrates consistency with the CAP, which is a qualified GHG reduction plan under CEQA (CEQA Guidelines Section 15183.5[h][3]). The CAP sets GHG reduction targets and proposes achievable, locally based strategies to reduce GHG emissions from both municipal and community activities. The state's GHG reduction targets established in Senate Bill (SB) 32 set a goal to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Utilizing the previous citywide GHG emissions inventory from 2012 and following the state's GHG reduction targets, estimated equivalent reductions at the local level would need to reduce emissions to 42 percent below 2012 levels by 2030 and 52 percent below 2012 levels by 2035.

The City has established a GHG screening threshold (set at 500 metric tons carbon dioxide equivalent [MT CO_2e] per year) for new development projects to determine if a project would need to demonstrate consistency with the CAP through the CAP Consistency Review Checklist (included as Appendix E to the CAP). New development projects that are consistent with the General Plan and are expected to generate fewer than 500 MTCO2e annually would not have a cumulative impact and would not be required to provide additional analysis. The Project would be consistent with the citywide emissions projections because it would replace an existing structure and is consistent with the land use designation and existing uses.

Construction of the Project would result in GHG emissions generated by vehicle engine exhaust from heavy construction equipment and worker commuter trips, as well as water use. The Project's construction GHG emissions were estimated using the same assumptions and methods as the air quality analysis (using CalEEMod Version 2020.4.0) and are shown in Table 3, *Estimated Project-related GHG Emissions.* Construction activities would include grading and construction, which are combined into one phase for modeling purposes. As shown in Table 3GHG emissions estimated to occur during construction of the Project total approximately 187.61 MT CO_2e. Amortized over an estimated 30-year Project lifetime, construction emissions would be approximately 6.25 MT CO_2e per year.

Table 3
ESTIMATED PROJECT-RELATED GHG EMISSIONS

Emission Sources	Emissions (MT CO_2e)
Construction	
2023	123.25
2024	64.36
Total	187.61
Construction (amortized over 30 years)	6.25
Total Annual Project Emissions	***6.25***
City Screening Threshold	**500**
Significant Impact?	**No**

Source: CalEEMod (model output data is provided in Appendix A; HELIX 2017a); significance thresholds based on the Escondido Municipal Code (City 2022).
Note: Totals may not add up exactly due to rounding.

Once operational, the new culvert bridge would have the same usage and function as the existing culvert bridge and would not result in changes to emissions from traffic on public roadways or from bridge maintenance activities compared to existing conditions. As a culvert for water conveyance and stormwater runoff within Kit Carson Park, the completed Project would not create a unique use that would attract more visitors to the park, nor would it require increased maintenance over what is already performed within the Park. Emissions resulting from implementation of the Project would not exceed the screening threshold of 500 MT CO_2e. Therefore, the implementation of the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

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

Less Than Significant Impact. The Project would replace an existing culvert bridge that is deteriorating. The Project would not generate growth in population or employment or require the alteration of an existing land use designation through amendment(s) to the City's General Plan or changes to zoning. Long-term operation of the culvert bridge would not result in changes to GHG emissions from maintenance activities, compared to the existing condition. Furthermore, as shown in Table 3, Project construction would not result in a significant increase in GHG emissions. Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, including the City's 2021 CAP. The impact would be less than significant.

IX. HAZARDS AND HAZARDOUS MATERIALS

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

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

Less Than Significant Impact. The Project proposes to replace an existing culvert bridge, and would generally not involve the transport, use, release, or disposal of hazardous materials. Long-term Project operations would potentially involve the use of chemical pesticides in certain instances (e.g., landscape maintenance), although the Project includes measures to minimize and control such use, as outlined below in Section X.

Project construction and demolition would involve the on-site use and storage of hazardous materials such as vehicle/equipment fuels, oils, and lubricants; paints; and solvents. Applicable regulatory requirements associated with the routine transport, use, and/or disposal of hazardous materials during construction- and demolition-related activities would be met through implementation of a SWPPP and related BMPs as described below in Section X. The Construction Contractor would be required to use standard construction controls and safety procedures to avoid or minimize the potential for accidental release of such substances into the environment. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. As discussed above, the Project would not result in the introduction of new hazardous materials within the Project Area. Construction would involve typical construction equipment and on-site use and storage of hazardous materials. Operation of the new culvert bridge would entail the same usage/maintenance as the existing conditions. The level of risk associated with the accidental release of other hazardous substances is not considered significant, due to the small volume and low concentration of these hazardous materials anticipated to be present on site. Applicable regulatory requirements associated with the possible release of hazardous materials during construction- and demolition-related activities would be met through implementation of a SWPPP and related BMPs as described below in Section X. Construction Contractor would be required to use standard construction controls and safety procedures to avoid or minimize the potential for accidental release of such substances into the environment. Therefore, impacts would be less than significant.

c) 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 Area is not located within one-quarter mile of an existing or proposed school. The nearest schools are San Pasqual High School, located approximately 0.3 mile east of the Project Area; and L.R. Green Elementary School and Bear Valley Middle School, located approximately 0.4 mile north of the Project Area. Nonetheless, the Project would adhere to necessary regulatory requirements regarding hazardous materials. Impacts related to the handling of acutely hazardous materials are not anticipated, and no impacts would occur.

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

No Impact. Pursuant to Government Code Section 65962.5 (Cortese List) requirements, the State Water Resource Control Board (SWRCB) GeoTracker database (SWRCB 2022) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2022) were searched for hazardous

materials sites within 0.25 mile of the Project Area. Based on a review of these databases, there are no hazardous materials sites located within the Project Area. However, there is a leaking underground storage tank (LUST) site located approximately 1,400 feet east of the Project Area. The LUST site is associated with San Pasqual High School, and the potential contaminant of concern was gasoline. The site was restored, and the case has been closed as of June of 2006. Therefore, the Project would not cause a significant hazard to the public or the environment related to a hazardous materials site, and 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 influence area or within two miles of a public or public use airport and is not subject to the requirements of any airport land use compatibility plan. The two nearest public airports to the City are the McClellan-Palomar Airport and Ramona Airport, located approximately 12.7 miles and 8.5 miles from the Project Area, respectively. Although portions of the City are subject to periodic flyovers from Marine Corps Air Station (MCAS) Miramar, which is located approximately 14 miles southwest of the Project Area, the mapped noise and safety hazard locations associated with these three airports are not located within the City. Therefore, the Project would not result in a noise or safety hazard for people residing or working in the project area. No impact would occur.

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

Less Than Significant Impact. Pertinent information regarding emergency response in the Project Area vicinity is provided in the County of San Diego General Plan and related documents, and in the General Plan Community Protection Element. The County General Plan includes information on emergency evacuation in the Mobility and Safety elements, with reference to the Office of Emergency Services Unified San Diego County Emergency Services Organization Operational Area Emergency Plan (County 2010). Specifically, Annex Q (Evacuation) of the plan notes that: “Primary evacuation routes consist of major interstates, highways and prime arterials within San Diego County…,” with I-15 and SR-78 identified in the Project Area vicinity. The County plan also notes that “Local jurisdictions will work with…applicable agencies/departments to identify evacuation points and transportation routes.”

The City General Plan Community Protection Element identifies information related to emergency response in association with vehicular and aircraft (helicopter) access for police, fire, and ambulance/Emergency Medical Technician (EMT) services, with no specific “emergency response or evacuation plans” included (City 2012a). In addition, the Community Protection Element includes policies related to emergency response for the noted services, including provision of adequate staffing, equipment and response times, and also identifies a number of designated emergency evacuation routes “…to aid in the orderly and rapid movement of people away from a threat or actual occurrence of a hazard.” Several of these designated routes are in the vicinity of the Project and may be utilized by the minimal Project-related construction traffic, including I-15, Bear Valley Parkway, Via Rancho Parkway and San Pasqual Road.

Potential impacts to emergency response or evacuation plans would be less than significant, based on the following considerations: (1) as described below in Section XVII, operational Project traffic would not

result in significant impacts to local roadways or intersections, with no associated effects to emergency response or evacuation plans; (2) Project construction would not involve off-site roadway (or other applicable) improvements that would result in associated roadway/lane closures or related impacts to emergency response or evacuation plans; (3) indirect effects to regional and local roadways (including I-15 and the designated emergency evacuation routes noted above) from Project-related construction traffic would be minor, due to the negligible average daily trips (ADT) anticipated for this type of Project and the temporary nature of Project construction; and (4) primary access to all major roadways from local properties would be maintained during construction and operational activities. Therefore, impacts related to impairment of an emergency response or evacuation plan would be less than significant.

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

Less Than Significant Impact. The Project is located in an urbanized area, surrounded by commercial and residential land uses. According to the General Plan Community Protection Element, the Project Area and vicinity is located in a high fire hazard zone. The construction phase of the Project could potentially increase the risk of fires on a short-term basis, if, for example, equipment-related fires were accidentally started at the site. The probability for such fires to occur is low, however, and construction equipment would be outfitted with spark arrestors and other fire protection features such as on-board fire extinguishers. As a result, potential impacts associated with short-term fire hazards from Project construction would be less than significant.

The proposed project would not involve the placement of new structures, nor would it be inconsistent with policies and regulations governing fire safety, including the Escondido Fire Code (found in the Escondido Municipal Code, Chapter 11, Article 2, Division 1), 2019 California Fire Code, and County of San Diego 2020 Consolidated Fire Code. Conformance with current fire codes would ensure that long-term operational fire hazards would be less than significant.

X. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
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:				

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	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 resources of polluted runoff?	☐	☐	☒	☐
	iv. Impede or redirect flood flows?	☐	☐	☒	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

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

Less Than Significant Impact. Escondido is within the jurisdiction of the SDRWQCB, which is tasked with protecting the region's water quality objectives that meet the standards set forth in the Section 303 of the federal Clean Water Act as well as the state's Porter-Cologne Water Quality Act. The SDRWQCB designates beneficial uses of surface water and groundwater, sets qualitative and quantitative water quality objectives that must be met to protect designated beneficial uses, and develops implementation programs to protect the regional water resources through its Water Quality Control Plan for the San Diego Basin (the Basin Plan).

As outlined in the following analysis, potential Project related water quality impacts are associated with short-term construction activities. Construction of the Project would potentially result in the release of sediments, nutrients, trash and debris, oxygen-demanding substances, oil and grease, bacteria and viruses, pesticides, and heavy metals into runoff from the Project Area. The short- and long-term discharge of pollutants from the Project Area could potentially result in significant water quality impacts to downstream receiving waters. In high water conditions, Eagle Scout Lake overflows to wetland areas in the southern portion of the Park. Flow eventually enters Lake Hodges and then the San Dieguito River.

To address potential water quality impacts, the Project would comply with NPDES Municipal Separate Storm Sewer Systems (MS4) permit requirements to develop a SWQMP which would outline construction and permanent BMPs to be implemented, pursuant to the Escondido Storm Water Design Manual (City 2016). The Project would employ source control, low-impact development (LID), and treatment control BMPs. Source control BMPs are site planning practices or structures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source. All development Projects within the City must implement source control BMPs 4.2.1 through 4.2.6 of the

Escondido Storm Water Design Manual, where applicable and feasible. Source control BMPs would be designed to prevent illicit discharges and potential sources of runoff pollutants and would include posting storm water information and signage for construction personnel and protecting outdoor materials and trash storage areas from rainfall, runoff, and wind dispersal. Specific BMPs would be identified during preparation of the Project's final SWQMP. Construction stormwater BMPs are required to be shown on the Project grading plan and would be provided in the SWPPP for the Project.

LID BMPs are storm water management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic conditions. LID BMPs include optimizing the site layout, minimizing the impervious footprint, dispersing runoff to adjacent landscaping, and draining impervious surfaces to bioretention facilities, planter boxes, cisterns, or dry wells. Structural treatment BMPs are designed to infiltrate, filter, and/or treat runoff from the Project footprint.

Implementation of these BMPs, along with regulatory compliance, would preclude violations of applicable standards and discharge regulations. Project impacts related to water quality would be less than significant.

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

Less Than Significant Impact. The Project Area is within the Del Dios sub area of the San Dieguito Hydrologic Unit. According to the California Department of Water Resources Basin Boundaries Data Viewer, the Project is not underlain by a groundwater basin, but it is within the vicinity of the San Pasqual Valley Groundwater basin (California Department of Water Resources 2022). The Project would not require the use of groundwater or deplete groundwater supplies from the area. The culvert bridge and relocated utilities would not require the use of water, nor would the Project interfere with sustainable groundwater recharge as it would replace the existing facilities in kind. If construction of the Project involves dewatering, a dewatering plan would be prepared per City and RWQCB requirements and submitted for review and approval by the City. Potential dewatering activities associated with construction would be short-term in nature and would not substantially affect the groundwater table. Based on the described conditions, implementation of the Project would decrease groundwater supplies or inhibit recharge. Impacts would be less than significant.

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

    i. Result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. The Kit Carson Panhandle drainage is an open channel that conveys runoff from the north end of Kit Carson Park and flows south towards Eagle Scout Lake. Eagle Scout Lake was originally built to function as a sediment basin, indicating that there may have been high levels of sediment transported through the Park within the drainage. In high water conditions, Eagle Scout Lake overflows to wetland areas in south Kit Carson Park (Kleinfelder 2018).

Construction of the Project would require the temporary diversion of the active creek to install the concrete culvert bridge. Methods to divert the creek may include temporary gravel bag berms, portable pump equipment, temporary pipe siphons and earthen berms. Prior to construction, a creek diversion

plan would be prepared in accordance with RWQCB requirements and submitted to the City for review and approval. If construction of the Project involves dewatering, a dewatering plan would also be prepared per City and RWQCB requirements and reviewed by the City.

As described above in Sections VII(b) and X(a), Project design would include structural BMPs to manage erosion. The Project would include storm drain inlet protection that would be installed at on-site storm drain inlets. This would prevent sediment from entering the storm drain system. Desiltation basins would also be included at drainage outlets from the graded site where feasible. Additionally, erosion control measures would be implemented on slopes and exposed soil utilizing BMPs described in the sections referenced above. To further address potential water quality impacts, the Project would comply with NPDES MS4 permit requirements to develop a SWQMP, which would outline construction and permanent BMPs to be implemented, pursuant to the Escondido Storm Water Design Manual (City 2016). Specific BMPs would be identified during preparation of the Project's final SWQMP. Construction storm water BMPs are required to be shown on the Project grading plan and would be provided in the SWPPP for the Project. Construction and operational BMPs would be implemented in compliance with applicable stormwater regulations to reduce potential water quality impacts, including those associated with increased erosion and siltation. As a result, impacts would be less than significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?

Less Than Significant Impact. Refer to Section X(c)i. The Project would temporarily alter the existing drainage of the site. The use of BMPs throughout the site would decease surface runoff velocities, reducing the chances of flooding on or off site. 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 resources of polluted runoff?

No Impact. Refer to Sections X(a) through X(c)i-ii. Runoff from the site would be channeled through the Project Area, similar to existing conditions. Runoff would not exceed the capacity of the proposed replacement stormwater drainage system or provide additional sources of polluted runoff with implementation of BMPs. Impacts would be less than significant.

iv. Impede or redirect flood flows?

Less Than Significant Impact. According to the Federal Emergency Management Agency (FEMA) flood map the Project Area is within the Regulatory Floodway in Zone AE (FEMA 2016). Zone AE is the flood insurance rate zone used for the one-percent-annual-chance floodplains subject to inundation by a 100-year flood. The Project proposes to replace the existing culvert bridge that is currently used to convey flows from Arroyo Del Oro Creek to Eagle Scout Lake. The replacement culvert bridge would continue to facilitate flood flows within the Project area. As discussed above, construction of the Project would require the temporary diversion of the active creek to install the concrete culvert bridge. Prior to construction, a creek diversion plan would be prepared and submitted to the City for review and approval. If construction of the Project involves dewatering, a dewatering plan would also be prepared per City and RWQCB requirements and reviewed by the City. The Project would temporarily redirect flood flows during construction, but would not impede flows once operational. With the incorporation of BMPs and implementation of the creek diversion plan, impacts would be less than significant.

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

No Impact. As described in Section X(c)iv, the Project Area is within a 100-year floodplain (FEMA 2016) and would implement BMPs and a creek diversion plan during construction to reduce potential effects related to release of pollutants during flooding. Tsunamis are usually caused by displacement of the ocean flood causing large waves and are typically generated by seismic activity. Since the Project is located approximately 14 miles from the Pacific Ocean, a tsunami hazard is not present. A seiche is a standing wave in an enclosed or partly enclosed body of water and is normally caused by earthquake activity. The nearest body of water, Lake Hodges, is approximately 2.5 miles away, which is too far to present flood hazards by a seiche event. The Project would not be subject to flood hazards, tsunamis, or seiches and therefore would not release pollutants due to Project inundations. No impact would occur.

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

Less Than Significant Impact. Refer to Sections X(a) through X(d). The Project would comply with all stormwater quality standards during construction and operation, and appropriate BMPs would be implemented to address potential water quality impacts. Impacts would be less than significant.

XI. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause 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?	☐	☐	☒	☐

a) Physically divide an established community?

No Impact. The Project would replace an existing culvert bridge utilized for water conveyance and stormwater runoff within Kit Carson Park. The Project would not prohibit access to, or otherwise physically divide, an established community. No impact would occur.

b) Cause 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?

Less Than Significant Impact. The Project is located within Kit Carson Park, an approximately 285-acre City-managed park, with 100 acres developed for recreational use. The Project Area is zoned as Open Space/Parks (OS) and is also designated in the General Plan as OpenSpace/Parks. The Project is not located within one of the City's Focused Planning Areas. The Project would be consistent with the underlying land use designations, as it would replace an existing culvert bridge and utility infrastructure in kind and would not introduce a more intensive use than existing conditions. As discussed throughout

this Initial Study, the Project would mitigate potentially significant environmental effects to below a level of significance.

The Project Area is located within the boundaries of the Draft MHCP Subarea Plan; however, this plan has not yet been approved or adopted. The Project Area occurs entirely within a public park. Impacts to sensitive biological resources would be avoided as part of the Project or mitigated if avoidance is not feasible as discussed in Sections IV(a) through IV(e). Kit Carson Park is located within the HFPA according to the Draft MHCP. For Projects within the HFPA, the area that has been developed or is approved for development is outside the preserve, while the open space area is in the preserve and conserved at 90 to 100 percent (depending on the types of approved activities). Although this Project would have minor impacts to biological resources, Project operations would be consistent with exiting conditions, and the current zoning and usage of the Project Area. Therefore, the Project would not conflict with a Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Implementation of the Project would not cause significant environmental impact due to a conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.

XII. MINERAL RESOURCES

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

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?

No Impact. The Surface Mining and Reclamation Act of 1975 required the classification of land into mineral resource zones (MRZ), according to known or inferred mineral resource potential. The process was based solely on geology, without regard to existing land use or land ownership. The Project is located in an area designated as MRZ-1 and MRZ-3, which includes areas where there are no significant mineral deposits present or likely to be present, as well as areas where mineral resource significance is undetermined, respectively (DOC 2015). According to Figure 4.11-1 of the General Plan FEIR, no existing or past mineral extraction facilities are located within the Project Area (City 2012b). The site has not been associated with mineral mining or excavation and is located in an urbanized area of the City where mineral extraction is not feasible. Therefore, no impacts related to the loss of a known mineral resource or locally important mineral resource recovery site would occur.

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

No Impact. There are no known mineral resources as designated by a local general plan, specific plan, or other land use plan within the Project Area. As described in Section XII(a), no existing or planned mining operations occur within the Project Area or immediate vicinity. Therefore, implementation of the Project would not result in the loss of availability of a locally important mineral resource recovery site. No impact would occur.

XIII. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

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

Less Than Significant Impact. The Project is anticipated to generate construction noise in the short-term. No new operational noise sources or increases in ambient noise are anticipated as a result of the Project.

Construction Noise

Construction noise in the City is regulated by Escondido Municipal Code Section 17-234. For grading activities specifically, Escondido Municipal Code Section 17-238 applies. The code prohibits construction on Sundays and holidays and allows construction between 7:00 AM and 6:00 PM on weekdays and between 9:00 AM and 5:00 PM on Saturdays. Grading activities are specifically restricted to the listed weekday hours, unless otherwise allowed by the City Manager. Section 17-234 also prohibits operation of construction equipment or combinations of construction equipment that generate noise levels in

excess of 75 decibels (dB) one-hour average sound level (L_{EQ} [1 hour]). For grading activities, a sound level of 75 dB L_{EQ} is not to be exceeded at the property line of a residential property.

Construction activities would comply with the work hours permitted by Section 17-234 and 17-238 of the Escondido Municipal Code. Construction noise related to the Project would be generated by equipment involved with demolition of the existing culvert bridge and installation of the new culvert bridge.

Project construction noise was analyzed using the Roadway Construction Noise Model (RCNM; USDOT 2008), which estimates sound levels from standard construction equipment. The full RCNM outputs are provided in Appendix D. During the typical 8-hour work day, not all construction equipment would be in constant use. The equipment analyzed for the Project included an excavator, loader, and dump truck. They were analyzed together for construction noise impacts due to their likelihood of being used in conjunction with one another. The nearest receptors during construction would be located at Kit Carson Park approximately 500 feet away and the nearest residential property line is located approximately 1,100 feet north of the Project Area. As a result, the noise level generated by the anticipated construction equipment was modeled at 50 feet, 500 feet, and 1,100 feet. Table 4, *Construction Equipment Noise Levels*, provides the noise levels for expected construction equipment at these distances.

Table 4
CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Usage (percent)	Noise Level at 50 feet (dBA L_{EQ})[1]	Noise Level at 500 feet (dBA L_{EQ})	Noise Level at 1,100 feet (dBA L_{EQ})
Air Compressor	40	73.7	53.7	46.8
Backhoe	40	73.6	53.6	46.7
Concrete Mixer Truck	40	74.8	54.8	48.0
Concrete Pump Truck	20	74.4	54.4	47.6
Dump Truck	40	72.5	52.5	45.6
Excavator	40	76.7	56.7	49.9
Front End Loader	40	75.1	55.1	48.3
Jackhammer	20	81.9	61.9	55.1
Pumps	50	77.9	57.9	51.1
Excavator/Loader/Dump Truck	40	79.9	66.2	59.4

Source: RCNM; Appendix D
[1] Noise modeled at a distance of 50 feet is presented for informational purposes.
dBA = A-weighted decibel; L_{EQ} = one-hour average sound level

As shown in Table 4, the highest anticipated noise level at 500 feet (Kit Carson Park) resulting from the use of an excavator, loader, and dump truck would be 66.2 dBA L_{EQ}. At the nearest residential property located approximately 1,100 feet north of the Project Area, the maximum anticipated noise level would be 59.4 dBA L_{EQ}. Construction noise levels would not exceed the City's hourly noise limit of 75 dBA L_{EQ} at any human receptor and construction would occur during the permitted hours.

Additionally, debris is anticipated to be limited to two hauling trips (Appendix A), which would not result in a perceptible increase in traffic noise on nearby roadways. Given that construction activities would not exceed the City's hourly noise limit of 75 dBA L_{EQ} at any human receptor and Project construction

would occur during the permitted hours, impacts related to construction noise would be less than significant.

Operational Noise

After construction of the Project is complete, operational activities that occurred under the pre-Project conditions would resume. These activities include occasional park maintenance and recreational use of the Project Area. Occasional vehicle trips associated with park maintenance would not result in perceptible changes to traffic noise in the Project Area. No new operational noise sources would be introduced to the Project Area and no increase in operational noise at the Project Area is anticipated. As a result, operational noise would not conflict with local policies and impacts would be less than significant.

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

Less Than Significant Impact. The primary potential for generation of groundborne vibration would occur during Project construction. Per Federal Transit Administration vibration criteria provided in the General Plan FEIR, an impact would occur if construction would generate vibration levels greater than 65 vibration decibels (VdB) at a vibration-sensitive land use, 80 VdB at the nearest residence or building where people sleep, or 83 VdB at the nearest institutional land use with primarily daytime uses (City 2012b). The thresholds further indicate structural damage to buildings could occur if peak particle velocity (PPV) between 0.2 and 0.5 inches per second (in/sec) would occur at a structure. No vibration-sensitive buildings, such as medical offices or research facilities, or known structurally sensitive buildings are located in close proximity to the Project Area. As stated above, the nearest residence to the Project Area is approximately 1,100 feet to the north. Fire Station 4, another building where people sleep, is located approximately 1,100 feet east of the Project Area and the nearest daytime institutional land use is San Pasqual High School, located approximately 1,400 feet east of the Project Area. Loaded dump trucks may pass residences at a distance of approximately 200 feet when hauling debris off-site via the contractor access paths (see Figure 3).

Of the anticipated construction equipment, loaded dump trucks are anticipated to generate the highest vibration levels. According to Table 4.12-9 of the General Plan FEIR, a loaded dump truck could generate 68 VdB and 0.01 in/sec PPV at a distance of 100 feet. At a distance of 200 feet, (the nearest anticipated distance to residences during hauling trips), the loaded dump truck could generate 59 VdB and 0.003 in/sec PPV. However, these levels of vibration would not exceed the threshold of 80 VdB for residential uses or 0.2 in/sec PPV for structural damage. The levels of vibration at the school located 1,100 feet to the east would therefore also be below the daytime threshold of 83 VdB. Therefore, vibration as a result of construction of the proposed Project would be below the City's thresholds. No operational sources of vibration would result from the Project. Impacts 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?

No Impact. The two nearest public airports to the City are McClellan-Palomar Airport and Ramona Airport, which are located approximately 12.7 miles and 8.5 miles from the Project Area, respectively. Additionally, portions of the City are subject to periodic flyovers from MCAS Miramar. However, the entire City is outside of the 60 community noise equivalent level (CNEL) noise contours for these airports and no significant airport noise would affect the Project Area. As the Project Area is not within two miles

of a public airport, two miles of a private airstrip, or the noise contours of an airport land use plan, the Project would not expose people residing or working in the Project area to excessive noise levels, and no impact would occur.

XIV. POPULATION AND HOUSING

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

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

No Impact. The Project does not include the development of housing or businesses. Construction activities would be generally minor occurring over a nine-month period, and workers would be assumed to be supplied from the surrounding region. Operation of the Project would be consistent with existing conditions and would not introduce a new or expanded use or create an attraction that would bring people to the area. Therefore, the Project would not induce substantial unplanned population growth in an area, either directly or indirectly. No impact would occur.

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

No Impact. The Project does not include housing, nor does the Project Area currently support housing as a public park. Operation of the Project would be consistent with existing conditions and would not introduce a new or expanded use from the existing culvert bridge. Therefore, the Project would not displace substantial numbers of existing people or housing. No Impact would occur.

XV. PUBLIC SERVICES

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

a) Fire protection?

No Impact. The Project would be served by the Escondido Fire Department (EFD). The EFD maintains the standard emergency response time of 7.5 minutes 90 percent of the time for all structure fires and emergency Paramedic Assessment Units (City 2012a). The closest fire station to the Project Area is Station 4, located approximately 1,100 feet (0.25 mile) east of the Project Area on Bear Valley Parkway. Operation of the Project would be consistent with existing conditions and would not introduce a new or expanded use from the existing culvert bridge. Therefore, there would be no need for new or altered fire protection facilities or related infrastructure that could result in significant adverse physical impacts. No impact would occur.

b) Police protection?

No Impact. The Project would be served by the Escondido Police Department (EPD). The EPD maintains the standard initial response times of less than 5 minutes for Priority 1 calls and less than 6.5 minutes for Priority 2 calls (City 2012a). The closest police station to the Project Area is approximately 4.26 miles north of the Project Area on Centre City Parkway. Operation of the Project would be consistent with existing conditions and would not introduce a new or expanded use from the existing culvert bridge. Therefore, there would be no need for new or altered police protection facilities or related infrastructure that could result in significant adverse physical impacts. No impact would occur.

c) Schools?

No Impact. The nearest schools to the Project Area are San Pasqual High School, located approximately 0.3 mile east of the Project Area; and L.R. Green Elementary School and Bear Valley Middle School, located approximately 0.4 mile north of the Project Area. Operation of the Project would be consistent with existing conditions and would not introduce a new or expanded use from the existing culvert

bridge. Additionally, the Project would not introduce a new population to the area or include any residential. Therefore, there would not be a need for new school facilities, nor would there be an increase in demand on the existing facilities. No impact would occur.

d) Parks?

Less Than Significant Impact. The Project would not increase the demand for park space and nor would it increase usage at existing City parks. According to the Community Health and Services Element of the City's General Plan, Escondido has 32 parks comprising 6,556.3 acres in the City, including the 285-acre Kit Carson Park within which the Project is located (City 2012a). The Project involves the removal of an existing damaged corrugated steel oval "squash" pipe and construction of a new cast-in-place double cell concrete culvert bridge at the inlet of Eagle Scout Lake within Kit Carson Park. Temporary use of the Project Area would be restricted during construction; however, the area is not currently accessible to the public due to safety concerns. Once construction has been completed, the area would be accessible to the public, improving upon the existing condition. The Project would not create an increased demand on the park itself, as the replacement of the culvert bridge would not be an attraction that would cause additional visitation of the park. Impacts related to parks would be less than significant.

e) Other public facilities?

No Impact. The Project would not increase the population of the area, nor would it cause increased demand on Kit Carson Park or other public facilities. The Project would not require the construction of new or expanded public facilities and no impact would occur.

XVI. RECREATION

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

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

Less Than Significant Impact. The Project would replace a damaged culvert bridge at the inlet of Eagle Scout Lake within Kit Carson Park. The Project also includes the relocation of a portion of existing reclaimed water line and a fiber optic conduit located in the vicinity of the existing culvert bridge. As noted in Section XV(iv), temporary use of the Project Area would be restricted during construction;

however, the area is not currently accessible to the public due to safety concerns. Once construction has been completes, the area would be accessible to the public, improving upon the existing condition. The Project would not increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The Project would improve a public facility, and therefore impacts would be less than significant.

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?

Less Than Significant Impact. The Project does not propose the development of recreational facilities or the expansion of existing recreational facilities. The Project would replace a damaged culvert bridge within Kit Carson Park. As described throughout this document, the Project would not have a substantial adverse physical effect on the environment. Impacts would be less than significant.

XVII. TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Would the project 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?	☐	☐	☒	☐

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

Less Than Significant Impact. According to Escondido Zoning Code Article 47, while changes in level of service (LOS) at street intersections or segments may not be used to determine whether a Project would cause traffic impacts for purposes of CEQA analysis, they may be used to determine if the Project is consistent with the General Plan's Street Network Policy 7.3. The operations of the Project would not increase the amount of travel to and from the Project Area. The replacement of the culvert bridge would not act as an attraction for additional park visitors, and maintenance of the Project Area would be performed by existing park maintenance staff. As such, once operational, the Project would be consistent with existing conditions, would not result in changes in LOS at street intersections and segments, and would not conflict with the General Plan's Street Network Policy 7.3.

Project construction activities would generate a short-term, temporary increase in construction-related traffic. The main access point for Project construction would be off Casteneda Drive, with additional site

access available off Entrance Drive. The construction staging area would be located at an internal parking lot north of the Project Area (see Figure 3). Temporary Project-generated traffic would primarily include construction workers commuting to and from the site. Based on the relatively small size of the Project work area (0.09 acre) and associated limited intensity of construction activities, the Project is not expected to generate worker commute trips that would change the LOS of nearby street intersections and segments. Similarly, the Project would not require high levels of import or export of materials and would not generate truck traffic that would change the LOS of nearby street intersections and segments. Project construction would therefore not conflict with the General Plan's Street Network Policy 7.3.

Implementation of the Project also would not conflict or interfere with policies contained in the General Plan Mobility and Infrastructure Element regarding alternative transportation modes. Transit service in the Project Area is provided by North County Transit District (NCTD) and is serviced by bus route 350. The closest 350 route stop to the Project Area is the Bear Valley Parkway and Kit Carson Park stop, located 0.25 mile east of the Project Area. The 350 route connects the Project Area to the Escondido Transit Center, located approximately 3 miles north of the Project Area. The Escondido transit center connects most Escondido bus routes, along with connections to the SPRINTER line and the Greyhound Bus Routes. The Project Area is also accessible by several public trails, including the Kit Carson Loop trail. Class 2 bicycle lanes are provided on both sides of Bear Valley parkway. The Project would not conflict with bicycle access to the Project Area as it would be constructed internally within the Park. Alternative transportation modes would not be impacted by the Project and would be available for use during construction and operation of the Project, consistent with the General Plan Mobility and Infrastructure Element.

The Project would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Impacts would be less than significant.

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

Less Than Significant Impact. CEQA Guidelines Section 15064.3, subdivision (b) provides criteria to evaluate a project's potential impact on transportation and traffic depending on the type of project. Section 15064.3(b) establishes vehicle miles traveled (VMT) as the appropriate measure for transportation impacts and eliminates automobile delay as appropriate for the determination of potentially significant transportation and traffic impacts. VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. For projects that reduce or have no impact on VMT (meaning there is no increase in demand for additional trips to be generated), CEQA Guidelines Section 15064.3 suggests that these projects be concluded to cause a less than significant impact. Additionally, the Office of Planning and Research (OPR) technical advisory regarding transportation impacts indicates that small projects generating fewer than 110 trips per day can be assumed to cause a less than significant transportation impact (OPR 2018). Traffic impacts associated with the Project would be mainly limited to the construction period of the Project. As stated above, the Project would not contribute to an increase in operational ADT compared to existing conditions, since operation of the Project would be consistent with existing conditions. Therefore, the Project would not exceed the 110-trip threshold and no conflicts with CEQA Guidelines Section 15064.3 subdivision (b) would occur. Impacts would be less than significant.

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

Less Than Significant Impact. The Project would not increase hazards due to a geometric design feature. The purpose of the Project is to improve safety for the public and facilitate regular maintenance of the drainage structure by replacing the existing deteriorating culvert bridge. The new structure would improve safety for Park patrons by repairing the crossing and associated path for pedestrian use and incorporating handrails that complement existing handrails on nearby crossings. The crossing's integrated maintenance features would improve safety for City operations personnel responsible for regular facility maintenance. The Project would not include incompatible uses of the Project Area or surrounding areas. Therefore, impacts related to increase in hazards from Project design features would be less than significant.

d) Result in inadequate emergency access?

Less Than Significant Impact. Please see Section IX(f). From the above information and the proposed Project design, potential impacts to emergency response or evacuation plans would be less than significant, based on the following considerations: (1) as described above, Project traffic would not result in significant impacts to local roadways or intersections, with no associated effects to emergency response or evacuation plans; (2) Project construction would not involve off-site roadway (or other applicable) improvements that would result in associated roadway/lane closures or related impacts to emergency response or evacuation plans; (3) indirect effects to regional and local roadways (including I-15 and the designated emergency evacuation routes noted above) from Project-related construction traffic would be minor, due to the negligible ADT levels anticipated for this type of residential Project and the temporary nature of Project construction; and (4) primary access to all major roadways from local properties would be maintained during construction and operation activities. Accordingly, impacts associated with emergency access would be less than significant.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☒	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

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

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant Impact with Mitigation Incorporated. As detailed in Section V(b), the general vicinity of the Project Area is known to have been occupied/used by the Luiseño and Kumeyaay people for thousands of years. No cultural resource sites were identified within the Project Area during the archaeological survey. record search of the NAHC Sacred Lands File (SLF) was completed for the Project by Kleinfelder (2021c). The results were positive and indicated that the Project Area is within the ancestral territory of the Kwaaymii Laguna Band of Mission Indians and the San Luis Rey Band of Mission Indians. Although no tribal cultural resources have been identified within the Project Area, there is potential for unrecognized resources to be discovered upon removal of the existing culvert bridge structure and/or utilities, during grading, and other ground-disturbing activities. The potential for unknown cultural resources is higher due to the presence of alluvial soils and the proximity of the site to Arroyo Del Oro Creek. Mitigation measures **CUL-1** through **CUL-10** identified in Section V, above, would be implemented to ensure that impacts to tribal cultural resources would be less than significant.

Native American/Tribal Consultation - In accordance with the requirements of AB 52, the City sent notification to five Native American Tribes traditionally and culturally affiliated with the Project Area on February 8, 2023. The City received requests for formal consultation from three Tribes: San Pasqual Band of Mission Indians, San Luis Rey Band of Mission Indians, and Rincon Band of Luiseño Indians. The City conducted formal consultation with the San Luis Rey (Carmen Mojado and Banning Taylor) on May 4, 2023; San Pasqual (Angelina Guiterrez and Desiree Morales Whitman) on April 20, 2023; and Rincon (Cheryl Madrigal) on April 6, 2023. The Tribes recommended that Native American monitors be present

during ground disturbing activities and appropriate mitigation measures be incorporated into the project conditions to address potential discovery of cultural resources.

XIX. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new 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?	☐	☐	☒	☐

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?

Less Than Significant Impact. In addition to replacement of the existing culvert bridge, the Project includes the relocation of a portion of reclaimed water line and a fiber optic conduit located in the vicinity of the existing facility.

Additionally, the proposed Project is part of a storm water drainage. In high water conditions, Eagle Scout Lake overflows to wetland areas in the southern portion of the Park. Flow eventually enters Lake Hodges and then the San Dieguito River. Over time the existing culvert bridge transporting water to Eagle Scout Lake has been damaged by large flow events. The replacement of the culvert bridge would restore this water transport and ensure appropriate capacity to convey stormwater to Eagle Scout Lake. As stated throughout this document, the proposed Project would not cause significant environmental effects. Impacts associated with these utilities would be less than significant.

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

Less Than Significant Impact. The Urban Water Management Planning Act, adopted in 1983, requires water suppliers in California to conduct long-term water resources planning and specifically, Section 10620(a) of this Act, identifies that urban water suppliers shall prepare and adopt an urban water management plan (UWMP) and that these plans are to be updated every five years. The project site is within the service area of the City of Escondido Water District. The water service reliability assessment results in the 2020 UWMP indicate that no water shortages are anticipated within the next 25 years under normal, single-dry, and multiple dry years conditions, including a five-year drought extending through 2025 (City 2021d). The City of Escondido Water District imports water from the San Diego County Water Authority and Metropolitan Water District, both of which have sufficient portfolios to accommodate changes to the City's water needs and anticipate the ability to meet projected imported water demands under normal, single-dry year, and multiple dry year conditions. Operation of the Project would not require water supply. A negligible, short-term increase in demand for water during construction, including implementation of construction BMPs, would occur. The temporary nature of the required water and the relatively minor amount required during construction would not create a considerable demand for water or new water services. Therefore, sufficient water supply would be available for construction of the Project, and impacts would be less than significant.

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

Less Than Significant Impact. Construction and operation of the Project would not require wastewater treatment. The Project proposes the replacement of a culvert bridge and relocation of existing utilities; the ultimate condition would be similar to existing conditions and would not affect the capacity of the City's wastewater treatment system. Therefore, impacts would be less than significant.

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?

Less Than Significant Impact. During construction, the Project would create solid waste that would be collected by Escondido Disposal, Inc. and disposed of at a regional landfill. Construction debris is anticipated to be limited to two hauling trips, which would not contribute to a substantial increase in waste disposal beyond the existing regional landfill capacity. The estimated 10 cubic yards of excess graded material is anticipated to be distributed within the Project Area instead of hauled off site. As discussed below in item XIX(d), construction activities associated with the Project would be required to comply with state and local standards related to solid waste, including applicable requirements for diversion of construction and demolition debris to reduce waste deposited at the landfill, the California Integrated Waste Management Act, and the City's solid waste reduction programs. As such, impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. The Project would comply with the City's solid waste reduction programs, which are designed to comply with federal, state, and local statutes and regulations related to solid

waste. These statues and regulations include the California Integrated Waste Management Act and the City's solid waste disposal policies and practices. Associated impacts would be less than significant.

XX. WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐

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

Less Than Significant Impact. Refer to Section IX(f). Potential impacts to emergency response or evacuation plans would be less than significant.

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?

Less Than Significant Impact. According to the General Plan Community Protection Element, the Project Area and vicinity is located in a high fire hazard zone. However, the Project would not introduce new occupied structures, and would adhere to the Escondido Fire Code (found in the Escondido Municipal Code, Chapter 11, Article 2, Division 1), 2019 California Fire Code, and County of San Diego 2020 Consolidated Fire Code. Conformance with current fire codes would ensure that wildfire risks within the Project Area would not be exacerbated as a result of Project implementation. Accordingly, there are no factors that would expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant.

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

No Impact. The Project involves the removal of an existing damaged corrugated steel oval "squash" pipe and construction of a new cast-in-place double cell concrete culvert bridge at the inlet of Eagle Scout Lake situated within Kit Carson Park. The Project also includes the relocation of a portion of reclaimed water line and a fiber optic conduit located in the vicinity of the existing culvert bridge. The proposed Project would not install infrastructure such as roads, fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk. No impact would occur.

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?

Less Than Significant Impact. Refer to Section XX(b). The risk to people and structures from downslope or downstream flooding or landslides resulting from runoff, post-fire slope instability, or drainage changes is negligible. Impacts would be less than significant.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present, and probable future projects)?	☐	☐	☒	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐
d)	Where deficiencies exist relative to the City's General Plan Quality of Life Standards, does the Project result in deficiencies that exceed the levels identified in the Environmental Quality Regulations (City of Escondido Zoning Code Article 47 Section 33-924(a))?	☐	☐	☒	☐

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

Less Than Significant with Mitigation Incorporated. Potentially significant impacts to the environment resulting from the Project have been identified for the areas of biological resources and cultural resources (including tribal cultural resources). With the incorporation of mitigation measures **BIO-1** through **BIO-4**, the Project would reduce potential impacts to biological resources to below a level of significance.

The Project is not expected to impact resources related to major periods of California history or prehistory. Based on the presence of cultural resources in the vicinity of the Project Area, however, the Project would have the potential to impact unknown subsurface cultural resources during ground-disturbing construction activities. With implementation of mitigation measures **CUL-1** through **CUL-10**, however, impacts to unknown subsurface cultural resources would be reduced to below a level of significance.

Therefore, the Project would not have the potential to degrade the quality of the environment for sensitive or special-status plant or animal communities, 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. Impacts would be less than significant through implementation 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 significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present, and probable future projects)?

Less Than Significant Impact. Cumulative impacts are defined as two or more individual Project effects that, when considered together or in concert with other Projects, combine to result in a significant impact (CEQA Guidelines Section 15355). As described, Project-related effects either would be avoided by incorporation of Project design measures, or mitigated to levels below significance, and no cumulatively considerable impacts would occur. Air pollutant and GHG emissions would be less than significant, biological impacts would be reduced though monitoring and avoidance mitigation measures, and impacts to unknown buried cultural resources would be avoided through construction monitoring and associated mitigation measures. Incremental increases in impacts to the environment are within the thresholds set by the General Plan and supporting planning and regulatory documents. Therefore, the Project would not have a significant individual or cumulatively considerable impact on the environment.

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

Less than Significant With Mitigation Incorporated. The Project would adhere to regulatory codes, ordinances, regulations, standards, and guidelines applicable to each of the environmental issue areas analyzed herein. As described above, adverse impacts on human beings resulting from implementation

of the Project would be less than significant. With the adherence to applicable regulations and the implementation of BMPs and applicable Project design features, the Project would not result in significant long- or short-term impacts, or result in substantial adverse effects on human beings, either directly or indirectly.

d) Where deficiencies exist relative to the City's General Plan Quality of Life Standards, does the Project result in deficiencies that exceed the levels identified in the Environmental Quality Regulations (City of Escondido Zoning Code Article 47 Section 33-924(a))?

Less Than Significant Impact. The General Plan Quality of Life Standards provide thresholds for potential impacts to air quality, schools, wastewater facilities, water supply, circulation, police and fire services, libraries, parks/open space, and economic prosperity within the City (City 2009). As described throughout this IS/MND, the Project would result in less than significant impacts related to air quality and would not adversely impact the services identified above. Moreover, the Project is consistent with designated land use and does not propose development of a new or expanded use compared to existing conditions. As such, no deficiencies relative to the City's General Plan Quality of Life Standards or related conflicts with the City EQR would occur.

3.0 References

Project-specific Technical Reports

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2012a. City of Escondido General Plan. May. Available at: http://www.escondido.org/general-plan.aspx.

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General References

Escondido Zoning Code and Land Use Maps
Escondido Municipal Code, as amended June 2022
California Department of Conservation San Diego County Important Farmland Map
SANDAG Demographic and Socioeconomic Estimates for Escondido
San Diego County General Plan
California Department of Transportation Scenic Highway Mapping System for San Diego County
USGS 7.5-Minute Topographic Quadrangle Map; Escondido
Site Visits and Field Inspections
Project Description and Preliminary Information

4.0 Preparers

Vanessa Toscano, Environmental Project Manager
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Appendix A

Air Quality and Greenhouse Gas Modeling Results (CalEEMod)

Eagle Scout Bridge Project - San Diego County, Annual

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

Eagle Scout Bridge Project

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	0.33	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - >33 acre site, no structures

Construction Phase - 9 month construction

Off-road Equipment - Equipment provided by client

Grading -

Trips and VMT - Concrete truck delivery

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	198.00

Eagle Scout Bridge Project - San Diego County, Annual

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

tblConstructionPhase	PhaseEndDate	7/19/2023	4/3/2024
tblConstructionPhase	PhaseStartDate	7/18/2023	7/3/2023
tblGrading	MaterialExported	0.00	15.00
tblLandUse	LotAcreage	0.00	0.33
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

Eagle Scout Bridge Project - San Diego County, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0614	0.4740	0.6806	1.4000e-003	7.6500e-003	0.0219	0.0296	2.0500e-003	0.0209	0.0229	0.0000	122.3923	122.3923	0.0278	5.3000e-004	123.2453
2024	0.0307	0.2310	0.3549	7.3000e-004	4.0000e-003	0.0102	0.0142	1.0700e-003	9.7000e-003	0.0108	0.0000	63.9212	63.9212	0.0145	2.7000e-004	64.3636
Maximum	**0.0614**	**0.4740**	**0.6806**	**1.4000e-003**	**7.6500e-003**	**0.0219**	**0.0296**	**2.0500e-003**	**0.0209**	**0.0229**	**0.0000**	**122.3923**	**122.3923**	**0.0278**	**5.3000e-004**	**123.2453**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0614	0.4740	0.6806	1.4000e-003	7.6500e-003	0.0219	0.0296	2.0500e-003	0.0209	0.0229	0.0000	122.3921	122.3921	0.0278	5.3000e-004	123.2452
2024	0.0307	0.2310	0.3549	7.3000e-004	4.0000e-003	0.0102	0.0142	1.0700e-003	9.7000e-003	0.0108	0.0000	63.9212	63.9212	0.0145	2.7000e-004	64.3636
Maximum	**0.0614**	**0.4740**	**0.6806**	**1.4000e-003**	**7.6500e-003**	**0.0219**	**0.0296**	**2.0500e-003**	**0.0209**	**0.0229**	**0.0000**	**122.3921**	**122.3921**	**0.0278**	**5.3000e-004**	**123.2452**

Eagle Scout Bridge Project - San Diego County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-3-2023**	**10-2-2023**	0.2705	0.2705
2	**10-3-2023**	**1-2-2024**	0.2704	0.2704
3	**1-3-2024**	**4-2-2024**	0.2502	0.2502
4	**4-3-2024**	**7-2-2024**	0.0027	0.0027
		Highest	0.2705	0.2705

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	7/3/2023	4/3/2024	5	198	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	7.00	158	0.38
Grading	Off-Highway Trucks	1	4.00	402	0.38
Grading	Air Compressors	1	6.00	78	0.48
Grading	Pumps	1	4.00	84	0.74
Grading	Graders	0	6.00	187	0.41
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	5	13.00	2.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

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

3.2 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0590	0.4666	0.6593	1.3100e-003		0.0218	0.0218		0.0208	0.0208	0.0000	114.3824	114.3824	0.0275	0.0000	115.0703
Total	**0.0590**	**0.4666**	**0.6593**	**1.3100e-003**	**0.0000**	**0.0218**	**0.0218**	**0.0000**	**0.0208**	**0.0208**	**0.0000**	**114.3824**	**114.3824**	**0.0275**	**0.0000**	**115.0703**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	9.0000e-005	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0394	0.0394	0.0000	1.0000e-005	0.0413
Vendor	1.5000e-004	5.7700e-003	2.0400e-003	3.0000e-005	8.6000e-004	3.0000e-005	9.0000e-004	2.5000e-004	3.0000e-005	2.8000e-004	0.0000	2.6085	2.6085	8.0000e-005	3.8000e-004	2.7231
Worker	2.2800e-003	1.5800e-003	0.0193	6.0000e-005	6.7800e-003	4.0000e-005	6.8100e-003	1.8000e-003	3.0000e-005	1.8300e-003	0.0000	5.3620	5.3620	1.6000e-004	1.5000e-004	5.4106
Total	**2.4300e-003**	**7.4400e-003**	**0.0213**	**9.0000e-005**	**7.6500e-003**	**7.0000e-005**	**7.7200e-003**	**2.0500e-003**	**6.0000e-005**	**2.1100e-003**	**0.0000**	**8.0099**	**8.0099**	**2.4000e-004**	**5.4000e-004**	**8.1750**

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

3.2 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0590	0.4666	0.6593	1.3100e-003		0.0218	0.0218		0.0208	0.0208	0.0000	114.3823	114.3823	0.0275	0.0000	115.0702
Total	**0.0590**	**0.4666**	**0.6593**	**1.3100e-003**	**0.0000**	**0.0218**	**0.0218**	**0.0000**	**0.0208**	**0.0208**	**0.0000**	**114.3823**	**114.3823**	**0.0275**	**0.0000**	**115.0702**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	9.0000e-005	2.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0394	0.0394	0.0000	1.0000e-005	0.0413
Vendor	1.5000e-004	5.7700e-003	2.0400e-003	3.0000e-005	8.6000e-004	3.0000e-005	9.0000e-004	2.5000e-004	3.0000e-005	2.8000e-004	0.0000	2.6085	2.6085	8.0000e-005	3.8000e-004	2.7231
Worker	2.2800e-003	1.5800e-003	0.0193	6.0000e-005	6.7800e-003	4.0000e-005	6.8100e-003	1.8000e-003	3.0000e-005	1.8300e-003	0.0000	5.3620	5.3620	1.6000e-004	1.5000e-004	5.4106
Total	**2.4300e-003**	**7.4400e-003**	**0.0213**	**9.0000e-005**	**7.6500e-003**	**7.0000e-005**	**7.7200e-003**	**2.0500e-003**	**6.0000e-005**	**2.1100e-003**	**0.0000**	**8.0099**	**8.0099**	**2.4000e-004**	**5.4000e-004**	**8.1750**

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3.2 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0295	0.2272	0.3444	6.9000e-004		0.0102	0.0102		9.6700e-003	9.6700e-003	0.0000	59.8474	59.8474	0.0144	0.0000	60.2062
Total	**0.0295**	**0.2272**	**0.3444**	**6.9000e-004**	**0.0000**	**0.0102**	**0.0102**	**0.0000**	**9.6700e-003**	**9.6700e-003**	**0.0000**	**59.8474**	**59.8474**	**0.0144**	**0.0000**	**60.2062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0203	0.0203	0.0000	0.0000	0.0212
Vendor	8.0000e-005	3.0000e-003	1.0400e-003	1.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.3407	1.3407	4.0000e-005	1.9000e-004	1.3996
Worker	1.1200e-003	7.4000e-004	9.4100e-003	3.0000e-005	3.5400e-003	2.0000e-005	3.5600e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	2.7129	2.7129	8.0000e-005	7.0000e-005	2.7366
Total	**1.2000e-003**	**3.7900e-003**	**0.0105**	**4.0000e-005**	**4.0000e-003**	**4.0000e-005**	**4.0400e-003**	**1.0700e-003**	**4.0000e-005**	**1.1100e-003**	**0.0000**	**4.0738**	**4.0738**	**1.2000e-004**	**2.6000e-004**	**4.1574**

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3.2 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0295	0.2272	0.3444	6.9000e-004		0.0102	0.0102		9.6700e-003	9.6700e-003	0.0000	59.8473	59.8473	0.0144	0.0000	60.2061
Total	**0.0295**	**0.2272**	**0.3444**	**6.9000e-004**	**0.0000**	**0.0102**	**0.0102**	**0.0000**	**9.6700e-003**	**9.6700e-003**	**0.0000**	**59.8473**	**59.8473**	**0.0144**	**0.0000**	**60.2061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0203	0.0203	0.0000	0.0000	0.0212
Vendor	8.0000e-005	3.0000e-003	1.0400e-003	1.0000e-005	4.5000e-004	2.0000e-005	4.7000e-004	1.3000e-004	2.0000e-005	1.5000e-004	0.0000	1.3407	1.3407	4.0000e-005	1.9000e-004	1.3996
Worker	1.1200e-003	7.4000e-004	9.4100e-003	3.0000e-005	3.5400e-003	2.0000e-005	3.5600e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	2.7129	2.7129	8.0000e-005	7.0000e-005	2.7366
Total	**1.2000e-003**	**3.7900e-003**	**0.0105**	**4.0000e-005**	**4.0000e-003**	**4.0000e-005**	**4.0400e-003**	**1.0700e-003**	**4.0000e-005**	**1.1100e-003**	**0.0000**	**4.0738**	**4.0738**	**1.2000e-004**	**2.6000e-004**	**4.1574**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Eagle Scout Bridge Project - San Diego County, Winter

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

Eagle Scout Bridge Project

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	0.33	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - >33 acre site, no structures

Construction Phase - 9 month construction

Off-road Equipment - Equipment provided by client

Grading -

Trips and VMT - Concrete truck delivery

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	198.00

Eagle Scout Bridge Project - San Diego County, Winter

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

tblConstructionPhase	PhaseEndDate	7/19/2023	4/3/2024
tblConstructionPhase	PhaseStartDate	7/18/2023	7/3/2023
tblGrading	MaterialExported	0.00	15.00
tblLandUse	LotAcreage	0.00	0.33
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

Eagle Scout Bridge Project - San Diego County, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.9480	7.2934	10.4721	0.0215	0.1205	0.3372	0.4577	0.0323	0.3213	0.3536	0.0000	2,074.8440	2,074.8440	0.4708	9.1000e-003	2,089.3239
2024	0.9064	6.7936	10.4392	0.0215	0.1205	0.2998	0.4203	0.0323	0.2854	0.3177	0.0000	2,071.6513	2,071.6513	0.4692	8.8000e-003	2,086.0074
Maximum	**0.9480**	**7.2934**	**10.4721**	**0.0215**	**0.1205**	**0.3372**	**0.4577**	**0.0323**	**0.3213**	**0.3536**	**0.0000**	**2,074.8440**	**2,074.8440**	**0.4708**	**9.1000e-003**	**2,089.3239**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	0.9480	7.2934	10.4721	0.0215	0.1205	0.3372	0.4577	0.0323	0.3213	0.3536	0.0000	2,074.8440	2,074.8440	0.4708	9.1000e-003	2,089.3239
2024	0.9064	6.7936	10.4392	0.0215	0.1205	0.2998	0.4203	0.0323	0.2854	0.3177	0.0000	2,071.6513	2,071.6513	0.4692	8.8000e-003	2,086.0074
Maximum	**0.9480**	**7.2934**	**10.4721**	**0.0215**	**0.1205**	**0.3372**	**0.4577**	**0.0323**	**0.3213**	**0.3536**	**0.0000**	**2,074.8440**	**2,074.8440**	**0.4708**	**9.1000e-003**	**2,089.3239**

Eagle Scout Bridge Project - San Diego County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Eagle Scout Bridge Project - San Diego County, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Eagle Scout Bridge Project - San Diego County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	7/3/2023	4/3/2024	5	198	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	7.00	158	0.38
Grading	Off-Highway Trucks	1	4.00	402	0.38
Grading	Air Compressors	1	6.00	78	0.48
Grading	Pumps	1	4.00	84	0.74
Grading	Graders	0	6.00	187	0.41
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Eagle Scout Bridge Project - San Diego County, Winter

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

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	5	13.00	2.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9071	7.1778	10.1434	0.0202		0.3361	0.3361		0.3202	0.3202		1,939.7691	1,939.7691	0.4667		1,951.4360
Total	**0.9071**	**7.1778**	**10.1434**	**0.0202**	**1.0000e-005**	**0.3361**	**0.3361**	**0.0000**	**0.3202**	**0.3202**		**1,939.7691**	**1,939.7691**	**0.4667**		**1,951.4360**

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

3.2 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-005	1.3700e-003	3.7000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.6686	0.6686	3.0000e-005	1.1000e-004	0.7011
Vendor	2.3200e-003	0.0893	0.0318	4.1000e-004	0.0136	5.2000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		44.2722	44.2722	1.3300e-003	6.4200e-003	46.2176
Worker	0.0385	0.0248	0.2965	8.9000e-004	0.1068	5.7000e-004	0.1074	0.0283	5.3000e-004	0.0289		90.1341	90.1341	2.7500e-003	2.5700e-003	90.9692
Total	**0.0409**	**0.1155**	**0.3287**	**1.3100e-003**	**0.1205**	**1.1000e-003**	**0.1216**	**0.0323**	**1.0400e-003**	**0.0333**		**135.0749**	**135.0749**	**4.1100e-003**	**9.1000e-003**	**137.8879**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9071	7.1778	10.1434	0.0202		0.3361	0.3361		0.3202	0.3202	0.0000	1,939.7691	1,939.7691	0.4667		1,951.4360
Total	**0.9071**	**7.1778**	**10.1434**	**0.0202**	**0.0000**	**0.3361**	**0.3361**	**0.0000**	**0.3202**	**0.3202**	**0.0000**	**1,939.7691**	**1,939.7691**	**0.4667**		**1,951.4360**

Eagle Scout Bridge Project - San Diego County, Winter

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

3.2 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-005	1.3700e-003	3.7000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.6686	0.6686	3.0000e-005	1.1000e-004	0.7011
Vendor	2.3200e-003	0.0893	0.0318	4.1000e-004	0.0136	5.2000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		44.2722	44.2722	1.3300e-003	6.4200e-003	46.2176
Worker	0.0385	0.0248	0.2965	8.9000e-004	0.1068	5.7000e-004	0.1074	0.0283	5.3000e-004	0.0289		90.1341	90.1341	2.7500e-003	2.5700e-003	90.9692
Total	**0.0409**	**0.1155**	**0.3287**	**1.3100e-003**	**0.1205**	**1.1000e-003**	**0.1216**	**0.0323**	**1.0400e-003**	**0.0333**		**135.0749**	**135.0749**	**4.1100e-003**	**9.1000e-003**	**137.8879**

3.2 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8679	6.6812	10.1306	0.0202		0.2987	0.2987		0.2844	0.2844		1,940.3082	1,940.3082	0.4653		1,951.9409
Total	**0.8679**	**6.6812**	**10.1306**	**0.0202**	**1.0000e-005**	**0.2987**	**0.2987**	**0.0000**	**0.2844**	**0.2844**		**1,940.3082**	**1,940.3082**	**0.4653**		**1,951.9409**

Eagle Scout Bridge Project - San Diego County, Winter

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

3.2 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-005	1.3600e-003	3.7000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.6569	0.6569	3.0000e-005	1.0000e-004	0.6889
Vendor	2.2300e-003	0.0887	0.0311	4.0000e-004	0.0136	5.3000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		43.5021	43.5021	1.3600e-003	6.3000e-003	45.4148
Worker	0.0363	0.0223	0.2771	8.6000e-004	0.1068	5.4000e-004	0.1073	0.0283	5.0000e-004	0.0288		87.1841	87.1841	2.5100e-003	2.4000e-003	87.9629
Total	**0.0385**	**0.1124**	**0.3086**	**1.2700e-003**	**0.1205**	**1.0800e-003**	**0.1216**	**0.0323**	**1.0100e-003**	**0.0333**		**131.3431**	**131.3431**	**3.9000e-003**	**8.8000e-003**	**134.0665**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8679	6.6812	10.1306	0.0202		0.2987	0.2987		0.2844	0.2844	0.0000	1,940.3082	1,940.3082	0.4653		1,951.9409
Total	**0.8679**	**6.6812**	**10.1306**	**0.0202**	**0.0000**	**0.2987**	**0.2987**	**0.0000**	**0.2844**	**0.2844**	**0.0000**	**1,940.3082**	**1,940.3082**	**0.4653**		**1,951.9409**

Eagle Scout Bridge Project - San Diego County, Winter

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

3.2 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-005	1.3600e-003	3.7000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.6569	0.6569	3.0000e-005	1.0000e-004	0.6889
Vendor	2.2300e-003	0.0887	0.0311	4.0000e-004	0.0136	5.3000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		43.5021	43.5021	1.3600e-003	6.3000e-003	45.4148
Worker	0.0363	0.0223	0.2771	8.6000e-004	0.1068	5.4000e-004	0.1073	0.0283	5.0000e-004	0.0288		87.1841	87.1841	2.5100e-003	2.4000e-003	87.9629
Total	**0.0385**	**0.1124**	**0.3086**	**1.2700e-003**	**0.1205**	**1.0800e-003**	**0.1216**	**0.0323**	**1.0100e-003**	**0.0333**		**131.3431**	**131.3431**	**3.9000e-003**	**8.8000e-003**	**134.0665**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

Eagle Scout Bridge Project - San Diego County, Winter

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Eagle Scout Bridge Project - San Diego County, Winter

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Biological Resources Assessment

BIOLOGICAL RESOURCES ASSESSMENT FOR THE EAGLE SCOUT LAKE BRIDGE PROJECT CITY OF ESCONDIDO SAN DIEGO COUNTY, CALIFORNIA KLEINFELDER PROJECT NO. 20212084.001A

SEPTEMBER 14, 2021

A Report Prepared for:

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BIOLOGICAL RESOURCES ASSESSMENT FOR THE EAGLE SCOUT LAKE BRIDGE PROJECT
CITY OF ESCONDIDO
SAN DIEGO COUNTY, CALIFORNIA

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September 14, 2021
Kleinfelder Project No. 20212084.001A

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SUMMARY

The proposed Eagle Scout Lake Bridge Project (Project) involves the removal of an existing damaged corrugated steel culvert and construction of a new cast-in-place double wall concrete box culvert. The Project will occur adjacent to Eagle Scout Lake within Kit Carson Park in the City of Escondido (Figure 1). The Project also includes the relocation of a portion of a reclaimed water line and a PVC fiber optic conduit located in the vicinity of the existing culvert. Both utilities will be relocated to the new concrete box culvert.

Kleinfelder biologist Lisa Achter conducted a preliminary desktop review of the site, and Kleinfelder biologist Miguel Kaminsky performed a field verification survey to identify and characterize existing on-site biological resources and determine the potential for resources considered to be sensitive or special status by state and federal resource agencies to occur on the site.

The field survey focused on the approximate 0.33-acre Project Area, 0.54-acre staging area, and 4.91 acres of access roads (all of which are existing in the Park), including an area of potential effect (APE) buffer extending 100 feet around these areas. The Project Area, staging area, access roads, and the APE together comprise the Study Area (Figure 2). Within the Project Area, a total of 0.02-acre of permanent impacts would occur due to removal and replacement of the old culvert, and a total of 0.31-acre of temporary impacts would occur due to removal of excess sediment around the culvert, contractor equipment access, and removal and replacement of rip rap within the creek.

Based on the results of the field verification survey, six special-status wildlife species were determined to have a moderate or greater potential to occur within the Study Area. No special-status plant species were determined to have a moderate or greater potential to occur within the Project Area, staging area, or access roads, and no special-status plant species were detected during field surveys. There are three potentially jurisdictional aquatic features within the Study Area, including Arroyo Del Oro creek (an intermittent drainage) that flows through the damaged culvert into Eagle Scout Lake (a freshwater pond), and Kit Carson Creek, an intermittent drainage that is located just south of the work area and flows through an Arizona crossing into Eagle Scout Lake.

This report serves to document the methods and results of the biological resources literature search (desktop study), July 2021 biological field survey, describes potential biological resource constraints associated with construction activities at the site, and provides recommendations to address these potential constraints.

1 INTRODUCTION

1.1 BACKGROUND AND PROJECT DESCRIPTION

Kit Carson Park (Park) is located in the City of Escondido (City) at 3333 Bear Valley Parkway, within Assessor's Parcel Number (APN) 760-244-36-00. The Park is approximately 285 acres, with 100 acres developed for recreational use, including playgrounds, picnic areas, baseball, softball and soccer fields, tennis courts, hiking trails, and a 17-hole frisbee golf course. Other amenities at Kit Carson Park include an outdoor amphitheater and a 5-acre arboretum. The Park has three ponds, one of which is the centrally located Eagle Scout Lake. Arroyo Del Oro Creek is an open channel drainage that conveys runoff from the north end of the Park and flows south through the Park towards Eagle Scout Lake. Eagle Scout Lake was built to function as a sediment basin, indicating that there may have been high levels of sediment transported within Arroyo Del Oro Creek. In high water conditions, Eagle Scout Lake overflows into wetland areas in the southern portion of the Park. Flow eventually enters Lake Hodges and then the San Dieguito River. Over time, the existing culvert transporting water to Eagle Scout Lake has been damaged by large flow events. Portions of the path adjacent to the channel have collapsed and consequently have been closed for use to ensure public safety.

The Project involves the removal of the existing damaged 72-inch by 44-inch corrugated steel oval "squash" pipe (measuring 17 feet in length) and construction of a new, cast-in-place, double wall, 34-foot by 16-foot concrete box culvert. The Project includes the relocation of a portion of an 18-inch reclaimed water line and a 4-inch PVC fiber optic conduit located in the vicinity of the existing culvert. Both water line and fiber optic conduit utilities will be relocated to the new concrete box culvert. Within the 0.33-acre Project Area, the work area encompasses 3,986 square feet (0.09 acre) that includes the culvert replacement, reclaimed water line and fiber optic conduit relocation, regrading of the drainage channel and repair/replacement of the pedestrian crossing over the culvert. Construction staging and access will be located in existing parking areas and along existing roadways within the Park.

The purpose of the proposed Project is to improve safety for the public and facilitate regular maintenance of the drainage structure. The new structure will improve safety for Park patrons by repairing the crossing and associated path for pedestrian use, and incorporating handrails that complement existing handrails on nearby crossings. The crossing's integrated maintenance features will improve safety for City operations personnel responsible for regular facility maintenance. Eagle Scout Lake was intended to act as a sedimentation pond for the upstream watershed, and it is not performing as designed in the current condition. To function properly, this crossing requires regular maintenance that entails removing accumulated sediment below the proposed crossing. The proposed Project design includes a maintenance ramp to offer easy and safe access for City personnel to remove sediment and debris.

1.1.1 Objectives

The purpose of this analysis is to evaluate the Study Area to assess the potential for special-status plant and wildlife species and sensitive natural communities to occur at the site, and the potential effects to these biological resources due to Project construction and operation. This assessment provides the methods and results of the desktop review and field survey, including vegetation communities and land cover types present within the Study Area, special-status plant and wildlife species detected or determined to have potential to occur within the Study Area, the presence of wildlife movement corridors or federally designated Critical Habitat within or adjacent to the Study Area, and any additional focused surveys necessary to further evaluate potential impacts to biological resources at the site. Recommendations to avoid and minimize impacts to these resources are also provided at the end of this document.

1.2 PROJECT LOCATION

The Study Area is located in the City of Escondido within San Diego County. Eagle Scout Lake occurs within Kit Carson Park just west of Casteneda Drive (Figure 2). Interstate 15 runs in a north-south direction approximately 0.5-mile west of the Study Area. Arroyo Del Oro Creek drains through the Project Area into the northern portion of Eagle Scout Lake. Elevation throughout the Study Area varies between approximately 380-425 feet above mean sea level (AMSL). Adjacent land uses are primarily residential development, and L.R. Green Elementary School is located approximately 2,000 feet north of the Project Area. Structures within the Study Area include two restrooms and a children's play area along Casteneda Drive, and several picnic shelters within the Park, including two near the proposed construction location.

The Study Area is situated within the 7.5-minute U.S. Geological Survey (USGS) Escondido quadrangle. The corresponding latitude and longitude at the approximate center of Project Area is 33°04'44" north latitude and 117°03'41" west longitude.

2 METHODS

2.1 DESKTOP REVIEW

Special-status plant and wildlife species present or potentially present within or adjacent to the Study Area were identified through a desktop literature review using the following sources: U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (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. Additionally, the Natural Resources Conservation Service (NRCS), Web Soil Survey (WSS) was queried to determine soil types that exist within the boundary of the Study Area (USDA 2021). The CNDDB, IPaC, and CNPS database searches included the Study Area and a two-mile buffer around the Study Area. Special-status species include those that are considered threatened, endangered, candidate for listing, species of special concern or fully protected by CDFW, USFWS, or CNPS. California Rare Plant Rank (CRPR) 1 and 2 plant species were included in the CNPS search. Following a review of these resources, Kleinfelder also reviewed relevant life history information on those species documented as occurring in the region, including habitat type, soils, and elevation preferences.

2.2 DEFINITION OF SPECIAL-STATUS SPECIES

Although threatened and endangered species are protected by specific federal and state statutes, California Environmental Quality Act (CEQA) Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been modeled after the definition in the federal Endangered Species Act (FESA, 1983) and the section of the California Fish and Game Code (1984) dealing with rare or endangered plants and animals, and allows a public agency to undertake a review to determine if a significant effect on a species that has not yet been listed by either the USFWS or CDFW (i.e., species of special concern) would occur. Whether a species is rare, threatened, or endangered can be legally significant because, under CEQA Guidelines, Section 15065, an agency must find an impact to be significant if a project would "substantially reduce the number or restrict the range of an endangered, rare, or threatened species." Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

2.2.1 Special-Status Wildlife Species

Special-status wildlife species include taxa designated as follows:

- Threatened, endangered, or candidate for listing under FESA;

- Threatened, endangered, or rare under the California Endangered Species Act (CESA);
- CDFW species of special concern or fully protected species.

2.2.2 Special-Status Plant Species

Special-status plant species include taxa designated as follows:

- Threatened, endangered, or candidate for listing under the FESA;
- Threatened, endangered, or rare under the CESA;
- Species with CRPRs as described below (CNPS 2020):
    - 1A – Plants presumed extinct in California
    - 1B – Plants considered rare, threatened, or endangered in California and elsewhere
    - 2 – Plants considered rare, threatened, or endangered in California, but more common elsewhere.

2.3 FIELD SURVEYS

A field survey was performed by Kleinfelder biologist Miguel Kaminsky on July 26, 2021, to evaluate botanical and wildlife resources within the Study Area, including habitat suitability for special-status species identified during the preliminary desktop review.

The field survey consisted of walking meandering transects throughout the Study Area to: 1) map and characterize vegetation communities; 2) collect data on the relative quality of, and potential for, existing habitats to support the special-status species identified during the preliminary database and resources review; and, 3) to identify any other sensitive biological resources present or potentially present within the Study Area. Portions of the Study Area that could not be accessed due to overgrown vegetation were evaluated using binoculars.

An aerial photograph (Google Earth 2021) and georeferenced mobile map with an overlay of the Project boundary was utilized to map the vegetation communities and record any special-status or sensitive biological resources while in the field. Incidental observations of wildlife or wildlife sign and dominant plant species were also recorded. Protocol-level surveys for special-status plant and wildlife species were not conducted during the field survey. However, any incidental observations of such species were documented.

Kleinfelder biologist Wayne Vogler conducted a jurisdictional delineation on August 25, 2021 to determine if any potentially jurisdictional wetlands or waters occurred within the Study Area. The delineation was

based on current and historic aerial photography signatures and field observations. The analysis was based on criteria provided by the following agencies:

- Waters of the U.S., including wetlands, under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), pursuant to Section 404 of the federal Clean Water Act (CWA).
- Wetlands under the jurisdiction of the Regional Water Quality Control Board (RWQCB), pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).
- Wetlands under the jurisdiction of CDFW, pursuant to Section 1602 of the California Fish and Game Code.

The jurisdictional delineation report was prepared under separate title for this project (*Eagle Scout Lake Bridge Project Jurisdictional Waters Report*, Kleinfelder 2021).

3 RESULTS

3.1 BIOLOGICAL SETTING

The biological setting surrounding the Study Area is primarily urban and developed with residential housing. The area within Kit Carson Park includes an amphitheater, disc golf course, picnic areas, walking trails, and parking lots. The area immediately surrounding the Project Area is relatively undeveloped; however, it is subject to human disturbance on a regular basis, as the public has access to walking trails and Eagle Scout Lake (Figure 2). There is one mature coast live oak tree within the area of temporary disturbance of the work area; however, the tree will be protected in place. Arroyo Del Oro Creek, which flows through the work area, is considered an intermittent stream, and the channel was wet during the time the field survey was conducted. Kit Carson Creek, located just south of the Project Area, will not be impacted by the Project; however, the Arizona crossing through Kit Carson Creek will be used to access the Project Area.

3.2 EXISTING HABITATS

A discussion of the general characteristics observed within the Study Area during the survey are presented below.

3.2.1 Soils

According to the NRCS (USDA 2021), three soil types have been mapped within the Study Area: Chino silt loam, saline, 0 to 2 percent slopes; Ramona sandy loam, 9 to 15 percent slopes, eroded; and Ramona sandy loam, 5 to 9 percent slopes, eroded (Figure 3). Chino silt loam is a moderately well drained, slightly to moderately saline alluvium derived from granite, found on alluvial fans. Ramona sandy loam is a well-drained alluvium derived from granite, also found on alluvial fans.

3.2.2 Vegetation Communities and Land Cover Types

Using the classifications described in *Preliminary Descriptions of the Natural Communities of California* (Holland 1986), five vegetation communities or land cover types were mapped within the Study Area (Figure 4). These are described in more detail below.

Southern Cottonwood-Willow Riparian Forest (1.64 acres). The polygons within the Study Area that are mapped as southern cottonwood-willow riparian scrub border the northern edge of the Project Area and extend northeast to Casteneda Drive along Arroyo Del Oro Creek. Dominant plant species found in the Study Area that are indicative of this vegetation community include willow (*Salix* spp.), wild cucumber (*Echinocystis lobata*), wild grape (*Vitis sp*.), Fremont's cottonwood (*Populus fremontii*), giant reed (*Arundo donax*), and California mugwort (*Artemisia douglasiana*), along with mule fat (*Baccharis salicifolia*),

perennial ragweed (*Ambrosia psilostachya*), and sacred datura (*Datura wrightii*). Some coast live oaks (*Quercus agrifolia*) are found along the edges of this vegetation community. Riparian habitat is typically associated with stream channels and other aquatic features such as rivers and wetlands.

Riparian habitat within the site is considered sensitive by CDFW in the context of California Fish and Game Code Section 1602. Impacts to riparian habitat, including trimming or removal of vegetation, would be considered potentially significant under CEQA. Impacts to these features would prompt the need for regulatory authorizations and mitigation in the form of establishment, re-establishment, and/or rehabilitation or preservation of similar habitat.

Southern Willow Scrub (1.71 acres). The polygons within the Study Area that are mapped as southern willow scrub is found primarily adjacent to the eastern edge of the staging area and in the southeastern portion of Casteneda Drive within the Study Area. This vegetation community within the Study Area is generally dominated by willow and Mexican palm (*Washingtonia robusta*), also mule fat, date palm (*Phoenix dactylifera*), Fremont's cottonwood, eucalyptus (*Eucalyptus sp*.), perennial ragweed, coyote bush (*Baccharis pilularis*), telegraphweed (*Heterotheca grandiflora*), bristly oxtongue (*Helminthotheca echioides*), bull thistle (*Cirsium vulgare*), wild cucumber, and saltgrass (*Distichlis spicata*). The areas mapped as southern willow scrub within the Study Area had standing water at the time of the survey.

Coast Live Oak Woodland (2.45 acres). The polygons within the Study Area that are mapped as coast live oak (*Quercus agrifolia*) woodland are composed of dense assemblages of coast live oak, mixed in with American sycamore (*Platanus occidentalis*), perennial ragweed, and Mexican elderberry (*Sambucus mexicanus*). Non-native grasses are typically found in the understory within this vegetation community within the Study Area.

Non-Native Annual Grassland (0.57 acre). The polygon within the Study Area mapped as non-native annual grassland within the Study Area is found adjacent to the west side of the staging area and is comprised of non-native annual grasses such as brome (*Bromus* sp.) and wild oat (*Avena* sp.).

Developed/Disturbed Land Cover (28.48 acres). The polygons within the Study Area that are mapped as developed/disturbed are composed of developed Park facilities that provide little to no habitat value for special-status plant and wildlife species, and are commonly urbanized areas that experience regular human disturbance. These areas include roads, play structures, parking lots, picnic areas, landscaped areas planted with ornamental vegetation, a frisbee golf course, and the shore of Eagle Scout Lake (which lacks vegetation and is highly impacted by human disturbance within the Project Area). The Project Area occurs entirely within this land cover type; however, the northern edge abuts southern cottonwood-willow riparian forest habitat (Figure 4).

3.2.3 Potentially Jurisdictional Wetlands and Water Features

A formal wetland delineation was performed by Kleinfelder biologist Wayne Vogler on August 25, 2021. Three aquatic features were mapped within the Study Area during the field delineation that are likely under jurisdiction of the ACOE, CDFW, and RWQCB. These included two intermittent drainages (Arroyo Del Oro Creek and Kit Carson Creek) and Eagle Scout Lake (a freshwater pond). These features were wet during the field survey, an ordinary high-water mark was present within the two intermittent streams, and riparian vegetation was observed along the banks of the streams (Figure 5).

All aquatic features within the site are considered sensitive by CDFW in the context of California Fish and Game Code Section 1602, RWQCB in the context of Section 401 of the Clean Water Act, and ACOE in the context of Section 404 of the Clean Water Act. Any impacts to these features, including impacts to the bed or bank of the intermittent streams, removal or deposition of soil, siltation from runoff, or alterations to natural flow would be considered potentially significant under CEQA. Impacts to these features would prompt the need for regulatory authorizations and mitigation in the form of establishment, re-establishment, and/or rehabilitation or preservation of similar habitat.

3.3 SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE STUDY AREA

Results of the CNDDB and IPaC searches indicated 30 special-status wildlife species known to occur within a two-mile search radius of the Study Area (CDFW 2021; USFWS 2021). Of these, 24 species are not expected to occur or have a low potential to occur within the Study Area due to a lack of suitable habitat, or the site is outside of the species' known range; therefore, these 24 species were removed from further consideration. The remaining six special-status wildlife species were determined to have a moderate or greater potential to occur at the site and are discussed further below. A list of wildlife species with potential to occur in the vicinity of the Study Area is included in Appendix A.

Western pond turtles (*Emys marmorata*) use both aquatic and terrestrial habitats. They are found in rivers, lakes, streams, ponds, wetlands, ephemeral creeks, reservoirs, agricultural ditches, estuaries, and brackish waters. Western pond turtles prefer areas that provide cover from predators, such as vegetation and algae, as well as basking sites for thermoregulation. Adults tend to favor deeper, slow-moving water, whereas hatchlings search for slow and shallow water that is slightly warmer. Terrestrial habitats are used for wintering and egg-laying and usually consist of burrows in leaves and soil (Ashton et. al. 1997). Western pond turtle is a California species of special concern and is present in Eagle Scout Lake. It was observed during field surveys on August 25, 2021.

There is one CNDDB documented occurrence of western pond turtle in Lake Hodges, located approximately 1.7 miles southwest of the Project Area, and there is connectivity between the lake and the Project Area via drainages and ponds (CDFW 2021). This record was submitted by Bayard Brattstrom, a well-known herpetologist and Professor of Zoology, Emeritus, at California State University, Fullerton; however, location and date information are not available in the occurrence data. This species is known to

occur upstream and downstream of Lake Hodges in Lusardi Creek and the upper San Dieguito River (San Diego MSPA 2017). In 2011, a western pond turtle trapping survey was performed at Eagle Scout Lake by AECOM (Appendix D). No western pond turtles were observed or trapped; therefore, a conclusion was made that western pond turtle was not present in the lake. Because this study is ten years old, and the habitat at Eagle Scout has changed significantly since the study was performed (specifically, the pond size has increased and vegetation has been cleared from the pond, allowing for more escape habitat and increased water depth), and for the reasons stated above, the potential for occurrence of western pond turtle at Eagle Scout Lake cannot be ruled out.

Southwestern willow flycatcher (*Empidonax traillii extimus*) is found in bushes, willow thickets, brushy fields, and upland groves. It breeds and nests in thickets of deciduous trees and shrubs, especially willows within riparian or scrub habitats, or along woodland edges. It is often found near streams or marshes (especially in the southern part of their range, within which Kit Carson Park occurs) (Sogge 2000).

There is suitable nesting and foraging habitat for this species within the southern cottonwood-willow riparian forest and southern willow scrub adjacent to the Project Area, as well as within the coast live oak woodland throughout the Study Area. Southwestern willow flycatcher is federally and state listed as endangered. There are documented occurrences of this species approximately 2.5 miles southeast of the Study Area (CDFW 2021).

Least Bell's vireo (*Vireo bellii pusillus*) primarily occupies riverine riparian habitats, including dry portions of intermittent streams that typically provide dense cover within three to six feet of the ground, often adjacent to a complex, stratified canopy. Prey items include bugs, beetles, grasshoppers, moths, spiders, and caterpillars. They glean insects from leaves, twigs, and branches by hovering and picking prey off these stationary objects, and also utilize aerial pursuit (Kus 2002). The southern cottonwood-willow riparian forest and southern willow scrub adjacent to the Project Area provide suitable nesting and foraging habitat for this species. There is no suitable habitat within the Project Area for this species as it is mapped as developed disturbed.

Least bell's vireo is federally and state listed as endangered. There are several documented occurrences of this species within Kit Carson Park (CDFW 2021), and suitable riparian habitat occurs adjacent to the Project Area (Figure 4).

Coastal California gnatcatcher (*Polioptila californica californica*) occurs in open sage scrub with California sagebrush (*Artemisia californica*) as a dominant or co-dominant species. It is more abundant near the sage scrub-grassland interface than in areas where sage scrub grades into chaparral. Dense sage scrub is occupied less frequently than more open sites (Mock 2004).

Coastal California gnatcatcher is federally listed as threatened and is a California species of special concern. There are several documented occurrences of this species within Kit Carson Park, and suitable sage scrub nesting and foraging habitat occurs adjacent to the west side of the western access roads, which is mapped as Critical Habitat for this species (CDFW 2021, USFWS 2021).

Pallid bat (*Antrozous pallidus*) roosts and forages in a variety of habitats, including grassland, shrubland, woodland, and forests from sea level up through mixed conifer forest. It roosts in caves, mines, crevices, and occasionally hollow trees or buildings, and prefers open habitats for foraging (Zeiner 1990).

Suitable foraging habitat exists in open areas within and adjacent to the Project site, including Eagle Scout Lake, the frisbee golf course, and other areas lacking dense vegetation, and the coast live oak woodlands and buildings within the Study Area provide potentially suitable roosting habitat. Pallid bat is a California species of special concern. There are documented occurrences of this species approximately two miles northwest of the site (CDFW 2021).

Western yellow bat (*Lasiurus xanthinus*) roosts and forages in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. It roosts in trees in, and near, palm oases and riparian habitat (CDFG 1999).

Suitable roosting and foraging habitat for this species occurs within the southern cottonwood-willow riparian forest and palm trees within the southern willow scrub in the Study Area, and there are documented occurrences of this species approximately two miles northwest of the site (CDFW 2021). Western yellow bat is a California species of special concern.

Recommendations to avoid and/or minimize impacts to the six special-status wildlife species with potential to occur within the Study Area is provided in Section 4.

3.4 SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE STUDY AREA

Results of the CNDDB, IPaC, and CNPS searches indicated 19 special-status plant species known to occur within the two-mile search radius of the Project Area (CDFW 2021, USFWS 2021, and CNPS 2021). Although there is potentially suitable habitat for three of these species in the marshy areas on the eastern side of the staging area, none of these species are expected to occur within the Project Area, staging area, or access roads due to the developed nature of these areas. Similarly, the remaining 16 species have a low potential to occur, or are not expected to occur due to a lack of suitable habitat, a lack of occurrences in the vicinity of the Project Area, or the Project Area is outside of the species' known range; therefore, special-status plants are not discussed further in this document. A list of plant species with potential to occur in the vicinity of the Project Area is included in Appendix B.

3.5 CRITICAL HABITAT

The Study Area falls within Critical Habitat limits for coastal California gnatcatcher (Appendix C). There are documented CNDDB occurrences of coastal California gnatcatcher within Kit Carson Park, as there is suitable sage scrub habitat for this species in the vicinity of the Park. No impacts to sage scrub habitat are proposed under the current Project design.

3.6 WILDLIFE CORRIDORS AND HABITAT LINKAGES

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as stepping stones for wildlife dispersal.

The Study Area is not recognized as an important wildlife corridor by any regional or state agency or jurisdiction and is not considered critical to the ecological functioning of adjoining open space areas. However, because the Study Area includes a portion of Arroyo Del Oro and Kit Carson creeks that are bordered by riparian habitat, it does provide value as a corridor that supports movement between similar patches of riparian habitat north and south of the Study Area. The creek corridor likely supports local movement patterns of riparian wildlife species, and it also provides food and cover resources for common and some special-status species (Figure 5). Temporary effects due to noise and increased human activity during project construction activities would not interfere with these local movement patterns over time, or affect the ability of these species to forage or reproduce in the long term.

3.7 COMMON WILDLIFE SPECIES

Four bird species were detected during the field survey, including American crow (*Corvus brachyrhynchos*), acorn woodpecker (*Melanerpes formicivorus*), mourning dove (*Zenaida macroura*), and a possible audible detection of coastal cactus wren (*Campylorhynchus brunneicapillus*),). In addition, several California ground squirrels and associated burrows were observed during the field survey. No common or special-status amphibians were detected during the field survey. A western pond turtle was observed basking on the shore of Eagle Scout Lake, and red-eared sliders (*Trachemys scripta elegans*) and painted turtles (*Chrysemys picta*) were also observed during the biological and jurisdictional field surveys.

The stream corridors within the Study Area could be used by several wildlife species as a local movement corridor for accessing foraging, cover, and shelter areas. No raptor nests or wildlife dens were incidentally observed during the field surveys. Common wildlife species adapted to life in proximity to human development, such as raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and striped skunk (*Mephitis mephitis*) are likely to move through the Study Area on a regular basis to find food and cover. Several common native and non-native bird species are likely to use the Study Area for nesting and foraging (Figure 5).

4 RECOMMENDATIONS

This section addresses potential environmental impacts caused by the project as a result of Project construction and operation as a result of the presence of sensitive biological resources and potential impacts to such resources that would result from project activities. Recommendations to address potential biological resource constraints are described below.

Impacts to native nesting birds. All native birds in California are protected by the federal Migratory Bird Treaty Act (MBTA) and provisions of the California Fish and Game Code. Section 3503.5 of the California Fish and Game Code specifically protects raptors. Ground disturbance**,** noise, or removal of vegetation that would result in destruction of active bird nests or disruption of breeding/nesting activity could be a violation of the MBTA and the California Fish and Game Code, as well as a significant impact under CEQA.

Kleinfelder recommends that construction activities for the proposed Project occur outside of the breeding bird season (August 16-January 31) to avoid impacts to native nesting birds. If construction must occur during the nesting season, a nesting bird survey should be completed by a qualified biologist no earlier than one week prior to any construction activity during the nesting season (February 1–August 15) to determine if any native birds are nesting on or near the Project Area and staging area (including a 100-foot buffer for special-status avian species described above in Section 3.3). If any active nests are observed during pre-construction surveys, a suitable avoidance buffer from the nests should be determined by the qualified biologist based on species, location, and extent and type of planned construction activity. These nests would be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. Kleinfelder also recommends removing any suitable nesting habitat (i.e., trees and vegetation), if necessary, outside of the breeding bird season to avoid impacts to nesting birds.

Impacts to federally and state listed avian species. There is suitable riparian habitat for federally and state listed bird species adjacent to the Project Area, including southwestern willow flycatcher and least Bell's vireo, which are federally and state listed as endangered, and coastal California gnatcatcher, which is federally listed as threatened. In addition, Critical Habitat has been mapped for coastal California gnatcatcher within the Study Area. Any impacts to these species or associated habitats would be considered significant under CEQA and would potentially require consultation with the USFWS under the National Environmental Policy Act (NEPA).

Current Project design does not require removal of riparian habitat; therefore, no impacts to USFWS mapped Critical Habitat would occur under the Project. Kleinfelder recommends construction activities occur outside of the breeding bird season to avoid potential impacts to these species. If construction must occur during the breeding season, Kleinfelder recommends implementing a preconstruction nesting bird survey, as described above, and early consultation with USFWS and CDFW to receive direction on how to address potential impacts to these species.

Increased predation on special-status species. Impacts to special-status species due to increased predation resulting from construction activities could be considered a significant impact in the context of CEQA. All trash and waste items generated by construction activities should be properly contained in a covered trash receptacle and removed from the Project Area and staging area daily. This includes biodegradable items such as apple cores and banana peels that attract predators like raccoons and American crows that could prey upon sensitive wildlife species.

Impacts to special-status bat species. To avoid impacts to foraging and roosting pallid bats or western yellow bats, construction activities should be limited to daylight hours (one hour after sunrise to one hour before sunset). Because it is implausible to detect bats that may be roosting in trees without using acoustic monitoring, a qualified biologist should inspect any trees slated for removal or trimming, two weeks prior to removal or trimming, to determine if there is appropriate roosting habitat within them (e.g., cavities, crevices, peeling bark, canopy). If suitable roosting habitat is detected during these inspections, the Project applicant should consult with CDFW to determine an appropriate plan to avoid impacts to roosting bats. If any bats are observed during construction activities, work should be halted and postponed until a qualified biologist and/or CDFW is contacted to determine a proper strategy to avoid impacts to bats potentially roosting within or in the vicinity of the Project Area.

Impacts to western pond turtle. Western pond turtles are present within Eagle Scout Lake and are known to occur in the vicinity of the Project Area, upstream and downstream of Lake Hodges. They are known to nest up to 325 feet from suitable aquatic sites. To avoid impacts to western pond turtle, construction should not occur within 50 feet of an active nest site (burrow), and proper BMP's should be installed prior to Project construction to prevent erosion or hazardous materials from entering Eagle Scout Lake, which could potentially decrease water quality. If construction must occur during the breeding season for western pond turtle (April-August), preconstruction surveys should be performed by a qualified biologist within the Project Area and staging area (including a 50-foot buffer) to determine whether any active western pond turtle nests are present. If any active nests are present, they should be flagged and avoided until the eggs have hatched or they are no longer active, as determined by the qualified biologist.

Sedimentation of and hazardous materials entering aquatic features. Impacts to wetlands and waters under jurisdiction of the ACOE, RWQCB and CDFW in the form of increased sedimentation and potential spills from construction equipment could be considered significant in the context of CEQA. Prior to any construction upslope of or within the intermittent streams and pond located in the Study Area, proper best management practices (BMPs) should be installed to prevent runoff and siltation from entering these features. These BMPs may include, but are not limited to, biodegradable straw wattles free from weed seed, silt fencing, hydroseeding, or biodegradable erosion control mats/blankets. Specific BMPs should be defined prior to construction to protect streams within the Project Area, and spill kits should be available to all workers on the site during construction activities.

Impacts to wetlands and waters of the U.S. and/or State. Project design that avoids and/or minimizes impacts to aquatic resources under jurisdiction of ACOE, RWQCB, and/or CDFW can avoid/minimize the need for compensatory mitigation requirements under CEQA and resource agency permits. If avoidance

is not possible, impacts to aquatic resources would require authorization from the regulatory agencies listed above in the form of regulatory permits (e.g., CWA Section 404 Nationwide Permit, CWA Section 401 Water Quality Certification, and California Fish and Game Code Section 1602 Streambed Alteration Agreement). Such permits typically include measures to avoid and minimize or mitigate impacts. Depending on the type and extent of project activities, impacts to these resources would also be considered significant under CEQA. Potentially significant impacts would include removal or degradation of these habitats, as well as temporary disturbances due to dewatering activities or fill being placed into these habitats.

To avoid impacts to these habitats in the form of sedimentation or runoff, a 25-foot buffer should be implemented during construction and proper BMPs (i.e., straw wattles, silt fencing) should be installed before construction begins where possible. Riparian vegetation removal should be avoided; however, if removal is necessary under the project, authorization from CDFW under Section 1602 of the Fish and Game Code would be required.

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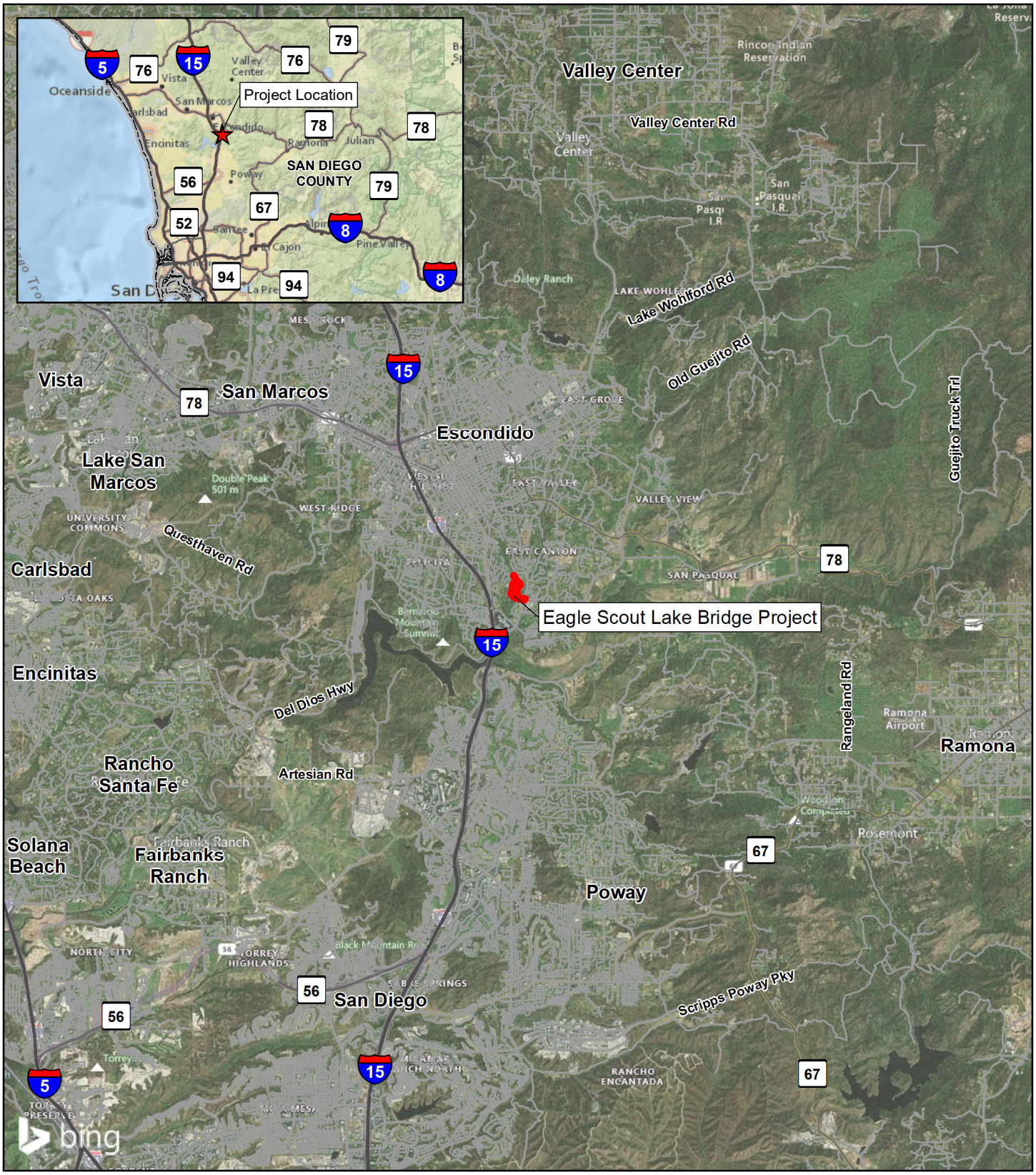
FIGURES



Source: Bing Maps

0 1.5 3 Miles

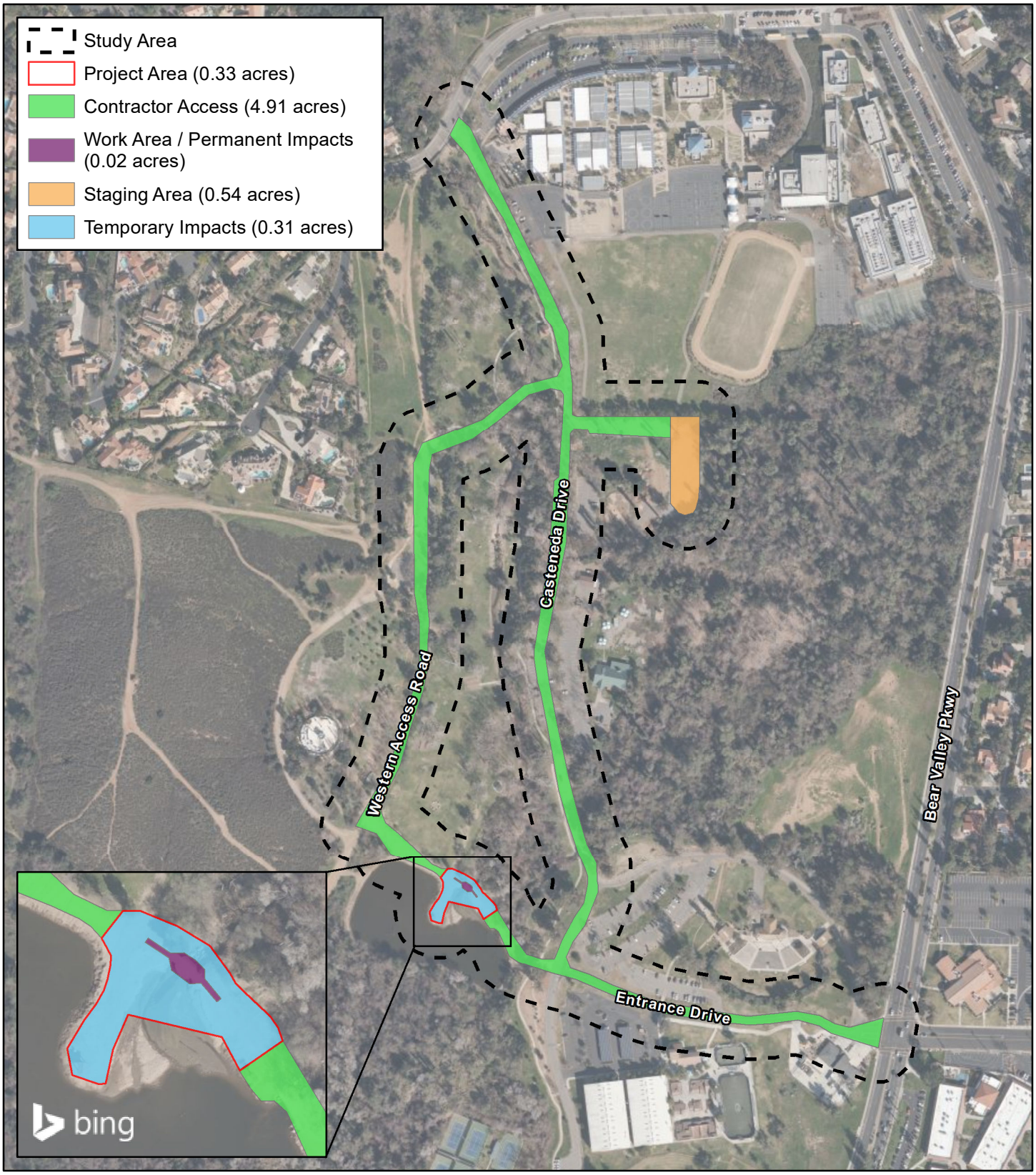
0 2.5 5 Kilometers

N

Scale 1:190,000
1 inch = 3 miles

Figure 1. Regional Vicinity
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



Source: Bing Maps

0 200 400 Feet

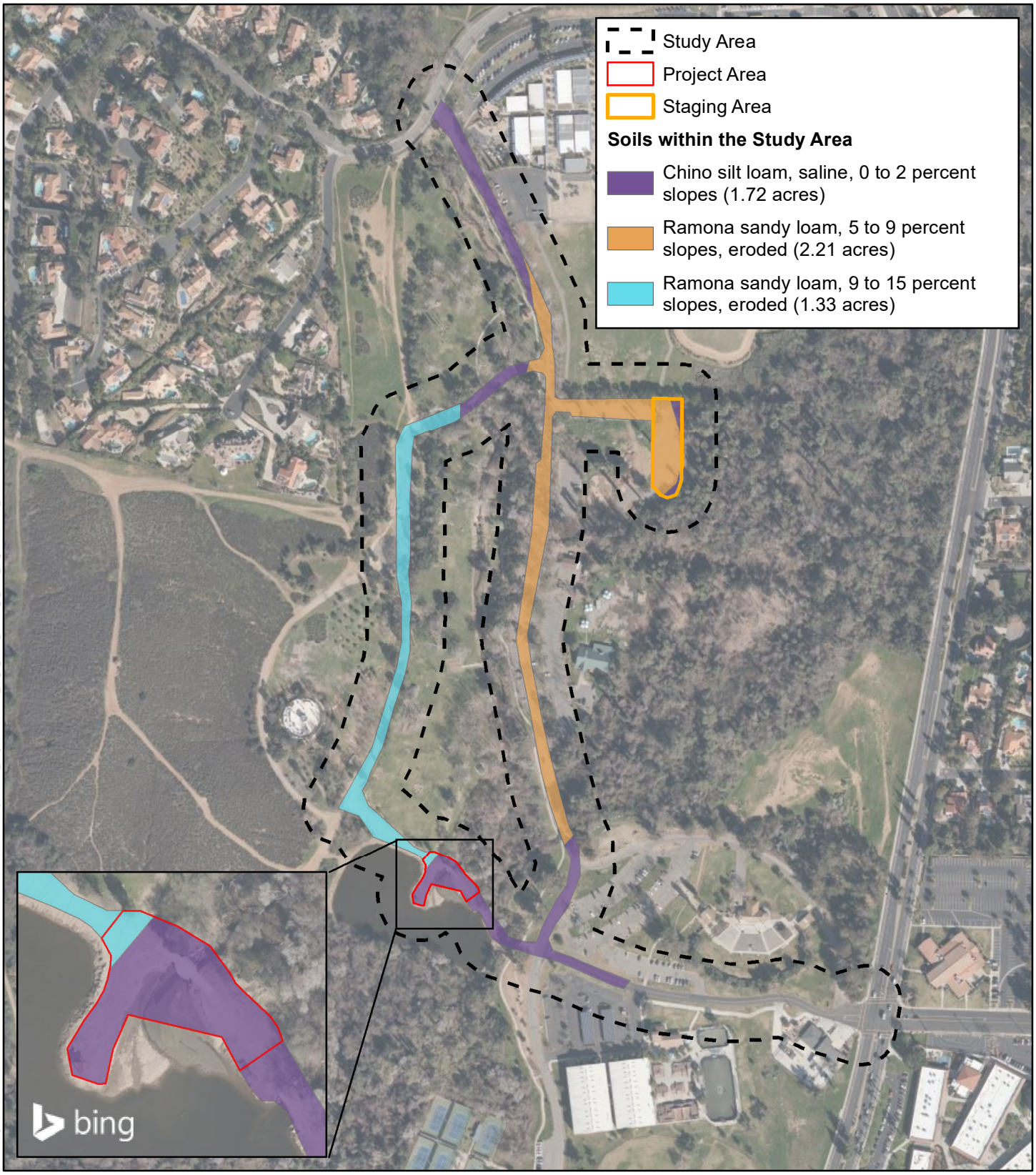
0 60 120 Meters

N

Scale 1:4,800
1 inch = 400 feet

Figure 2. Project Area
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



Source: gSSURGO (April 2021)

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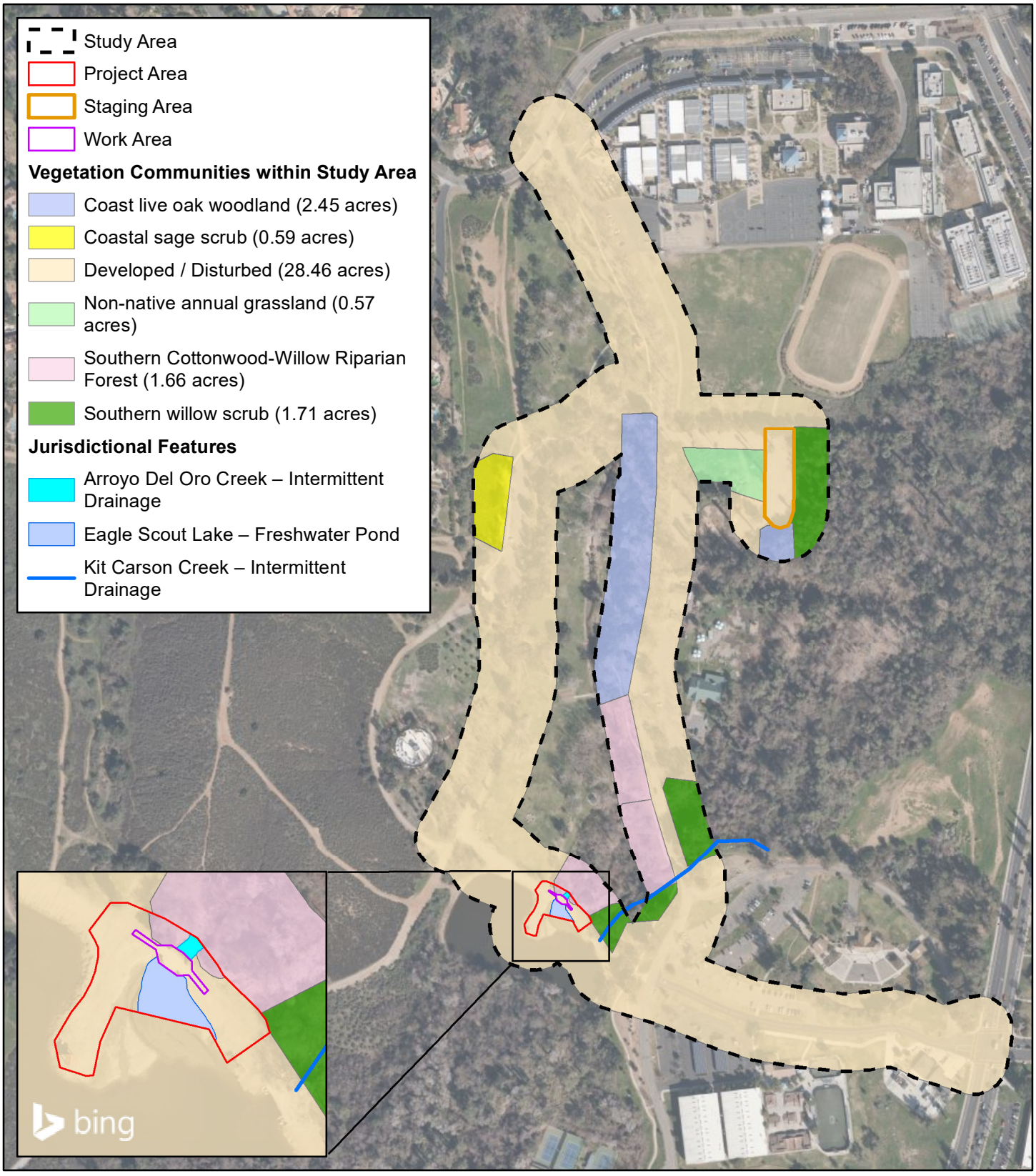
0 60 120 Meters

N

Scale 1:4,800

Figure 3. Soils
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



Source: Bing Maps

0 200 400 Feet

0 60 120 Meters

N

Scale 1:4,800

Figure 4. Vegetation Communities and Potentially Jurisdictional Features
Eagle Scout Lake Bridge Project
San Diego County, California

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Looking east at Project Area and
Southern Cottonwood-Willow Riparian Forest

Southern willow scrub adjacent to Project Area

Looking northwest from Project Area at
Southern Cottonwood-Willow Riparian Forest

Looking south at damaged culvert and work area

Looking northwest at work area

Culvert outlet draining into
Eagle Scout Lake in work area

Figure 5a. Photos
Eagle Scout Lake Bridge Project
San Diego County, California

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Looking at western edge of staging area at non-native annual grassland

Southern willow scrub adjacent to east side of staging area

Looking north at staging area

Looking south at coast live oak woodland adjacent to staging area

Looking north along western access road

Looking at developed park along western side of Casteneda Drive access road

Figure 5b. Photos
Eagle Scout Lake Bridge Project
San Diego County, California

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Riparian habitat along Arroyo Del Oro Creek

Riparian habitat along Arroyo Del Oro Creek,
just east of the Project Area

Looking south from northern end of Casteneda Drive

Figure 5c. Photos
Eagle Scout Lake Bridge Project
San Diego County, California

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APPENDIX A
SPECIAL-STATUS WILDLIFE SPECIES WITH KNOWN OR POTENTIAL OCCURRENCE IN THE VICINITY OF THE EAGLE SCOUT LAKE BRIDGE PROJECT IN SAN DIEGO COUNTY, CALIFORNIA

APPENDIX A
Special-Status Wildlife Species with Known or Potential Occurrence in the Vicinity of the Eagle Scout Lake Bridge Project in Escondido, California

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Study Area[2]
Invertebrates				
Crotch's bumble bee	*Bombus crotchii*	None/Candidate Endangered	Crotch's bumble bee was historically common throughout much of the southern two-thirds of California, but now appears to be absent from most of the state. Most bumble bees are primitively eusocial insects that live in colonies composed of a queen, workers, and, near the end of the season, reproductive members of the colony (new queens, or gynes, and males). Habitat requirements include availability of suitable colony nesting sites, floral resources to obtain nectar and pollen throughout the duration of the colony period (spring, summer and fall), and suitable overwintering sites for queens.	**Low potential to occur.** Although potentially suitable low-quality habitat may be present for this species during years with adequate rainfall within and adjacent to the Study Area that would support a robust bloom period, there are no documented occurrences of this species within 2 miles of the site. The highly developed nature of the site likely precludes this species from occurring.
Quino checkerspot	*Euphydryas editha quino*	Endangered/None	Quino checkerspot is found in annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include *Plantago erecta* (dwarf plantain), *Antirrhinum coulterianum* (white snapdragon), and *Plantago patagonica* (woolly plantain).	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area and there are no documented occurrences of this species within 5 miles of the site.
Amphibians and Reptiles				
arroyo toad	*Anaxyrus californicus*	Endangered/SSC	Arroyo toads are found in low gradient, medium-to-large streams and rivers with intermittent and perennial flow in coastal and desert drainages. They occur in aquatic, riparian, and upland habitats in the remaining suitable drainages within its range and require slow-moving streams that are composed of sandy soils with sandy streamside terraces. Breeding, egg-laying, and tadpole development occur in very shallow, still, or low-flow pools.	**Low potential to occur.** Although potentially suitable habitat for this species is present within the riparian area surrounding Arroyo Del Oro Creek, the developed nature of the area likely precludes this species from occurring. More suitable, undeveloped habitat occurs approximately 2 miles east of the site in the vicinity of the San Dieguito River, where there are multiple documented occurrences of this species.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Study Area[2]
California glossy snake	*Arizona elegans*	None/SSC	California glossy snake inhabits arid scrub, rocky washes, grasslands, and chaparral. It appears to prefer microhabitats of open areas and areas with soil loose enough for easy burrowing. It is typically active from late February until November, depending on the weather, but is less active during Summer.	**Low potential to occur.** Although there is potentially suitable habitat for this species in the coastal sage scrub habitat just west of the of the Study Area, the developed nature of the site likely precludes this species from occurring in Kit Carson Park.
coast horned lizard	*Phrynosoma blainvillii*	None/SSC	Coast horned lizard prefers open areas within valley grasslands and foothill coniferous forests, woodlands, and chaparral that have sandy, loose soils and low vegetation. It is often found in lowlands along sandy washes with scattered shrubs, and along dirt roads.	**Low potential to occur.** Although there is potentially suitable habitat for this species in the coastal sage scrub habitat just west of the of the Study Area, the developed nature of the site likely precludes this species from occurring in Kit Carson Park.
coastal whiptail	*Aspidoscelis tigris stejnegeri*	None/SSC	Coastal whiptail is found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas. Eats small invertebrates, especially spiders, scorpions, centipedes, and termites, and small lizards.	**Low potential to occur.** Although there is potentially suitable habitat for this species in the coastal sage scrub habitat just west of the of the Study Area, the developed nature of the site likely precludes this species from occurring in Kit Carson Park.
red diamond rattlesnake	*Crotalus ruber*	None/SSC	Red diamond rattlesnake Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas. On the desert slopes of the mountains, it ranges into rocky desert flats. It eats small mammals, including ground squirrels, wood rats, and rabbits, lizards, and birds	**Low potential to occur.** Although there is potentially suitable habitat for this species in the coastal sage scrub habitat just west of the of the Study Area, the developed nature of the site likely precludes this species from occurring in Kit Carson Park.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Study Area[2]
southern California legless lizard	*Anniella stebbinsi*	None/SSC	Southern California legless lizard occurs in moist warm loose soil with plant cover in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat.	**Low potential to occur.** Although there is potentially suitable habitat for this species in the riparian habitat adjacent to the Project area, documented occurrences are limited to areas outside of Escondido, and the developed nature of the site likely precludes this species from occurring in Kit Carson Park.
western pond turtle	*Emys marmorata*	None/SSC	Western pond turtles use both aquatic and terrestrial habitats. They are found in rivers, lakes, streams, ponds, wetlands, ephemeral creeks, reservoirs, agricultural ditches, estuaries, and brackish waters. Western pond turtles prefer areas that provide cover from predators, such as vegetation and algae, as well as basking sites for thermoregulation. Adults tend to favor deeper, slow-moving water, whereas hatchlings search for slow and shallow water that is slightly warmer. Terrestrial habitats are used for wintering and egg-laying and usually consist of burrows in leaves and soil. They are rarely found at altitudes above 1,500 meters.	**Present.** This species was observed in Eagle Scout Lake during field surveys.
western spadefoot	*Spea hammondii*	None/SSC	Western spadefoot inhabits areas with slightly moist, friable soils in mostly treeless habitats. They are usually absent from narrow canyons and highly mesic habitats, and require rain pools with little to no vegetation for spawning.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area and there are no documented occurrences of this species within 2 miles of the site.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Study Area[2]
Birds				
burrowing owl	*Athene cunicularia*	None/SSC	Burrowing owl utilizes abandoned ground squirrel burrows in open habitats and grasslands, also disturbed areas. Diet consists of insects, small mammals, reptiles and amphibians. Commonly uses burrows on levees or mounds where there are unobstructed views of possible predators such as raptors or foxes.	**Low potential to occur.** Although potentially suitable habitat for this species is present within and adjacent to the Study Area, and there is one documented occurrence of this species approximately 2 miles northwest the site, the developed nature of the site and intensity of human presence likely precludes this species from occurring within the Study Area.
California black rail	*Laterallus jamaicensis coturniculus*	None/Threatened, FP	California black rail occurs near freshwater marshes along the margins of ponds, lakes, and water impoundments, as well as herb dominated wetlands on sloped ground associated with springs, canal leaks, seepage from impoundments and agricultural irrigation. This species requires water depths of about one inch that do not fluctuate during the year, and dense vegetation for nesting habitat.	**Not expected to occur.** Suitable habitat for this species is absent from the Study Area, and there has not been a documented occurrence of this species in the Escondido quad since 1970. This species is presumed extant from the vicinity of the Study Area.
coastal cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	None/SSC	Coastal cactus wren is an obligate inhabitant of coastal sage scrub, a natural vegetation community of low, semi-woody vegetation found only in coastal and near-coastal portions of the state, generally below 3,000 ft. While some coastal birds have been observed using riparian woodland areas below 2,000 ft., it is unlikely that this habitat type is used for nesting.	**Low potential to occur.** Suitable habitat for this species is absent from the Project area; however, it could potentially occur within the coastal sage scrub west of the Study Area.
coastal California gnatcatcher	*Polioptila californica californica*	Threatened/SSC	Coastal California gnatcatcher occurs in open sage scrub with California sagebrush (*Artemisia californica*) as a dominant or co-dominant species. More abundant near sage scrub-grassland interface than where sage scrub grades into chaparral. Dense sage scrub occupied less frequently than more open sites.	**Moderate potential to occur.** There are several documented occurrences of this species within Kit Carson Park, and suitable riparian habitat occurs adjacent to the Project area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Study Area[2]
least Bell's vireo	*Vireo bellii pusillus*	Endangered/Endangered	Least Bell's vireo primarily occupies riverine riparian habitats, including dry portions of intermittent streams that typically provide dense cover within 3-6 feet of the ground, often adjacent to a complex, stratified canopy. Prey items include bugs, beetles, grasshoppers, moths, spiders, and caterpillars. They glean insects from leaves, twigs, and branches by hovering and picking prey off these stationary objects, and also utilize aerial pursuit.	**Moderate potential to occur.** There are several documented occurrences of this species within Kit Carson Park, and suitable riparian habitat occurs adjacent to the Project area.
Southwestern willow flycatcher	*Empidonax traillii extimus*	Endangered/Endangered	Willow flycatcher is found in bushes, willow thickets, brushy fields, and upland groves. It breeds in thickets of deciduous trees and shrubs, especially willows, or along woodland edges. It is often found near streams or marshes (especially in southern part of range).	**Moderate potential to occur.** There are documented occurrences of this species approximately 2.5 miles southeast of the Study Area, and suitable habitat for this species occurs adjacent to the Project area.
Swainson's hawk	*Buteo swainsoni*	None/Threatened	Swainson's hawk spends the breeding season in the Central Valley of California and is commonly found in agricultural areas or open grasslands containing solitary trees for nesting. Diet consists of insects, small mammals and reptiles.	**Low potential to occur.** Although suitable nesting habitat exists within the Study Area, and potentially suitable foraging habitat exists approximately 1.7 miles southeast of the Study Area within agricultural land, the most recent documented occurrences of this species are from the early 1900's and this species is thought to be extirpated from the vicinity of the site.
tricolored blackbird	*Agelaius tricolor*	None/Threatened, SSC	Tricolored blackbird is a colonial species found almost exclusively in California. It utilizes wetlands, marshes and agricultural grain fields for foraging and nesting. The tricolored blackbird population has declined significantly in the past 6 years due to habitat loss and harvest of grain fields before young have fledged.	**Not expected to occur.** Suitable habitat for this species is absent from the Study Area, and there has not been a documented occurrence of this species in the vicinity of Escondido since 1906. This species is presumed extirpated from the vicinity of the Study Area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Study Area[2]
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	Threatened/Endangered	Western yellow-billed cuckoo inhabits woodlands, thickets, orchards, and streamside groves. It breeds mostly in dense deciduous stands, often in willow groves around marshes and in the west, mostly in streamside trees, including cottonwood-willow groves in arid country. It forages by scaling through shrubs and trees, gleaning insects from foliage and branches.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area.
yellow-breasted chat	*Icteria virens*	None/SSC	Yellow-breasted chat is found in brushy tangles, briars, and stream thickets. It breeds in very dense scrub (such as willow thickets), often along streams and at the edges of swamps or ponds. It is sometimes found in dry overgrown pastures, and upland thickets along margins of woods.	**Not expected to occur.** Suitable habitat is not present within or adjacent to the Study Area.
Mammals				
American badger	*Taxidea taxus*	None/SSC	American badger is most abundant in drier open stages of most shrub, forest and grassland habitats with friable soils. It digs burrows for cover and will reuse burrows occasionally, but may also dig new burrows each night in the summer. Its diet consists of rodents, small mammals, reptiles, insects, birds and carrion.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area.
big free-tailed bat	*Nyctinomops macrotis*	None/SSC	Big free-tailed bat mainly inhabits rugged, rocky habitats in arid landscapes. It has been located in a variety of plant associations including desert scrub, woodlands, and evergreen forests. It is a seasonal migrant and roosts mainly in the crevices of cliff rocks although there is some documentation of roosting in buildings, caves, and tree cavities.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area.
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	None/SSC	Dulzura pocket mouse resides in montane hardwood, valley foothill hardwood-conifer, valley foothill hardwood, annual grassland, sagebrush, chamise-redshank and montane chaparral, and coastal scrub habitats. It occurs in greatest abundance in habitats where grassland and chaparral are in close proximity.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the proposed Study Area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Study Area[2]
pallid bat	*Antrozous pallidus*	None/SSC	Pallid bat occupies a variety of habitats including grassland, shrubland, woodland and forests from sea level up through mixed conifer forest. It roosts in caves, mines, crevices and occasionally hollow trees or buildings, and prefers open habitats for foraging.	**Moderate potential to occur.** Suitable roosting and foraging habitat exist within Study Area, and there are documented occurrences of this species approximately 2 miles northwest of the site.
pocketed free-tailed bat	*Nyctinomops femorosaccus*	None/SSC	Pocketed free-tailed bat is found in pinyon-juniper woodlands, desert scrub, desert succulent scrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis habitats. It prefers rock crevices in cliffs for roosting in rocky desert areas with high cliffs or rock outcrops.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	None/SSC	San Diego black-tailed jackrabbit is a habitat generalist occurring in open areas or semi-open country, typically in grasslands, agricultural fields or sparse coastal scrub; however, it is generally not found in chaparral or woodland habitats.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area.
San Diego desert woodrat	*Neotoma lepida intermedia*	None/SSC	San Diego desert woodrat is most abundant in rocky areas with Joshua trees, but common to abundant in Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. It eats buds, fruits, seeds, bark, leaves, and young shoots of many plant species. It is largely dependent upon prickly pear for water balance in desert habitats, although it can be sustained on creosote year-round. It prefers moderate to dense canopy cover.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area.
Townsend's big-eared bat	*Corynorhinus townsendii*	None/SSC	Townsend's big-eared bat is found throughout most of western North America. It hibernates and roosts in caves and mines near entrances, or cave like structures such as buildings or under decks. It forages in forested habitats along open edges.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area.

Common Name	Scientific Name	Federal/State Status[1]	Habitat Associations	Potential to Occur in the Study Area[2]
western mastiff bat	*Eumops perotis californicus*	None/SSC	Western mastiff bat occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban areas. Suitable habitat consists of extensive open areas with abundant roost locations provided by crevices in rock outcrops and buildings. When roosting in rock crevices, this species needs vertical faces to drop off to take flight. Catches and feeds on insects in flight.	**Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the Study Area.
western yellow bat	*Lasiurus xanthinus*	None/SSC	Western yellow bat is found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. It roosts in trees in, and near, palm oases and riparian habitat.	**Moderate potential to occur.** Suitable roosting and foraging habitat exist within Study Area, and there are documented occurrences of this species approximately 2 miles northwest of the site.

[1]Status Legend:

SSC: Species of Special Concern (CDFW)
FP: Fully Protected (CDFW)

[2] Definitions Regarding Potential for Occurrence

- Not expected to occur – Habitat on and adjacent to the Project Area is unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, and disturbance regime).
- Low – Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of poor quality. The species is not likely to found on the site.
- Moderate – Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High – All of the habitat components meeting the species requirements are present, and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present – Species is observed on the site or has been recorded (i.e., CNDDB, or other reports) on the site recently.

Sources

California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Database (CNDDB). Rarefind, Version 5 (Commercial Subscription). Accessed July 2021. Sacramento, California. Website https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx#.

United States Fish and Wildlife Service (USFWS). 2021. Information for Planning and Consultation (IPaC). The Environmental Conservation Online System. Accessed July 2021. Auburn, California. Website https://ecos.fws.gov/ipac/.

APPENDIX B
SPECIAL-STATUS PLANT SPECIES WITH KNOWN OR POTENTIAL OCCURRENCE IN THE VICINITY OF THE EAGLE SCOUT LAKE BRIDGE PROJECT IN SAN DIEGO COUNTY, CALIFORNIA

APPENDIX B
Special-Status Plant Species with Known or Potential Occurrence in the Vicinity of the Eagle Scout Lake Bridge Project in Escondido, California

Scientific Name	Common Name	Status (Federal/State, CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the Study Area
Acanthomintha ilicifolia	San Diego thorn-mint	Threatened/Endangered, CRPR 1B.1	Annual herb found in chaparral, coastal scrub, valley and foothill grassland; vernal pools (clay, openings). Elevation 35-3,150 feet. Blooms Apr-Jun.	**Low potential to occur**. Suitable habitat for this species is present in the coastal scrub west of the Study Area, but does not occur within or adjacent to the Study Area.
Adolphia californica	California adolphia	None/None, CRPR 2B.1	Perennial deciduous shrub found in chaparral, coastal scrub, valley and foothill grassland (clay). Elevation 35-2,430 feet. Blooms Dec-May.	**Low potential to occur**. Suitable habitat for this species is present in the coastal scrub west of the Study Area, but does not occur within or adjacent to the Study Area.
Ambrosia pumila	San Diego ambrosia	Endangered/None, CRPR 1B.1	Perennial rhizomatous herb found in open habitats in coarse substrates near drainages and in upland areas on clay slopes. Also occurs in a variety of associations dominated by sparse grasslands or marginal wetlands, such as river terraces, pools, and alkali playas. Elevation 65-1,360 feet. Blooms Apr-Oct.	**Low potential to occur**. Critical Habitat for this species occurs just west of the Project Area, and there is potentially suitable habitat for this species in undisturbed habitat west of the Study Area; however, the highly developed and disturbed nature of the Study Area likely precludes this species from occurring.
Astragalus albens	Cushenbury milk-vetch	Endangered/None, CRPR 1B.1	Perennial herb found in Joshua tree "woodland", Mojavean desert scrub, and pinyon and juniper woodland. Elevation 3,595-6,560 feet. Blooms Mar-Jun.	**Not expected to occur**. Suitable habitat for this species is not present within or adjacent to the Study Area.
Baccharis vanessae	Encinitas baccharis	Threatened/Endangered, CRPR 1B.1	Perennial deciduous shrub found in chaparral and cismontane woodland. Elevation 195-2,360 feet. Blooms Aug-Nov.	**Not expected to occur**. Suitable habitat for this species is not present within or adjacent to the Study Area.
Bloomeria clevelandii	San Diego goldenstar	None/None, CRPR 1B.1	Perennial bulbiferous herb found in chaparral, coastal scrub, valley and foothill grassland; vernal pools. Elevation 165-1,525 feet. Blooms Apr-May.	**Low potential to occur**. Suitable habitat for this species is present in the coastal scrub west of the Study Area, but does not occur within or adjacent to the Study Area.

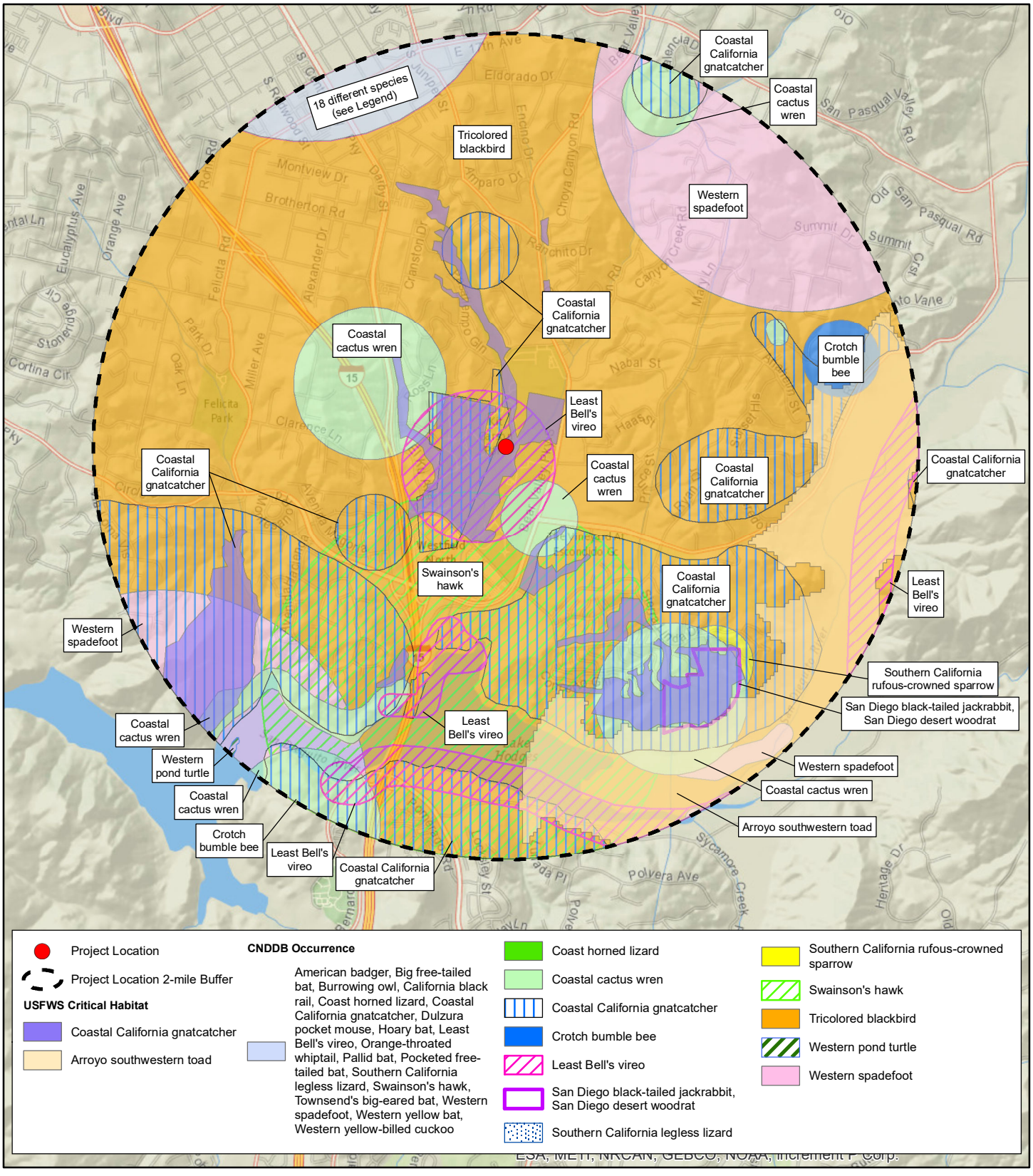
Scientific Name	Common Name	Status (Federal/State, CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the Study Area
Brodiaea filifolia	thread-leaved brodiaea	Threatened/Endangered, CRPR 1B.1	Perennial bulbiferous herb found in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland; vernal pools. Elevation 80-3,675 feet. Blooms Mar-Jun.	**Low potential to occur**. Suitable habitat for this species is present in the coastal scrub west of the Study Area, but does not occur within or adjacent to the Study Area.
Ceanothus verrucosus	wartstemmed ceanothus	None/None, CRPR 2B.2	Perennial evergreen shrub found in chaparral. Elevation 5-1,245 feet. Blooms Dec-May.	**Not expected to occur**. Suitable habitat for this species is not present within or adjacent to the Study Area.
Centromadia parryi	Southern tarplant	None/None, CRPR 1B.1	Annual herb found in marshes and swamps, valley and foothill grassland; vernal pools. Elevation 0-1,575 feet. Blooms May-Nov.	**Low potential to occur**. Suitable habitat for this species is present adjacent to the east side of the staging area, but does not occur within or adjacent to the Project area.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None, CRPR 1B.1	Annual herb found in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland. Elevation 0-2,100 feet. Blooms Apr-Sep.	**Low potential to occur**. Suitable habitat for this species is present adjacent to the east side of the staging area, but does not occur within or adjacent to the Project area.
Clarkia delicata	delicate clarkia	None/None, CRPR 1B.2	Annual herb found in chaparral and cismontane woodland. Elevation 770-3,280 feet. Blooms Apr-Jun.	**Not expected to occur**. Suitable habitat for this species is not present within or adjacent to the Study Area.
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	None/None, CRPR 1B.2	Perennial evergreen shrub found in chaparral and cismontane woodland. Elevation 100-2,590 feet. Blooms Apr-Jun.	**Not expected to occur**. Suitable habitat for this species is not present within or adjacent to the Study Area.
Dudleya variegata	variegated dudleya	None/None, CRPR 1B.2	Perennial herb found in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; vernal pools. Elevation 10-1,905 feet. Blooms Apr-Jun.	**Low potential to occur**. Suitable habitat for this species is present in the coastal scrub west of the Study Area, but does not occur within or adjacent to the Study Area.
Ericameria palmeri var. palmeri	Palmer's goldenbush	None/None, CRPR 1B.1	Perennial evergreen shrub found in chaparral and coastal scrub. Elevation 100-1,970 feet. Blooms (Jul)Sep-Nov.	**Low potential to occur**. Suitable habitat for this species is present in the coastal scrub west of the Study Area, but does

Scientific Name	Common Name	Status (Federal/State, CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in the Study Area
				not occur within or adjacent to the Study Area.
Eryngium aristulatum var. *parishii*	San Diego button-celery	Endangered/Endangered, CRPR 1B.1	Annual/perennial herb found in coastal scrub, valley and foothill grassland; vernal pools. Elevation 65-2,035 feet. Blooms Apr-Jun.	**Not expected to occur**. Suitable habitat for this species is not present within or adjacent to the Study Area.
Ferocactus viridescens	San Diego barrel cactus	None/None, CRPR 2B.1	Perennial stem succulent found in chaparral, coastal scrub, valley and foothill grassland, vernal pools. Elevation 10-1,475 feet. Blooms May-Jun.	**Not expected to occur**. Suitable habitat for this species is not present within or adjacent to the Study Area.
Isocoma menziesii	decumbent goldenbush	None/None, CRPR 1B.2	Perennial shrub found in chaparral and coastal scrub. Elevation 35-445 feet. Blooms Apr-Nov.	**Low potential to occur**. Suitable habitat for this species is present in the coastal scrub west of the Study Area, but does not occur within or adjacent to the Study Area.
Iva hayesiana	San Diego marsh-elder	None/None, CRPR 2B.2	Perennial herb found in marshes and swamps, playas. Elevation 35-1,640 feet. Blooms Apr-Oct.	**Low potential to occur**. Suitable habitat for this species is present adjacent to the east side of the staging area, but does not occur within or adjacent to the Project area.
Quercus dumosa	Nuttall's scrub oak	None/None, CRPR 1B.1	Perennial evergreen shrub found in chaparral, closed-cone coniferous forest, and coastal scrub. Elevation 50-1,310 feet. Blooms Feb-Apr (May-Aug).	**Low potential to occur**. Suitable habitat for this species is present in the coastal scrub west of the Study Area, but does not occur within or adjacent to the Study Area.

Status Legend:
CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere
CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Sources
California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed July 2021].

APPENDIX C
CALIFORNIA NATURAL DIVERSITY DATABASE RESULTS MAP FOR SPECIAL-STATUS PLANTS AND WILDLIFE



Project Location

Source: USFWS Critical Habitat and CDFW CNDDB (2021)

0 0.5 1 Mile

0 1 2 Kilometers

N

Scale 1:42,000

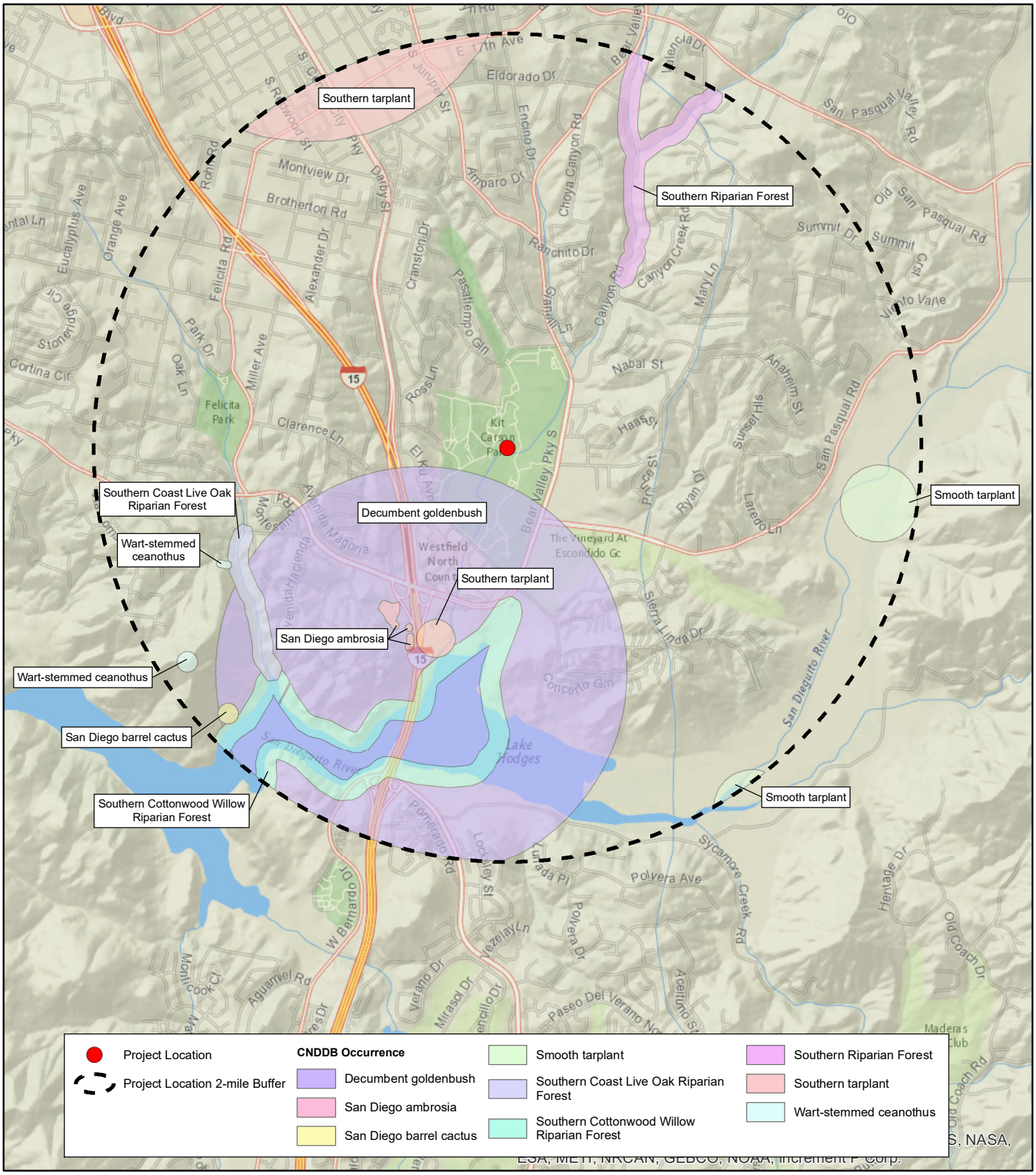
CNDDB Occurrences within 2 Miles (Animal)

Eagle Scout Lake Bridge Project

San Diego County, California

KLEINFELDER

Bright People. Right Solutions.



Source: USFWS Critical Habitat and CDFW CNDDB (2021)

0 0.5 1 Mile

0 1 2 Kilometers

N

Scale 1:42,000

CNDDB Occurrences within 2 Miles (Plant)

Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
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APPENDIX D

REPORT SUMMARIZING RESULTS OF THE SAND LAKE WESTERN POND TURTLE SURVEYS, AECOM 2011

AECOM
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Suite 500
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619.233.1454 tel
619.233.0952 fax

July 6, 2011

Jeff Warner
Environmental Programs Specialist
Utilities Administration Division
City of Escondido
201 North Broadway
Escondido, California 92025

Subject: Report Summarizing Results of the Sand Lake Western Pond Turtle Surveys

Dear Mr. Warner:

This letter summarizes results of focused surveys conducted by AECOM to determine the presence of the western pond turtle in support of environmental permitting for the dredging of Sand Lake.

Project Description

The City of Escondido has proposed a project to dredge a portion of Sand Lake at Kit Carson Park. Dredging would occur with a loader stationed adjacent to the pond, and work would only occur along a portion of the pond margins. No work is planned along the artificial dam structure where the margin is dominated by emergent vegetation, but rather is concentrated in areas that have become sandbars through years of sediment deposition from the upper watershed.

Background Information

Western pond turtle (*Actinemys marmorata*) is the only native turtle in coastal California. A habitat generalist, the pond turtle will inhabit slow-moving creeks, marshes, ponds, lakes, reservoirs, canals, and even sewage treatment plants. The pond turtle is considered a Federal Species of Concern by the U.S. Fish and Wildlife Service (USFWS) and protected as a California Species of Concern by the California Department of Fish and Game (CDFG). In San Diego, the pond turtle has been designated for regulatory protection from development projects and has requirements for management and adaptive monitoring under the San Diego County Multiple Species Conservation Program (MSCP). Further protection is provided by the wetlands section of the Resource Protection Ordinance of the County of San Diego which has a no-net-loss standard for aquatic habitat that might be occupied by pond turtles; however, this does not cover upland nesting areas.

Survey Methodology

To determine western pond turtle presence in Sand Lake, visual encounter surveys and trapping surveys were conducted during a 3-day period from June 13–15, 2011.

Prior to setting or checking traps, a visual encounter survey was conducted each day. The visual encounter survey was conducted by scanning the entire shoreline and pond surface

with binoculars for turtles. Data recorded during the visual encounter survey included daily weather conditions and an assessment of habitat features present at Sand Lake. Photographs were also taken and are presented in Attachment 1.

Following the visual survey, five submersible hoop traps baited with sardines were placed in Sand Lake. Traps were placed on June 13, checked and rebaited June 14, and pulled June 15. Traps were marked with a scientific collection identification number, per CDFG permit requirements. Trap locations are illustrated in Attachment 2. All species caught were identified and released (no specific direction on the removal of nonnative species was provided by CDFG). Methods used were generally consistent with the 2006 USGS western pond turtle trapping survey protocol for the southcoast ecoregion (USGS 2006).

Surveys were conducted by an experienced AECOM biologist who has over 10 years of experience with California reptiles and amphibians; holds USFWS 10(a) permits for California red-legged frog and California tiger salamander; holds a CDFG scientific collections permit; and has conducted pond turtle surveys throughout California for numerous clients, including a large-scale population study with over 90 pond turtles captured and marked for Beale Air Force Base in 2010.

Results

Sand Lake is a two-lobed pond partially divided by a large (and growing) sandbar and is located in the center of a large city park. Approximately 40% of the pond margin is vegetated with a 2- to 3-meter-wide strip of emergent vegetation, including dense tules. Maximum depth was not measured; however, based on bank slope and the size of the earthen dam structure, it is estimated to be a maximum of 2 to 3 meters deep. The sand substrate of the pond has submerged vegetation cover of greater than 75% algae or other green matter.

Visual encounter surveys revealed a population of red-eared sliders (*Trachemys scripta elegans*) in Sand Lake with four red-eared sliders observed June 13, six observed June 14, and eight observed June 15. The 2011 trapping effort included approximately 240 trap hours. No western pond turtle were observed or trapped during the study. Six red-eared sliders were captured and released from traps, which helped to confirm their identification from the visual encounter surveys. No other turtles were found in Sand Lake. Survey data are presented in Attachment 3.

Western pond turtle are not expected to occur in this location due to the lack of natural habitats in the vicinity, high levels of recreational disturbance, and competition from nonnative species. Western pond turtle have not been previously reported in any of the ponds in Kit Carson Park, including Sand Lake. The only known occurrence of western pond turtle within 5 miles of Sand Lake is a California Natural Diversity Database (CNDDB) occurrence for western pond turtle in Lake Hodges, approximately 2 miles southwest of Sand Lake (CDFG 2011). This sighting lacks any information in the CNDDB, including date or number of individuals observed and it is unknown whether a population of western pond turtle currently resides in Lake Hodges. Another sighting farther west in Escondido Creek was reported by Madden-Smith et al. (2005), but this sighting is over 10 miles from Sand Lake. While the outflow from Sand Lake eventually flows into Lake Hodges, it goes into

underground culverts after leaving the park and remains underground for over a mile. This is likely to act as a barrier for movement between Sand Lake and populations in Lake Hodges, if they exist.

Because western pond turtle is not known nor expected to occur in Sand Lake, the proposed project would have no impact on western pond turtle and supplemental mitigation for this species is not recommended.

Respectfully,

Andy Hatch, MS
Wildlife Biologist
(916) 798-3108

Attachment 1: Survey Photographs
Attachment 2: Site Map
Attachment 3: Survey Data Sheet

REFERENCES

California Department of Fish and Game (CDFG). 2011. California Natural Diversity Database. Habitat Conservation Division, Wildlife and Habitat Data Analysis Branch.

Madden-Smith, M. C., E. L. Ervin, K. P. Meyer, S. A. Hathaway, and R. N. Fisher. 2005. *Distribution and Status of the Arroyo Toad (Bufo californicus) and Western Pond Turtle (Emys marmorata) in the San Diego MSCP and Surrounding Areas*. U. S. Geological Survey final report prepared for County of San Diego and California Department of Fish and Game. San Diego, CA. 183 pp.

U. S. Geological Survey. 2006. USGS Western Pond Turtle (*Emys marmorata*) Trapping Survey Protocol for the Southcoast Ecoregion. U. S. Geological Survey protocol. San Diego, CA. 30 pp.

Attachment 1
Survey Photographs

Mr. Jeff Warner
July 6, 2011
Attachment 1 Survey Photographs

Photograph 1 : Sand Lake looking northwest at the northern lobe of Sand Lake

Photograph 2 : Sand Lake looking northwest at the southern lobe of Sand Lake

AECOM

Mr. Jeff Warner
July 6, 2011
Attachment 1 Survey Photographs

Photograph 3 : Red-Eared Slider

Attachment 2
Site Map

Source: LANDISCOR 2010; AECOM 2011

100 50 0 100 Feet

Scale: 1 = 1,200; 1 inch = 100 feet

Figure 1
Trap Locations, Sand Lake Western Pond Turtle Surveys

Path: P:\2011\11280146.01_Esc_JURMP\06GIS\6.3_Layout\GIS_Graphics\SandLake_PondTurtle.mxd, 6/27/2011, SteinB

Attachment 3
Survey Data Sheet

AECOM

Mr. Jeff Warner
July 6, 2011
Attachment 3 Survey Data

Table 1. Sand Lake Western Pond Turtle Survey Data

Visual Encounter Survey

HABITAT FEATURES

Pond type ☐ Natural ☒ Other **Describe:** Artificial pond at park that is currently partially divided by sand bar

Water present? ☐ No ☒ Yes **Estimate maximum depth:** approx. 2–3m **Pond diameter:** 30m (each side of bar)

Water control structure present? ☐ No ☒ Yes **Describe:** earth dam

Emergent/margin vegetation: ☐ none ☐ cattails ☐ bulrush ☒ willow ☐ blackberry ☒ other: tules

dominant type/describe: some willows, and many tules along earth dam, and northern lobe of pond

Emergent veg cover ☐ 0% ☐ 1–5% ☐ 6–10% ☐ 11–25% ☒ 26–50% ☐ 51–75% ☐ 76–100%

% of margin that is vegetated (nearest 5%): 30%

Average width of vegetation strip along margin (m): 2–3 m

Submerged vegetation: ☐ none ☒ algae/green matter ☐ rootballs ☐ other:

Submerged veg cover ☐ 0% ☐ 1–5% ☐ 6–10% ☐ 11–25% ☐ 26–50% ☐ 51–75% ☒ 76–100%

Basking sites present ☐ No ☒ Yes

Describe basking sites: Very limited basking sites present. A few floating logs along tules, trash, sand beaches.

Date: 6/13/11 **Surveyor(s):** ARH **Location:** Sand Lake **Photo #s:** 4167-93 **TIME @ Start:** 13:40 **End:** 14:15 **Total VES search time:** 0:35 **Air Temp @ Start** 27 **C End:** 27 **C** **H2O Temp @ Start** 25 **C End:** 25 **C** **Cloud cover(%):** ☒ <25 ☐ 25-50 ☐ >50 **Wind:** ☒ calm ☐ light ☐ windy **Species Observed:** 4 red-eared sliders, American bullfrog, largemouth bass, bluegill	**Date:** 6/14/11 **Surveyor(s):** ARH **Location:** Sand Lake **Photo #s:** 4167-93 **TIME @ Start:** 11:25 **End:** 11:47 **Total VES search time:** 0:22 **Air Temp @ Start** 27 **C End:** 27 **C** **H2O Temp @ Start** 25 **C End:** 25 **C** **Cloud cover(%):** ☒ <25 ☐ 25-50 ☐ >50 **Wind:** ☒ calm ☐ light ☐ windy **Species Observed:** 6 red-eared sliders, American bullfrog, largemouth bass	**Date:** **6**/15/11 **Surveyor(s):** ARH **Location:** Sand Lake **Photo #s:** 4167-93 **TIME @ Start:** 11:10 **End:** 11:35 **Total VES search time:** 0:25 **Air Temp @ Start** 27 **C End:** 27**C** **H2O Temp @ Start** 25 **C End:** 25**C** **Cloud cover(%):** ☒ <25 ☐ 25-50 ☐ >50 **Wind:** ☒ calm ☐ light ☐ windy **Species Observed:** 8 red-eared sliders, American bullfrog, largemouth bass

Trap Data

Trap #	Set Date/Time	Location (UTM 11N)	Check Date/Time	Results	Removal Date/Time	Results
1	6/14/11 13:15	494264 E 3659972 N	6/14/11 11:36	1 red-eared slider	6/15/11 11:41	1 red-eared slider
2	6/14/11 13:22	494220 E 3660009 N	6/14/11 11:48		6/15/11 11:56	
3	6/14/11 13:28	494223 E 3660035 N	6/14/11 11:53		6/15/11 12:14	
4	6/14/11 13:45	494177 E 3660034 N	6/14/11 12:12	1 red-eared slider	6/15/11 12:31	1 red-eared slider
5	6/14/11 14:01	494170 E 3660006N	6/14/11 12:19		6/15/11 12:51	2 red-eared sliders

Appendix C

Cultural Resources Identification Report

CULTURAL RESOURCES IDENTIFICATION REPORT FOR THE EAGLE SCOUT LAKE BRIDGE PROJECT IN THE CITY OF ESCONDIDO, SAN DIEGO COUNTY, CALIFORNIA.

KLEINFELDER PROJECT No.: 20212084.001A

SEPTEMBER 7 2021

Report Completed: September 7, 2021 **Fieldwork Performed:** August 4, 2021

CULTURAL RESOURCES IDENTIFICATION REPORT FOR THE EAGLE SCOUT LAKE BRIDGE PROJECT IN THE CITY OF ESCONDIDO, SAN DIEGO COUNTY, CALIFORNIA.

KLEINFELDER Project No.: 20212084.001A

Project Site Location: 7.5-Minute USGS, Escondido Quadrangle, California.
San Bernardo (Snook) Land Grant.

Prepared for: Elisa Marrone, AICP
Environmental Programs Specialist, Utilities Department
City of Escondido
201 North Broadway, Escondido, CA 92025

Prepared by: KLEINFELDER
201 North Brand Blvd., Suite 200 Glendale, CA 91203
(626) 627-4436

Rachael Nixon, M.A., RPA.
Cultural Resources Program Manager
Senior Archaeologist

Gregorio Pacheco, B.A.
Cultural Resources Project Manager
Archaeologist

STATEMENT OF CONFIDENTIALITY

This report identifies the locations of cultural resources, which are confidential. As nonrenewable resources, archaeological sites can be significantly impacted by disturbances that can affect their cultural, scientific, and artistic values. Disclosure of this information to the public may be in violation of both federal and state laws. To discourage damage resulting from vandalism and artifact looting, cultural resource locations should be kept confidential and report distribution restricted. Applicable U.S. laws include, but are not limited to, Section 304 of the National Historic Preservation Act (16 USC 470w-3) and California state laws that apply include, but are not limited to, Government Code Sections 6250 *et seq.* and 6254 *et seq.*

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
amsl	above mean sea level
APE	area of potential effect(s)
APN	Assessor's Parcel Number
B.A.	Bachelor of Arts
B.P.	before present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
City	City of Escondido
County	San Diego County
CRHR	California Register of Historic Resources
DPR	Department of Parks and Recreation
EIR	Environmental Impact Report
GLO	Bureau of Land Management General Land Office
M.A.	Master of Arts
MND	Mitigated Negative Declaration
MLD	most likely descendant
NAHC	Native American Heritage Commission
ND	Negative Declaration
NETR	Nationwide Environmental Title Research, LLC.
NHPA	National Historic Preservation Act
No.	number
NOP	Notification of Preparation
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
Project	Eagle Scout Lake Bridge Project in San Diego County, California
PRC	Public Resources Code
RPA	Registered Professional Archaeologist
RPO	Resource Protection Ordinance
SCIC	South Coast Information Center
SDSU	San Diego State University
SHPO	State Historic Preservation Officer
SLF	Sacred Lands File
State	State of California
TCR	Tribal Cultural Resource(s)
US	United States
USACE	US Army Corps of Engineers
USGS	United States Geological Survey

MANAGEMENT SUMMARY

The City of Escondido proposes the Eagle Scout Lake Bridge Project in the City of Escondido, San Diego County, California (Project). The Project proposes the construction of a light-load bridge or culvert at Eagle Scout Lake in Kit Carson Park to improve safety for the public and facilitate regular maintenance of the drainage structure. The new structure will improve safety for park patrons by repairing the crossing and associated path for pedestrian use and incorporating handrails that complement existing handrails on nearby crossings.

The City of Escondido is looking to meet and obtain a 401 Water Quality Certification for this Project. As the Project may affect waters of the United States (US), the Project proponent must meet requirements of Sections 401 of the Clean Water Act. Therefore, because the project requires a federal permit, Section 106 of the National Historic Preservation Act (NHPA), is triggered. Specifically, Section 106 of NHPA requires that federal agencies "take into account" the effect of their undertakings on historic properties. The US Army Corps of Engineers (USACE) is a federal agency and since the Project is an "undertaking" as defined at 36 Code of Federal Regulations (CFR) §800.16(y), and the undertaking has the potential to cause effects on historic properties (36 CFR §800.3[a]), it is necessary to identify cultural resources within the Area of Potential Effects (APE). This Cultural Resources Identification Report has been prepared in accordance with the USACE Section 106 Standards. In addition to meeting federal regulations, the Project is also subject to the California Environmental Quality Act (CEQA) as the Project's environmental impacts will be evaluated under CEQA using a Categorical Exclusion.

This report provides a summary of the efforts and results of the California Historical Resources Information System (CHRIS) records search managed by the South Coastal Information Center (SCIC) located at San Diego State University (SDSU); a review of historical maps; research of the Escondido History Center archives; Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search; as well as, the methods, results, resource eligibility, and management recommendations.

The results of the SCIC search identified six previously cultural resources on file with the SCIC within a 0.25-mile radius of the APE, no resources were found to be within the APE. Twenty-two previous cultural resources studies were found to have been conducted within the 0.25-mile radius of the APE, and eight were found to be located within the APE. The NAHC SLF records search resulted in positive findings within the search area. The NAHC provided a list of Native

American contacts to be contacted for additional outreach regarding the Project. Per Section 106 of NHPA and CEQA Assembly Bill (AB) 52 it is the lead federal and state agencies responsibility to conduct tribal consultation with regards to tribal cultural resources that may be of concern to tribe(s) affiliated with the region, and as needed, work with tribe(s) to develop appropriate avoidance and/or mitigation measures. Kleinfelder archaeologist did not complete tribal outreach, as it is assumed that the USACE and City of Escondido will complete tribal consultation in accordance with federal and state regulations.

An intensive pedestrian survey was conducted on August 4, 2021, by Kleinfelder archeologist Darryl Dang, Bachelor of Arts (B.A.). No new cultural resources were identified and no previously recorded resources were observed during the fieldwork. The survey was conducted using 3-meter-wide parallel transects. No vehicles were used other than on paved, dirt, or gravel roads.

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APPENDICES

1 INTRODUCTION

This cultural resources identification report provides an overview of the Eagle Scout Lake Bridge Project (Project), setting and description, Area of Potential Effect (APE), background and objectives, regulatory framework, natural and cultural contexts, research and field methods, results of research and field inventory, and management recommendations.

1.1 PROJECT SETTING AND DESCRIPTION

The Project is located within the grounds of the Kit Carson Park in the City of Escondido (City) at 3333 Bear Valley Parkway on Assessor's Parcel Number (APN) 760-244-36-00 and within the southern portion of the City. The Project is surrounded by suburban neighborhood between the communities of East Canyon (and Bear Valley Parkway) to the east and Lake Hodges (and Interstate Highway 15 Express) to the west (Appendix B, Figures 1 and 2).

The Project involves the removal of the existing damaged 72-inch by 44-inch corrugated steel oval "squash" pipe measuring 17 feet in length and constructing a new cast-in-place double wall 34-foot by 16-foot concrete box culvert. Over time the current culvert transporting water to Eagle Scout Lake has been damaged by large flow events. Portions of the path adjacent to the channel have collapsed and consequently have been closed for use by the public. The Project also includes the relocation of a portion of an 18-inch reclaimed water line and a 4-inch PVC fiber optic conduit located in the vicinity of the existing culvert. Both utilities will be relocated to the new concrete box culvert. The Project area is 3,986 square feet (0.09 acre) that encompasses the culvert replacement, reclaimed water line and fiber optic conduit relocation, regrading of the drainage channel and repair/replacement of the pedestrian crossing. Construction staging and access will take place in current parking areas and along existing roadways.

The purpose of the proposed Project is to improve safety for the public and facilitate regular maintenance of the drainage structure. The new structure will improve safety for park patrons by repairing the crossing and associated path for pedestrian use and incorporating handrails that complement existing handrails on nearby crossings. The crossing's integrated maintenance features will improve safety for City operations personnel responsible for regular facility maintenance. Eagle Scout Lake was intended to act as a sedimentation pond for the upstream watershed and in the pond's current condition, it is not performing as designed. To function properly, this crossing requires regular maintenance by clearing sediment which can accumulate

below the proposed crossing. The proposed Project design includes a maintenance ramp for easy and safe access of City personnel to remove sediment and debris.

1.2 AREA OF POTENTIAL EFFECT

The APE measures approximately 5.78 acres and includes the Project footprint which is composed of the access routes, the equipment staging area, the temporary and indirect impact areas and the permanent and direct impact areas (Appendix B, Figure 3). The APE is located within Kit Carson Park, one of the City's largest municipal parks with 285 acres of land. The APE's permanent and direct impact areas where ground disturbance will be conducted is located within Eagle Scout Lake, located in the center portion of the park, with El Arroyo picnic area to the north, Tennis Center to the south, Disc Golf Course and Escondido Sport Center to the east, and Queen Calafia's Magical Circle to the west. Based upon the project design, staying within similar footprint and no changes in height or differing structures, the direct and indirect APE are comprised of the same APE.

The elevation range of the APE varies from approximately 330 to 900 feet above mean sea level (amsl). The Park has only developed approximately 100 acres of the total 285 into various recreational and community facilities. The remaining 185 acres have been designated to be a natural reserve (Jow 2013).

1.3 BACKGROUND AND OBJECTIVES

The purpose of this assessment is to inventory the APE for potential cultural resources that may be present and identify measures to avoid or mitigate potential impacts to such resources. Cultural resources include archaeological, architectural history, and Native American (tribal) cultural resources.

For this analysis, Kleinfelder conducted a cultural resources literature search through the California Historical Resources Information System (CHRIS) records search with the South Coastal Information Center (SCIC) at San Diego State University, to assess potential presence of cultural resources within the APE and a 0.25-mile radius around the APE. The records review and literature search included reviews of the Escondido History Center historical photographs, historical maps, previous survey reports, and registers of historical resources. This was followed by a request of a Sacred Lands File (SLF) search with the Native American Heritage Commission (NAHC). Once background research had been completed, Kleinfelder completed an intensive

pedestrian survey of the APE in order to identify and/or update cultural resources within the APE. The Project has been conducted in accordance with Section 106 of the National Historic Preservation Act (NHPA) and California Environmental Quality Act (CEQA).

2 REGULATORY CONTEXT

The following section provides the federal, State of California (State), and local laws, regulations, and ordinances that are applicable to cultural resources compliance for this Project. The U.S. Army Corps of Engineers (USACE) is the federal lead agency and the City of Escondido is the lead agency under CEQA for this Project.

2.1 SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary set of federal laws governing projects that may affect cultural resources. Section 106 of the NHPA (36 Code of Federal Regulations [CFR] §800) requires that projects undertaken by federal agencies (and/or federally funded projects or projects requiring federal approval) consider the effects of their actions on properties that may be eligible for listing or are listed in the National Register of Historic Places (NRHP). To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological and architectural properties) must be inventoried and evaluated for listing in the NRHP. Although compliance with Section 106 is the responsibility of the lead federal agency, consultants in support of the agency or project proponent may be delegated all or portions of the Section 106 process. The Eagle Scout Lake Bridge Project is subject to Section 106 because the City of Escondido is looking to obtain a 401 Water Quality Certification for this Project. As the Project may affect waters of the United States (US), the Project proponent must meet requirements of Sections 401 of the Clean Water Act. Therefore because the project requires a federal permit, Section 106 of the National Historic Preservation Act (NHPA), is triggered. The Section 106 process includes four primary steps, listed below.

1. Initiation of consultation with consulting parties (36 CFR §800.3).
2. Identification and evaluation of historic properties within the APE (36 CFR §800.4).
3. Assessment of adverse effects on historic properties within the APE (36 CFR §800.5). If there are historic properties that will be affected, consult with the California State Historic Preservation Officer (SHPO) regarding adverse effects, both direct and indirect, on historic properties. If there are no historic properties that will be affected, implementation of the project in accordance with the findings of no adverse effect shall proceed (36 CFR 36 §800.5[d][1]).
4. Resolve adverse effects on historic properties within the APE (36 CFR 800.6). Continue consultation among the federal agency and consulting parties to avoid and mitigate adverse effects. The Advisory Council on Historic Preservation (ACHP) provides comments to head of the federal agency, and the ACHP comments must be considered

when final agency decision on the undertaking is made (move forward with the project, stop pursuant to mitigation, step back through Section 106 process) (36 CFR 800.7).

2.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970, AS AMENDED

The CEQA requires State and local agencies to identify and reduce, if feasible, the significant, negative environmental impacts of land use decisions.

CEQA Guidelines: Title 14 CCR Section 15064.4 subsection (b)

This section of CEQA defines "historical resource," addresses reburial options for Native American remains, and presents the preferred mitigation of historical resources.

CEQA Guidelines: Title 14 CCR Section 15064.5

This section of CEQA identifies which resources are considered cultural resources, as stated below.

- Resource(s) listed or eligible for listing on the California Register of Historic Places (CRHR) (Title 14 CCR Section 15064.5(a)(1).
- Resource(s) either listed in the NRHP or in a "local register of historical resources" unless "the preponderance of evidence demonstrates that it is not historically or culturally significant," (Title 14 CCR Section 15064.5(a)(2)).
- Resources identified as significant in a historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code (PRC) [Title 14 CCR Section 15065.5(a)(2)].

In addition, Subdivision (g) provides the guidelines referenced below regarding historical surveys.

A resource identified as significant in a historical survey may be listed in the CRHR if the survey meets all the following criteria:

- The survey has been or will be included in the State Historic Resources Inventory,
- The survey and the survey documents were prepared in accordance with procedures and requirements of the California Office of Historic Preservation (OHP),
- The resource is evaluated and determined by OHP to have a significance rating of Category 1 to 5 on the Department of Parks and Recreation (DPR) Historic Resources Inventory Form,

- If the survey is five years or older at the time of its nomination for inclusion in the CRHR, the survey is updated to identify historic resources that have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminished the significance of the resource, and
- Resources identified during such surveys are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates otherwise.
- A final category of "historical resources" may be determined at the discretion of the lead agency when: Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, education, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record [Title 14 CCR Section 15064.5(a)(3)].

When an Initial Study identifies the existence of, or the probable likelihood of, Native American human remains within a project, the lead agency shall work with the appropriate Native Americans as identified by NAHC. An applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by NAHC (Title 14 CCR Section 15064.5(d)).

CEQA Guidelines: Title 14 CCR Section 15064.5(b)

Section 15124(b) addresses mitigation, and states that the preferred mitigation for historical resources is treatment in a manner consistent with Secretary's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The preferred mitigation for archaeological sites is preservation in place.

CEQA Guidelines: Title 14 CCR Section 15064.7 "Thresholds of Significance"

This section encourages agencies to develop thresholds of significance to be used in determining potential impacts and defines the term "cumulatively significant".

CEQA Guidelines: Title 14 CCR Section 15126.4 "Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects", sub-section (b) "Mitigation Measures Related to Impacts on Historical Resources"

Subsection (b) discusses:

- Impacts of maintenance, repair, stabilization, restoration, conservation, or reconstruction of a historical resource,
- Documentation as a mitigation measure, and
- Mitigation through avoidance of damaging effects on any historical resource of an archaeological nature, preferably by preservation in place, or by data recovery through excavation if avoidance or preservation in place is not feasible; data recovery must be conducted in accordance with an adopted data recovery plan.

CEQA Appendix G Section V

This appendix is a checklist that identifies potential impacts to historical and archaeological resources, and/or human remains. The checklist includes the following questions, which are used to determine if a potential project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5,
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5,
- Disturb any human remains, including those interred outsides of formal cemeteries.

Questions on the checklist are answered to assess whether impacts associated with a project would be potentially significant, less than significant with mitigation, less than significant, or have no impact. The final determination of project-related impacts is made by the lead agency on a project.

CEQA Assembly Bill 52 –Tribal Consultation and Tribal Cultural Resources

Assembly Bill (AB) 52 amended CEQA to address California Native American tribal concerns regarding how cultural resources of importance to tribes are treated under CEQA. As such, CEQA specifies that a project that may cause a substantial adverse change in the significance of a “tribal cultural resource” [as defined in PRC 21074(a)] is a project that may have a significant effect on the environment. According to AB 52, tribes may have expertise in tribal history and “tribal knowledge about land and tribal cultural resources (TCR) at issue should be included in environmental assessments for projects that may have a significant impact on those resources.”

The AB 52 process entails the following:

- The CEQA lead agency must begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if the tribe has requested such notification to the lead agency, in writing. The notification request requires that the lead agency inform tribes who have requested such notification within their geographic area. Additionally, there are timelines in the legislation for notification, response to request for consultation, and initiation of consultation. Specifically, the lead state agency is required to notify tribe(s) that have requested notification under AB 52 within 15 days of determining there is a project; the tribe(s) then has 30 days to respond to this notification and request consultation: upon receipt of a request for consultation, the lead agency must then initiate consultation with the tribe(s) within 30 days.
- AB 52 applies to the following CEQA documents: Negative Declaration (ND), Mitigated Negative Declaration (MND), or Notification of Preparation (NOP) of an Environmental Impact Report (EIR). Such documents cannot be released for public review before tribal consultation has concluded and shall not contain any confidential information that the Tribe has requested be omitted from public review.

AB 52 further defines the following legislative terms:
Public Resource Code (PRC) 21074 (Tribal Cultural Resource [TCR]): The statute identifies TCR as a separate and distinct category of resource, separate from a historical resource. New PRC Section 21074 further defines a TCR as any of the following under its subsections:

a) Sites, features, places, and objects with cultural value to descendant communities or cultural landscapes that are any of the following:
    - Listed on the CRHR.
    - Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
    - Deemed to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

b) Sacred places, including, but not limited to, Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines that meet either of the following criteria:
    - Listed on the California NAHC's SLF pursuant to Section 5097.94 or 5097.96 and a California Native American tribe has submitted sufficient evidence to the lead

agency demonstrating that significance to the California Native American tribe or contain known graves and cemeteries of California Native Americans.

- Listed or determined pursuant to criteria set forth in subdivision (g) of Section 5024.1 to be eligible for listing in the CRHR.

c) A cultural landscape is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

d) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "non-unique archaeological resource" as defined in subdivision (h) of Section 21083.2, also may be a TCR if it conforms with the criteria of subdivision (a).

2.3 PUBLIC RESOURCES CODES

The following provide a summary of California PRCs that apply to cultural resources.

PRC Section 5020.1

This section defines several terms, including those provided below:

"Historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

"Substantial adverse change" means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired.

PRC Section 5024.1

This section establishes the CRHR. A resource may be listed as a historical resource in the CRHR if it meets the NRHP criteria or the following state 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, or

- has yielded, or may be likely to yield, information important in prehistory or history.

PRC Section 5097.5

This section states that any unauthorized removal or destruction of archaeological or paleontological resources on sites located on public land is a misdemeanor. As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the State, or any city, county, district, authority or public corporation, or any agency thereof.

PRC Section 5097.98

This section discusses the procedures that need to be followed upon the discovery of Native American human remains. The NAHC, upon notification of the discovery of human remains by the County coroner, is required to notify those persons it believes to be most likely descended from the deceased Native American. It enables the descendant to inspect the site of the discovery of the Native American human remains and to recommend to the landowner (or person responsible for the excavation) means of treating, with dignity, the human remains and any associated grave goods.

PRC Sections 5097.99, 5097.991

These sections establish that it is a felony to obtain or possess Native American artifacts or human remains taken from a grave or cairn and sets penalties for these actions. The sections also mandate that it is the policy of the State to repatriate Native American remains and associated grave goods.

PRC Section 21083.2

This section states that under CEQA, the lead agency is responsible for determining whether a project may have a significant effect on historical and archaeological resources. Section 21083.2 states that if the lead agency determines that the project may have a significant effect on “unique” archaeological resources, an EIR shall be prepared to address these resources. A unique archaeological resource is an 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 the resource meets one of the following criteria:

- contains information needed to answer important research questions and that a demonstrable public interest exists in that information,
- has a special and particular quality, such as being the oldest or best example of its type, and/or

- is directly associated with a scientifically recognized important prehistoric or historic event or person.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require that reasonable efforts be taken to preserve these resources in place or provide conditions or mitigation measures to protect them.

PRC Section 21084.1

This section sets forth that a project that may cause a significant adverse change in a significant historical resource is a project that may be considered to have adverse effects on the environment. Historical resources not listed on the CRHR or other local lists may still be considered historical resources at the discretion of the lead agency on the project.

Senate Concurrent Resolution Number 43

This resolution requires state agencies to cooperate with archaeological survey and excavation programs, and to preserve known archaeological resources whenever reasonable.

Senate Bill 18 (Burton 2004)

This bill requires protection and preservation of Native American traditional cultural places during city and county general plan development.

Health and Safety Code Section 7050.5

This code establishes that any person who knowingly mutilates, disinters, wantonly disturbs, or willfully removes any human remains in or from any location without authority of the law is guilty of a misdemeanor. It further defines procedures for the discovery and treatment of Native American remains.

Health and Safety Code Sections 8010-8011

This code is intended to provide consistent state policy to ensure that all California Native American human remains and cultural materials are treated with dignity and respect. The code extends policy coverage to non-federally recognized tribes, as well as federally recognized groups.

California Penal Code Section 622.5

This code states that anyone who willfully damages an object or thing of archaeological or historic interest can be found guilty of a misdemeanor.

2.4 LOCAL REGULATIONS

California law requires every city and county in the state to prepare and adopt a general plan "for the physical development of the county or city and any land outside its boundaries which bears relation to its planning" (California Government Code, Section 65300). The following local policies provide a framework for the development of San Diego County (County) or the City of Escondido general plans that is applicable to the Project:

San Diego County Local Register of Historical Resources

Criteria for evaluating significance of potential historical resources for inclusion on the County of San Diego Local Register of Historical Resources (Local Register) was established in Section 396.7 of the San Diego County Administrative Code. A historical resource was defined as an object, building, structure, site, landmark, area, or place that is significant in terms of architectural, engineering, scientific, economic, agricultural, educational, social, political, archaeological, military, or cultural history. A historical resource must be significant at the local level under one or more of the following four criteria:

- Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
- Is associated with the productive lives of persons important to the history of San Diego County or its communities;
- Embodies the distinctive characteristics of a type, period, San Diego County region, and method of construction, or as the work of an important creative individual, or as having high artistic value; or
- Has yielded or may be likely to yield, information important to prehistory or history.

Resource Protection Ordinance

The County's Resource Protection Ordinance (RPO) protects significant cultural resources. The RPO's definition of a "Significant Prehistoric or Historic Site" is as follows (County of San Diego 2012:

> (o) "Significant Prehistoric or Historic Sites": Sites that provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, State, or Federal importance. Such locations shall include, but not be limited to:
>
> (1) Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:

(aa) Formally determined eligible or listed in the National Register of Historic Places by the Keeper of the National Register; or

(bb) To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or

(2) One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and

(3) Any location of past or current sacred religious or ceremonial observances which is either:

(aa) Protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, or

(bb) Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

City of Escondido Municipal Code Article 40

Article 40 of the City's Municipal Code (Historical Resources) establishes the City's Historic Preservation Committee, the Escondido Local Register of Historical Places, and the designation process for Escondido Local Landmarks. Any person may nominate a historical resource to the local register or for landmark designation; however, the application must be made to the planning division on forms provided by the City. In addition, requests for local landmark designation must include a letter signed by the property owner consenting to the initiation. Article 40 additionally establishes it as unlawful to tear down, demolish, construct, alter, remove, or relocate any historical resource or any portion thereof that has been listed on the Escondido Historic Sites Survey, Local Register, designated as a Local Landmark, or located within an Historical Overlay District or to alter any feature of without first obtaining a permit as outlined in Article 40, Section 33-798. This includes obtaining a Certificate of Appropriateness for any new construction, and/or alteration that would affect the exterior appearance of an historical resource listed on the local register, or located within an historical overlay district, including the back, sides, and street façade, even when a building permit is not otherwise required. Additional permits, as well as review by the planning commission, may also be required. Improvements and alterations to properties listed on the Escondido Historic Sites Survey outside a historical overlay district are also subject to staff administrative review to ensure that improvements and alterations do not preclude future listing in the local register. Further, Article 40 requires that all repairs, alterations, constructions, restorations, or changes in use of applicable historical resources shall conform to the

requirements of the State Historical Building Code and the Secretary of the Interior's Standards for Rehabilitation. Demolitions to such resources would require a permit acquired in accordance with Article 40, Sections 33-801, 33-802 and 33-803.

City of Escondido Municipal Code Article 55

Article 55 of the City Municipal Code (Grading and Erosion Control) ensures that development occurs in a manner that protects the natural and topographic character and identity of the environment, the visual integrity of hillsides and ridgelines, sensitive species and unique geologic/geographic features, and the health, safety, and welfare of the general public by regulating grading on private and public property and providing standards and design criteria. Additionally, the article recommends that grading designs be sensitive to natural topographic, cultural, or environmental features, as well as mature and protected trees by implementing the following features should be preserved in permanent open space easements, or such other means that will ensure their preservation: undisturbed steep slopes (over 35%); riparian areas, mitigation areas, and areas with sensitive vegetation or habitat; unusual rock outcroppings; other unique or unusual geographic features; and significant cultural or historical features.

3 NATURAL AND CULTURAL SETTING

This section presents background information pertaining to the natural and cultural context of the APE, as well as an overview of the regional geology, topography, soils and geologic formations, regional prehistory, ethnography, and history.

3.1 NATURAL CONTEXT

The APE is located in the north-central portion of San Diego County approximately 15 miles inland from the Pacific Ocean with an elevation ranging between approximately 330 to 900 feet above mean sea level (amsl). The APE is located within the grounds of the Kit Carson Park, of which only 100 acres have been developed of a total of 285 acres and the remaining approximately 185 acres are designated as a natural reserve (Jow 2013). The immediate vicinity is residential, with the communities of East Canyon to the east and Lake Hodges to the west.

The climate of the region can generally be described as Mediterranean and consists of hot, dry summers and warm, moist winters. The temperature on average is about 85 degrees Fahrenheit (°F) in the summer, but with maximums that can occasionally reach the high 90s. In the winter, the average temperature is 40°F but can drop almost to freezing. Rainfall occurs primarily during the winter months and averages about 15 inches per year.

The closest natural bodies of water to the APE are Arroyo Del Oro Creek, Kit Carson Creek, and Eagle Scout Lake, which are all located within the Project. Arroyo Del Oro Creek runs in a northwest to southeast direction and Kit Carson Creek runs in a northeast to southwest direction. Both creeks outfall to Eagle Scout Lake. Eagle Scout Lake runs in a northeast to southwest direction and outfalls into Lake Hodges.

Predominantly mixed chaparral and coastal sage scrub habitats dominate the APE and surroundings on the southwestern portion of the City of Escondido, with small amounts of oak woodland and riparian habitat zones along the rivers, creeks, and drainages as well. The chaparral vegetation community is characterized by toyon, chamise, manzanita, oak, yucca, wild lilac, and redshank (Pryde 1992). The coastal sage scrub vegetation community is characterized by California sagebrush, bright yellow bush sunflower, lemonade berry, goldenbush, and coastal prickly pear cactus. Southern willow riparian forest systems can be also observed near the drainage systems and pond. Prehistorically this area provided the population with acorns, and a

fairly wide variety of other edible plants and seeds. After European contact, activities such as agriculture, ranching, and development resulted in introduction of non-native plants including grasses, mustard, various shrubs, and trees including palm trees and eucalyptus trees.

The fauna found on a mixed chaparral and coastal sage scrub habitat includes a wide variety of birds, such as spotted towhee, wrentit, black-chinned sparrow, California thrasher, common raven, turkey vultures, greater roadrunners, and the federally threatened California gnatcatcher. A number of reptiles also inhabit these habitats, including western whiptail lizard, granite spiny lizard, San Diego horned lizard, and Pacific rattlesnake. Mammals that inhabit this community include a number of species of bats, deer mice and pocket mice, black-tailed jackrabbit and brush rabbit, as well as coyote, racoon, skunk, various other rodents, bobcat, mule deer, and the occasional mountain lion. In rocky areas, ring-tailed cats occur.

The APE lies within the Peninsular Range region of San Diego County. The lower Peninsular Range region is made up of foothills that span in elevation from 600 to 2,000 feet amsl. It is characterized by rolling to hilly uplands that contain frequent narrow, winding valleys. Specifically, the Project is located in the foothills sub province of the Peninsular Ranges Geomorphic Province, a region typified by northwest-southeast trending structural blocks separated by major regional fault zones (City of Escondido 2021). The geology surrounding the APE consists primarily of Cretaceous plutonic rocks including granitic, dioritic, and gabbroic rocks of the batholith of southern California. Soils present within the APE include Chino sandy loam, Placentia sandy loams, and two types of Ramona sandy loam.

3.2 CULTURAL CONTEXT

Prehistoric Period

A variety of syntheses of the prehistory of southern California have been proposed by such authors as Wallace (1955) and Warren and Crabtree (1986) and, more recently, by Schaefer (1994) and Reddy and Byrd (1997). Regional schema for San Diego County has been proposed by Rogers (1939), Meighan (1954), and True (1958, 1966, 1970). Human occupation in San Diego County has been documented for at least 9,000 years, although a handful of researchers have suggested a considerably earlier date for the initial occupation of the area (Carter 1957:369-373; Minshell 1976; Moriarty and Minshell 1972), perhaps as early as 40,000 years ago. The following is a brief summary of the major periods of human occupation of San Diego County.

San Dieguito

The earliest recognized occupation of the region, dating to 10,000-8,000 years before present (B.P.), is known as the San Dieguito complex (Rogers 1939, 1945). Assemblages from this occupation generally consist of flaked stone tools. Evidence of milling activities is rare for sites dating to this period. It is generally agreed that the San Dieguito complex shows characteristics of the Western Pluvial Lakes tradition, which was widespread in California during the early Holocene (Moratto 1984). This reflects a generalized hunting economy.

Archaic

The following period, the Archaic (8500-1300 B.P.), is traditionally seen as encompassing both a coastal and an inland focus, with the coastal Archaic represented by the shell middens of the La Jolla complex and the inland Archaic represented by the Pauma complex (True 1980). Coastal settlement is also thought to have been significantly affected by the stabilization of sea levels around 4,000 years ago that led to a general decline in the productivity of coastal ecosystems. Nevertheless, recent research on Camp Pendleton has documented continued occupation along the coast well after this decline was in progress (Byrd 1996, 1998). Artifacts associated with this period include milling stones, unshaped manos, flaked cobble tools, Pinto-like projectile points, and flexed inhumations.

Late Prehistoric

The Late Prehistoric period (1300-200 B.P.) is marked by the appearance of small projectile points indicating the use of the bow and arrow, the common use of ceramics, and the replacement of inhumations with cremations, all characteristic of the San Luis Rey complex as defined by Meighan (1954). The San Luis Rey complex is divided temporally into San Luis Rey I and San Luis Rey II, with the latter distinguished mainly by the addition of ceramics. Along the coast of northern San Diego County, deposits containing significant amounts of Donax shell are now often assigned to the Late Prehistoric, based on a well-documented increase in the use of this resource at this time (e.g., Byrd and Reddy 1999). The inception of the San Luis Rey complex is suggested by True (1966; True et al. 1974) to mark the arrival of Takic speakers from regions farther inland. Waugh (1986) is in general agreement with True but suggests that the migration was probably sporadic and took place over a considerable period. Titus (1987) uses burials showing physical differences between pre- and post-1300 B.P. remains to further support this contention. However, some researchers have suggested that these Shoshonean groups may have arrived considerably earlier, perhaps as early as 4,000 years ago. Vellanoweth and Altschul (2002:102-105) provide an excellent summary of the various avenues of thought on the Shoshonean Incursion.

Ethnohistoric Period

When the Spanish arrived in southern California, the APE was occupied by Takic speaking Native Americans known to the Spanish as the Luiseño. Luiseño territory is thought to have comprised some 1,500 square miles (3,890 square kilometers) of coastal and interior southern California (White 1963). The Luiseño speak a language that is placed within the Cupan group of the Takic family of the Uto-Aztecan stock (Shipley 1978) also known as Southern California Shoshonean (Kroeber 1925:574). Kroeber (1925) estimated a population of only 5,000 pre-contact Luiseño. White (1963) and Shipek (1977) estimated that, at the time of Spanish contact, there were on the order of 50 Luiseño rancherias with an average population of some 200 people, for a total Luiseño population of about 10,000. This number rapidly decreased after contact, with the introduction of new diseases for which the native population lacked immunity. The way these diseases spread is poorly understood. Preston (1996) documents known pathways of smallpox and other contagious diseases from their origin in central Mexico to southern Arizona and northern Baja California and points out that there was regular and frequent contact between these areas and southern California. Lightfoot and Simmons (1998), on the other hand, believe the effects of disease throughout much of native California during the Protohistoric period was limited. Like Preston, however, Lightfoot and Simmons note that the San Diego County region was particularly vulnerable to the introduction of pathogens both from ships arriving at San Diego Bay and by overland trade routes originating in Arizona and Mexico.

Historic Period

The historical context below provides a brief overview of the history of the APE. It has been divided into time periods based on significant historical periods. These include the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present). The section concludes with examinations of the history of Escondido and the APE.

Spanish

The first significant European settlement of California began during the Mission Period (1769 to 1822) with the founding of the first mission in San Diego and lasted until 1833-1834 when the Mexican secularization laws effectively opened the area to social and economic growth. The establishment of San Gabriel and San Juan Capistrano missions in 1771 and 1776, respectively, had a number of impacts on the region, resulting in the abandonment of some areas and the agricultural and ranching development of other portions. The mission system was dismantled after Mexican governors introduced new secularization acts between 1822 and 1833, thus freeing the Indians from mission control.

Mexican

After secularization, the dominance of the large land grant ranchos became established. In 1810, the Spanish government granted the first rancho to Jose Antonio Yorba and his nephew Juan Pablo Peralta. The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers (Castillo 1978). Rancho San Onofre and Rancho Santa Margarita was granted to Pio and Andres Pico in 1841. Las Flores, which had been one of the few Indian pueblos established by the Mexican government, was acquired by the Pico brothers in 1844, thus creating the Rancho Santa Margarita y Flores. By 1862, the Picos had fallen into financial difficulties, and they sold part of the rancho to their brother-in-law, Juan Forster, to avoid losing it to creditors. Forster, after undertaking several improvements, died in 1882, and the ranch eventually was transferred to James C. Flood and Richard O'Neill (Thurman 1960:104). During this period, the entire area was almost constantly involved in political and military revolts. The tense situation ended in 1847 when California gained independence from Mexico during the "Bear Flag" revolt. One year later, the United States gained control of the area as a result of the Mexican-American War.

American

Although California had been under the control of the United States since 1847, the American Period did not really begin in the APE until 1851, when the Land Act required rancho owners to confirm the ownership of their lands. Many rancho dons lacked funds and legal documents to confirm land ownership. Along with legal problems related to the Land Act and new taxes imposed by the United States, many second-generation dons experienced a disastrous two-year drought (McWilliams 1973:62). The combination of these hardships resulted in many rancho families losing their lands. A steady influx of Euro-Americans was brought in by the railroads. The Euro-Americans expanded commercial and land development primarily in farming and dairy endeavors. In the twentieth century, independent businesses began to dominate the economic strategy, much as they do today.

City of Escondido

After the arrival of Spanish explorers, the area that is now Escondido became part of the Spanish mission system. In 1843, the APE was enveloped within a Mexican land grant known as El Rincon del Diablo Rancho, which was granted to Juan Bautista Alvarado. In 1860, the rancho land was acquired by the Wolfskill brothers who planted vineyards and raised sheep (McGrew 1988). In 1883, much of the area was purchased by the Escondido Company, a group of Stockton speculators that subdivided the property three years later. In 1886, a 12,000-acre tract was purchased by a group of investors that formed the Escondido Land and Town Company, which

platted the city of Escondido and lobbied for the construction of a railroad connection to the coast. Aggressive land promotions during the latter half of the 1880s drew many people to the area, and although growth had slowed considerably during the 1890s, settlers continued to arrive in the backcountry, establishing small farms and ranches throughout the area. This migration took a sharp decline with the onset of the Depression during the 1930s, as many of the rural farmers abandoned their farms and moved to urban areas. The number of people living on farms fell 63 percent during the 1930s, while San Diego County's overall population increased by 38 percent (Van Wormer and Walter 1991). Nevertheless, farming and ranching continued to be the major focus of Escondido's economy until the 1960s.

Kit Carson Park

The City of Escondido acquired 285 acres from the City of San Diego in 1967 to develop a large regional park. The park was named after Christopher (Kit) Carson, who fought in the Battle of San Pasqual approximately 5 miles from the location of the park and was a famous scout who guided Captain John C. Frémont over the Sierra Nevada during a government exploration expedition. Only 100 acres of the 285-acre park have been developed and the remaining 185 acres are preserved as a natural reserve (City of Escondido 2021). The developed acres are strictly in its majority for recreational use and includes playgrounds, picnic areas, baseball, softball and soccer fields, tennis courts, hiking trails, and a 17-hole golf course. Other amenities related to the development of the park include an outdoor amphitheater and a 5-acre arboretum.

4 BACKGROUND RESEARCH AND SOURCES CONSULTED

The methods and results of the records search, historical map review, and NAHC consultation are described in detail below.

4.1 RECORD SEARCH METHODS

A records search of the APE and a 0.25-mile buffer was conducted by the SCIC on July 6, 2021 (I.C. File #2922). Six previously identified cultural resources on file with the SCIC were identified within a quarter of a mile of the APE, none were found to be within the APE. Previously recorded cultural resources sites P-37-000571/ CA-SDI-000571 and P-37-018684 were found to be near the APE (access routes). Twenty-two previous cultural resources studies have been conducted within the 0.25-mile radius of the APE, and eight were found to be located within the APE (Table 2).

Table 1. Previously Resources within APE and 0.25 Miles.

PRIMARY NO.	TRINOMIAL	TYPE	NAME/DESCRIPTION	RELATION TO THE APE
P-37-000571	CA-SDI-000571	Protohistoric	Unknown	Within 0.25 miles of the APE
P-37-000572	CA-SDI-000572	Prehistoric	Lithic scatter	Within 0.25 miles of the APE
P-37-005088	CA-SDI-005088	Unknown	Unknown	Within 0.25 miles of the APE
P-37-018684	Unknown	Unknown	Chimney	Within 0.25 miles of the APE
P-37-024169	Unknown	Unknown	Unknown	Within 0.25 miles of the APE
P-37-030196	Unknown	Unknown	Unknown	Within 0.25 miles of the APE

Table 2. Previous Studies Conducted within the APE and 0.25 Miles.

DATE	SCIC NO.	AUTHOR	TITLE	RELATION TO THE APE
1988	SD-00303	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Escondido Union School District Parcel, Escondido, San Diego, California.	Within APE
1978	SD-00478	Corum, Joyce M.	An Archaeological Survey Report for a Proposed Interstate 15 Crossing Rancho Bernardo (11-SD-15 M22.8/M27.2) 11208-105671	Within 0.25 miles of the APE

DATE	SCIC NO.	AUTHOR	TITLE	RELATION TO THE APE
1978	SD-00481	Chace, Paul G.	An Archaeological Survey of Bear Valley Estates No. 1 & No. 2 (Tentative Tract No. 351 and Tentative Tract No. 343) In the City of Escondido, California.	Within 0.25 miles of the APE
1978	SD-00507	Chace, Paul G.	An Archaeological Survey of Bear Valley Estates (Tentative Tract No. 351) In the City of Escondido, California.	Within 0.25 miles of the APE
1978	SD-00561	Chace, Paul G.	An Archaeological Survey of Park View Terrace, City of Escondido (Tract No.78-09)	Within 0.25 miles of the APE
1987	SD-00768	Chace, Paul G. and Donna Collins	An Archaeological Survey of Kit Carson Park	Within APE
1984	SD-01620	WESTEC SERVICES, INC.	Archaeological Constraint Survey Kit Carson Regional Park	Within APE
1987	SD-01659	Wade, Sue A.	Results of an Archaeological Archival and Field Survey of the Bear Valley Parkway/SR- 78 General Plan Amendment EIR Project Area San Diego County, California	Within 0.25 miles of the APE
1993	SD-02777	Affinis M. Robbins-Wade and R, Alter	Cultural Resources Survey for the Bear Valley Parkway (South) Reconstruction, Activity No. UJ1194, Escondido, San Diego County, California	Within 0.25 miles of the APE
1981	SD-04236	APEC Environmental Consultants	Environmental Impact Report for San Dieguito River Study Draft Conceptual Mater Plan	Within APE
1970	SD-04896	RECON	Draft EIR for Las Palmas Ranch	Within 0.25 miles of the APE
1978	SD-06253	RECON	Draft Environmental Impact Report for Adobe Heights	Within 0.25 miles of the APE
1983	SD-07267	Van Dyke-Halsey	Draft Environmental Impact Report Kit Carson Park Master Plan Revisions	Within APE
1980	SD-08588	City of Escondido	Draft Environmental Impact Report for Expansion of Wastewater Treatment Facility	Within APE
1976	SD-08594	Bull, Charles, S.	Appendix E Report of an Archaeological Reconnaissance of the Las Palmas Ranch Properties, San Diego County, California	Within 0.25 miles of the APE
1992	SD-08596	Keller Environmental Associates	Appendices-Reclaimed Water Distribution System Project: Draft Environmental Impact Report	Within APE
2001	SD-10530	Mclean, Deborah	Cultural Resources Assessment, the Proposed Kit Carson Middle School Escondido Union School District, City of Escondido, San Diego County, California	Within 0.25 miles of the APE

DATE	SCIC NO.	AUTHOR	TITLE	RELATION TO THE APE
2008	SD-12109	Dalope, Michelle and Susan Hector	Cultural Resources Study for the Westfield North County Expansion Offsite Improvements Project, City of Escondido, San Diego County, California	Within 0.25 miles of the APE
2013	SD-16079	Stephanie Jow and Christy Dolan	Archaeological Survey Report for the Sand Lake Dredging Project, City of Escondido, San Diego County, California	Within APE
2017	SD-17574	Manchen, Kent and Williams, Brian	Supplemental Archaeological Survey for the Minor Project Refinements: Certificate of Public Convenience and Necessity for the Rainbow-San Diego (Line 3602) 36-Inch Natural Gas Pipeline Project, San Diego County, California	Within 0.25 miles of the APE
2016	SD-17576	Castells, Shelby, Gunderman, Matthew Decarlo, and Williams Brian	Cultural Resources Survey Report for the San Diego Gas and Electric Company and Southern California Gas Company Pipeline Safety and Reliability Project, San Diego County, California	Within 0.25 miles of the APE
2016	SD-17577	Davis, Shannon	Indirect Visual Impact Assessment Survey for the Proposed Pipeline Safety and Reliability Project, San Diego County, California	Within 0.25 miles of the APE

4.2 HISTORICAL MAP REVIEW

Kleinfelder reviewed historical maps depicting features such as towns, roads, buildings, and creeks to provide additional information regarding the potential for the presence of historic-era cultural resources within the APE. Historic maps and images were reviewed through the following online repositories; the United States Geological Survey (USGS) repository, Historical Aerials, and the Library of Congress, and Old Maps Online. Refer to Appendix B to view figures 6 through 13 with the APE plotted on the historical maps. The following sources were consulted during the historical map review:

- Escondido, CA (US Historical File Topographic Division 1893)
- Escondido, CA (US Historical File Topographic Division 1901)
- Escondido, CA (War Department Corps of Engineers, U.S. Army 1942)
- Escondido, CA (USGS Aerial 1947)
- Escondido, CA (USGS Historical File Topographic Division 1949)
- Escondido, CA (USDS Aerial 1953)
- Escondido, CA (USGS Aerial 1967)

- Escondido, CA (USGS Aerial 1980)

4.3 HISTORICAL MAP REVIEW RESULTS

The 1893 historical topographic map shows an undisturbed area with Arroyo Del Oro Creek and Kit Carson Creek merge together within the location of the APE. Lake Hoggins is portrayed as a small water body. A structure can be seen, possibly part of the previously recorded historical chimney structure P-37-018684. No other features are shown.

The 1901 historical topographic map also shows an undisturbed area with Arroyo Del Oro Creek and Kit Carson Creek coming together within the location of the APE. Lake Hoggins is portrayed as a small water body. Structure possibly associated with previously recorded historical chimney structure P-37-018684 can be seen. No other features are shown.

The 1942 War Department Corps of Engineers, U.S. Army map shows signs of development, and a possible man-made Eagle Scout Lake can be seen on the surroundings of the APE. A trail within the APE is also seen. The confluence of Arroyo Del Oro and Kit Carson creeks within the location of the APE can still be seen. A structure can be seen within proximity of the APE. No other features are shown.

The 1947 USGS aerial shows graded portions of the western and eastern areas of the APE. Farming, most likely citrus trees, can be seen on the surroundings of the APE. Arroyo Del Oro Creek and Kit Carson Creek seem to be redirected. A structure can be seen, possibly part of the previously recorded historical chimney structure P-37-018684. No other features are shown.

The 1949 historical topographic map shows Arroyo Del Oro Creek and two dams within the APE. A smaller structure can be seen in proximity to the previously recorded historical chimney structure P-37-018684. No other features are shown.

The 1953 USGS aerial shows graded portions on the western area of the APE. Arroyo Del Oro Creek and two smaller dams can be seen within the APE. A smaller structure can be seen in proximity to the previously recorded historical chimney structure P-37-018684. No other features are shown.

The 1967 USGS aerial shows a Arroyo Del Oro Creek and one dam. Several paths are shown going in and out of the APE and farming and housing developments surround the APE. Structure

in proximity to the previously recorded historical chimney can still be seen. No other features are shown.

The 1980 USGS aerial shows residential and commercial developments in proximity to the APE. Arroyo Del Oro Creek and the dam are no longer depicted. Small portions of farming land can still be seen in the surroundings of the APE. A structure in proximity to the APE can be seen and is possible associated with Kit Carson Park. The smaller structure in proximity to the previously recorded historical chimney structure P-37-018684 can still be seen. No other features are shown.

4.4 NATIVE AMERICAN HERITAGE COMMISSION CONSULTATION

On June 29, 2021, Kleinfelder requested from the California NAHC a search of their Sacred Land Files (SLF). The NAHC responded on September 1, 2021, with positive results for tribal resources within the APE. The NAHC indicated to contact the Kwaaymii Laguna Band of Mission Indians and the San Luis Rey Band of Mission Indians, as well as the list of Native American contacts affiliated with the region to possibly obtain additional information. Kleinfelder completed no further Native American outreach, as it was assumed that the lead agencies will conduct their government-to-government consultation as defined under Section 106 of NHPA (federal)CEQA AB 52 (state) with regards to tribal consultation. The NAHC Native American contacts list is provided in Appendix D.

5 FIELD METHODS AND RESULTS

On August 4, 2021, Kleinfelder archaeologist, Darryl Dang, B.A., completed an intensive pedestrian survey of the APE. The survey was completed using 3-meter-wide parallel transects. Close inspection was given to all open and exposed ground soils for the presence of archaeological materials. The APE was photographed using a high-resolution digital camera (see Appendix E, Survey Photographs) and field observations were captured in written notes. Locational data were collected with Environmental Systems Research Institute Arc Collector application on Android.

The APE was accessible by foot and 100 percent of the APE was surveyed. The ground visibility varied between 0-100 percent, with the overall average being about 60 percent. The ground visibility of the survey area along one side of the paved access route was very good (75 percent visibility). The ground visibility along the other side of the paved route was usually poor (0-50 percent) due to grass landscape. The ground visibility along the unpaved access routes and areas of direct/indirect impacts was generally good (75 percent overall). The staging area is covered with gravel/crushed rock. Ground visibility in the area adjacent to and west of the staging area was very good (90 percent), and visibility in the areas adjacent to and east of the staging area was poor (0 to 50 percent), due to dense vegetation.

Vegetation observed consisted mainly of palms, oaks, eucalyptus, cottonwoods, and sycamore trees. Willow trees were observed in the riparian areas of the creeks, and a few recently planted pine trees were observed adjacent to the northern end of Castaneda Drive. The understory consisted of landscaped grasses. The APE has been disturbed by development of the park, maintenance activities, and on-going recreational use of the park. The native surface soils observed consist of light brown to brown coarse to medium grain sandy loam. No cultural resources were identified as a result of the survey and the previously recorded cultural resources sites (P-37-000571/CA-SDI-000571 and P-37-018684) reported to be in the vicinity of the APE (based on record search results) were not relocated.

6 RECOMMNEDATIONS AND CONCLUSION

No prehistoric or historic-period cultural resources were identified during the cultural resource pedestrian survey of the APE. Previously recorded cultural resources sites P-37-000571/ CA-SDI-000571 and P-37-018684, reported to be in the vicinity of the APE (based on record search results) were not relocated. The APE has been disturbed extensively by development of the park, maintenance activities, and on-going recreational use of the park. Additionally, the review of historic maps demonstrated little to no historic use of this location, other than a structure previously within the 0.25-mile area around the APE that appeared to have been partially removed. The remaining of the structure is a chimney (P-37-018684) currently located within the Escondido Fire Department Station 4. In sum, there is little to no potential for buried cultural resources to be present within the APE

If cultural resources are encountered during construction activities, standard mitigation measures related to the unanticipated discovery of archaeological resources and human remains are recommended for the Project, as indicated below:

- If an archaeological resource is encountered, the USACE, the City of Escondido, and the Project Proponent shall be notified immediately and construction activities in the area of the discovery shall cease until a qualified archaeologist, individual that meets the Secretary of the Interior's Professional Qualification Standards for archaeology (36 CFR 61)—can assess the discovery in accordance with Section 106 of NHPA and CEQA. Should any prehistoric or tribal cultural resources be identified within the APE, Native American consulting parties shall be contacted regarding the disposition and treatment of the tribal cultural resource(s). If the discovery proves to be significant under Section 106 of NHPA and CEQA and avoidance is not possible, the qualified archaeologist shall coordinate with USACE and the City of Escondido to develop and implement a data recovery plan to avoid impacts to the resource and/or mitigate to reduce impacts to less than significant.

  In the event of the unanticipated discovery of human remains, work in the immediate vicinity of the find shall stop and no further disturbance shall occur until the San Diego County Coroner has made a determination of origin and disposition pursuant to State of California Health and Safety Code Section 7050.5 and PRC Section 5097.98. The County Coroner shall be notified of the find immediately. If the Coroner shall determine if the human remains are of Native American in origin, and if so, shall notify the NAHC, who is responsible for identifying and notifying the Native American most likely descendant

(MLD). The MLD shall complete the inspection of the site within 48 hours of notification and make recommendations regarding the treatment and disposition of human remains and items associated with Native American burials. If an agreement regarding disposition of human remains between the MLD and the Landowner cannot be reached, then, the landowner shall comply with PCR 5097.98, regarding the appropriate handling and disposition of the find. Please refer to the lead agencies for additional compliance measurements.

Finally, if the APE is expanded to include areas not covered by this survey or other recent cultural resources studies, additional cultural resources studies may be required.

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APPENDIX A
QUALIFICATION OF ENVIRONMENTAL PROFESSIONALS

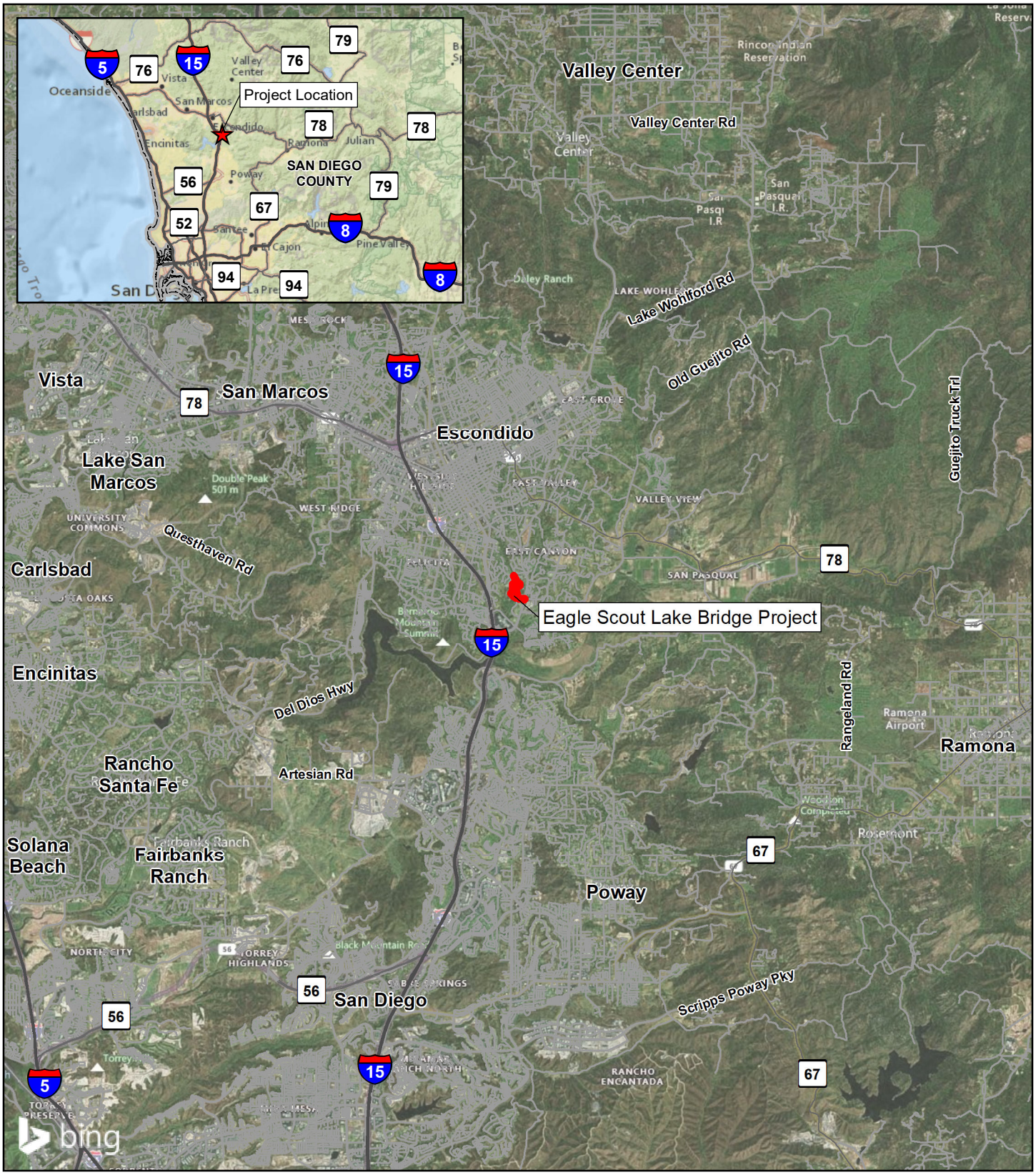
This report was prepared by Kleinfelder archaeologist Gregorio Pacheco, B.A., and reviewed by Senior Cultural Resources Manager Rachael Nixon, M.A., RPA.

Mr. Pacheco is an archaeologist with experience in cultural, paleontological and natural resources compliance oversight, supervising and directing crews of varying sizes through the organization, planning, and field project execution. He has over 12 years of experience working on projects in support of compliance with the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA). Additional experience includes assisting with client meetings, managing projects, creates budgets, development of contracts, coordinating and overseeing cultural monitoring and data recovery work operations. He ensured fieldwork was conducted in both a professional and timely manner and was responsible for all day-to-day project logistics. He also tracked project construction schedules, supervised crew in the field, reviewed daily paperwork, as required by the client and authored reports.

Rachael Nixon has over 20 years of cultural resource management experience. She has served as principal investigator on projects under California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and Section 106 of the National Historic Preservation Act (NHPA). Rachael has directed projects that involved the identification and evaluation of hundreds of resources including paleontological, archaeological, and architectural history. She has worked with various agencies, including but not limited to; Bureau of Land Management, Bureau of Indian Affairs, California Energy Commission, Native American Heritage Commission, U.S. Army Corps of Engineers, U.S. Forest Service, U.S. Bureau of Reclamation, and the State Historic Preservation Office. She has also worked closely with Native American Tribal representatives, most likely descendants, Tribal Historic Preservation Officers, and has served as liaison between contract personnel, clients, tribal representatives, technical leads, and agency leads throughout California. She meets the Secretary of Interior's Professional Qualification Standards in archaeology and history, is listed as a principal investigator on GANDA's BLM California (CA-17-27) and Nevada (N-97534) Cultural Resources Use Permit, Registered Professional Archaeologist (#15857), and meets the California State Personnel Board as a Senior Archaeologist. EXPERTISE: California Environmental Quality Act (CEQA) compliance National Environmental Policy Act (NEPA) compliance Section 106 National Historic Preservation Act (NHPA) compliance Native American Consultation (Section 106 and AB 52) Secretary of the

Interior Qualified in Archaeology and History Mission Period Coastal Archaeology Southern California Desert Archaeology Chinatown and Turn of the Century Archaeological Sites Registered Professional Archaeologist (RPA; ID No. 15857).

APPENDIX B
FIGURES (RESULTS MAP CONFIDENTIAL)



Source: Bing Maps

0 1.5 3 Miles

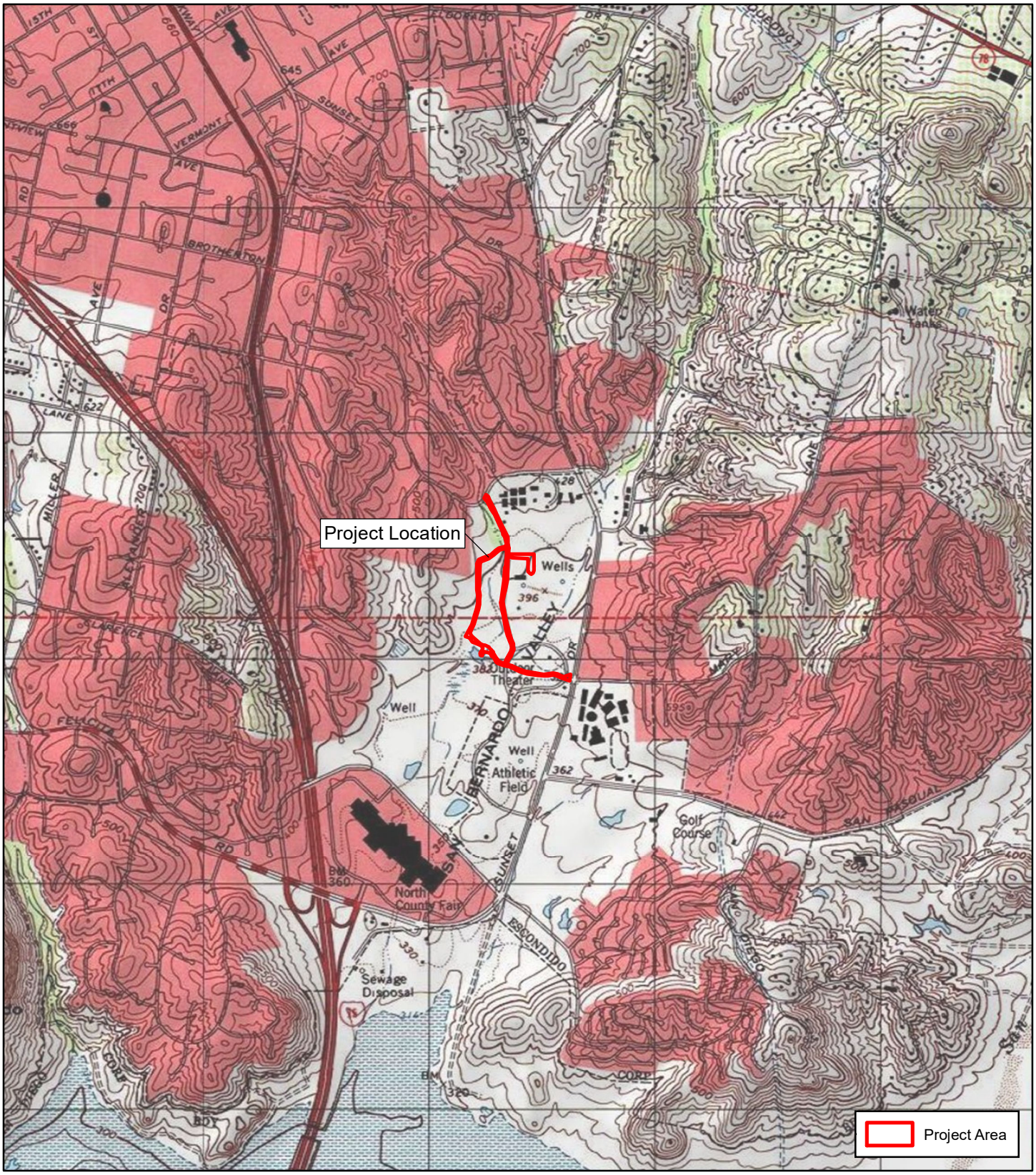
0 2.5 5 Kilometers

N

Scale 1:190,000
1 inch = 3 miles

Figure 1. Regional Vicinity
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

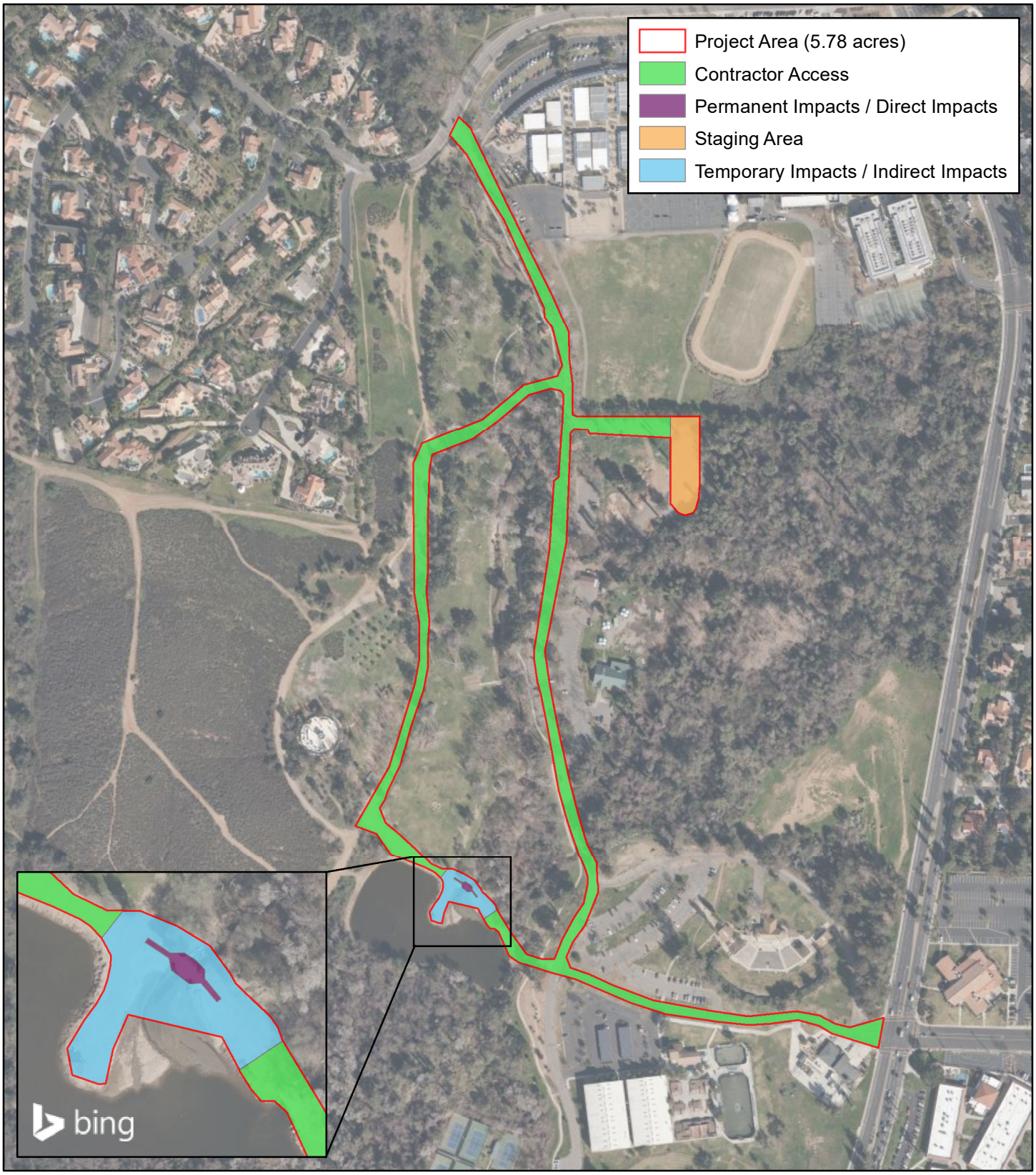
0 1,000 2,000 Feet
0 300 600 Meters

N

Scale 1:24,000
1 Inch = 2,000 Feet

Figure 2. Project Location
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



Source: Bing Maps

0 200 400 Feet

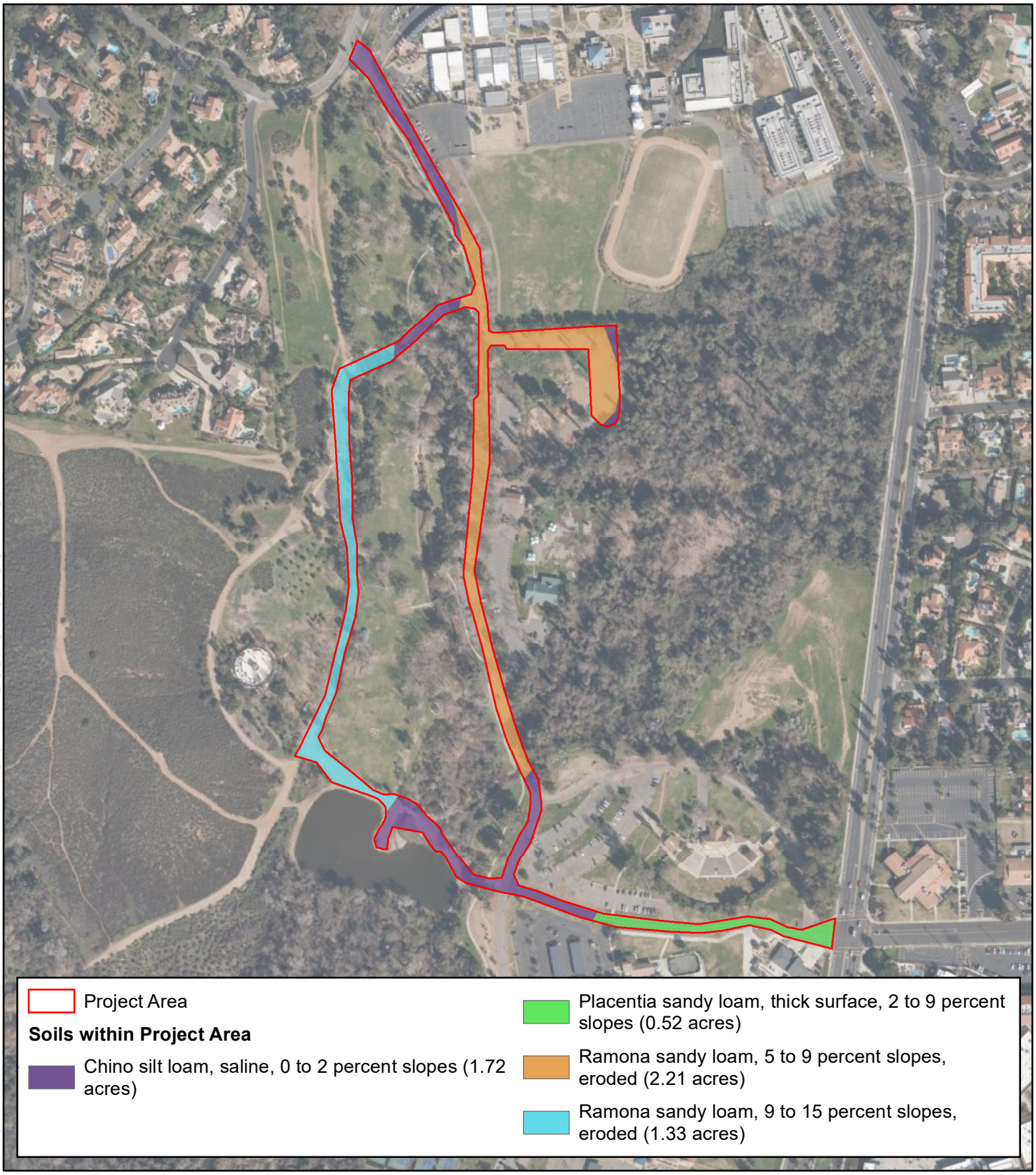
0 60 120 Meters

N

Scale 1:4,800
1 inch = 400 feet

Figure 3. Project Area
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



Source: gSSURGO (April 2021)

0 200 400 Feet

0 60 120 Meters

N

Scale 1:4,800

Figure 4. Soils
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.

USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

0 1,000 2,000 Feet

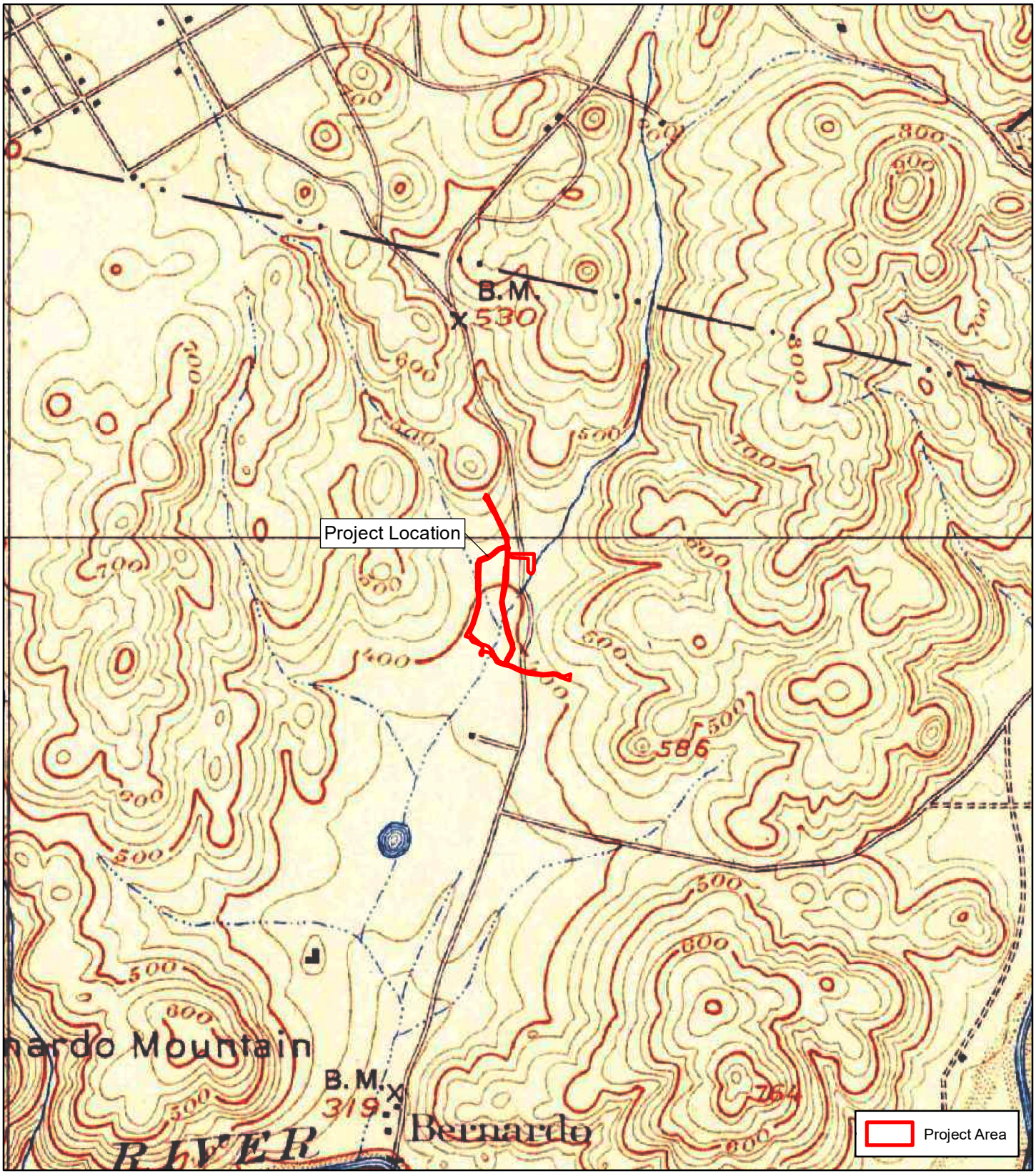
0 300 600 Meters

N

Scale 1:24,000
1 Inch = 2,000 Feet

Figure 6. Historic Map 1893
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

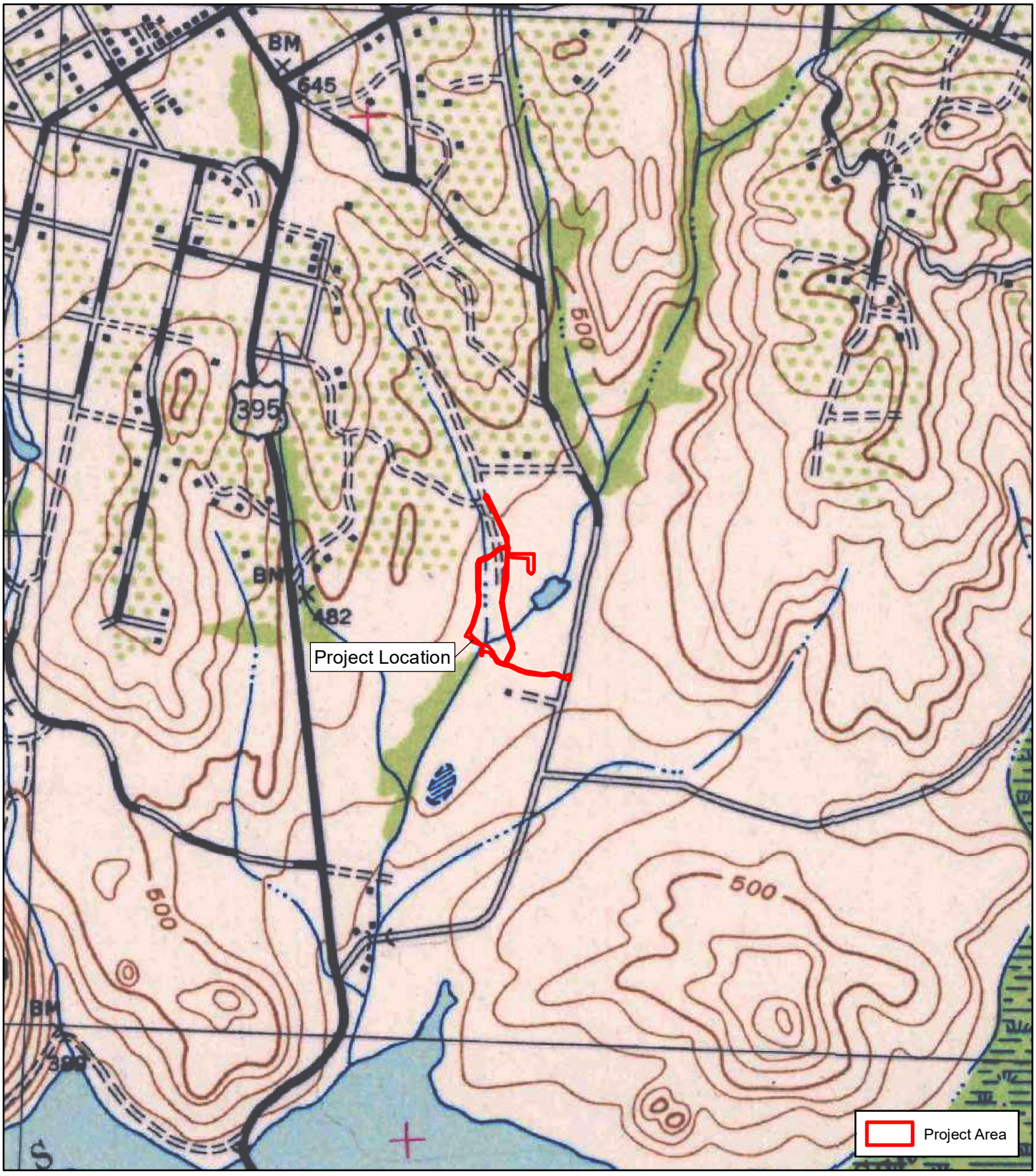
0 1,000 2,000 Feet
0 300 600 Meters

N

Scale 1:24,000
1 Inch = 2,000 Feet

Figure 7. Historic Map 1901
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

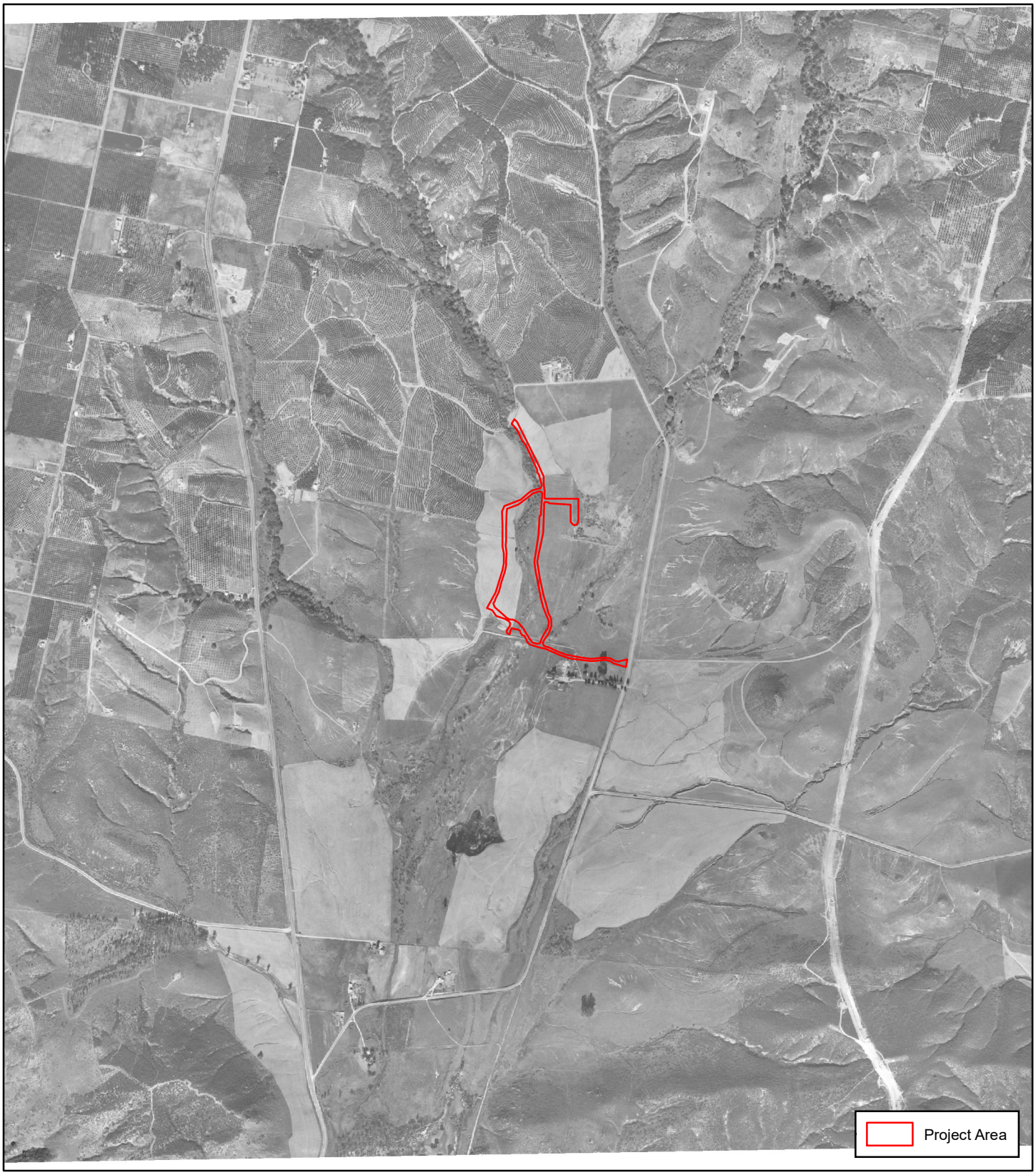
0 1,000 2,000 Feet
0 300 600 Meters

N

Scale 1:24,000
1 Inch = 2,000 Feet

Figure 8. Historic Map 1942
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

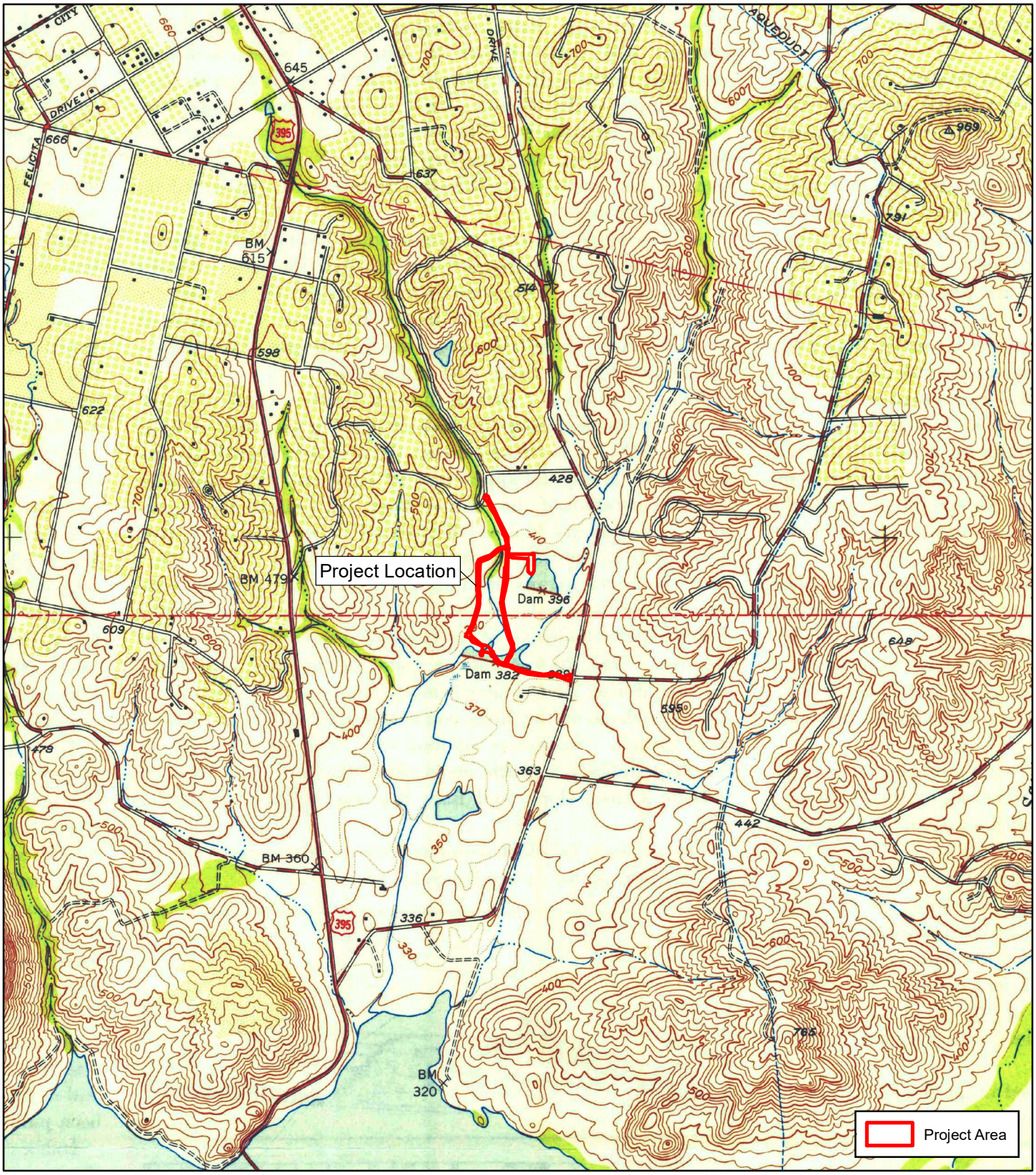
0 750 1,500 Feet
0 250 500 Meters

N

Scale 1:18,000
1 Inch = 1,500 Feet

Figure 9. Historic Aerial 1947
Kit Carson Park
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

0 1,000 2,000 Feet
0 300 600 Meters

N

Scale 1:24,000
1 Inch = 2,000 Feet

Figure 10. Historic Map 1949
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.

USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

0 750 1,500 Feet
0 250 500 Meters

N

Scale 1:18,000
1 Inch = 1,500 Feet

Figure 11. Historic Aerial 1953
Kit Carson Park
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.

USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

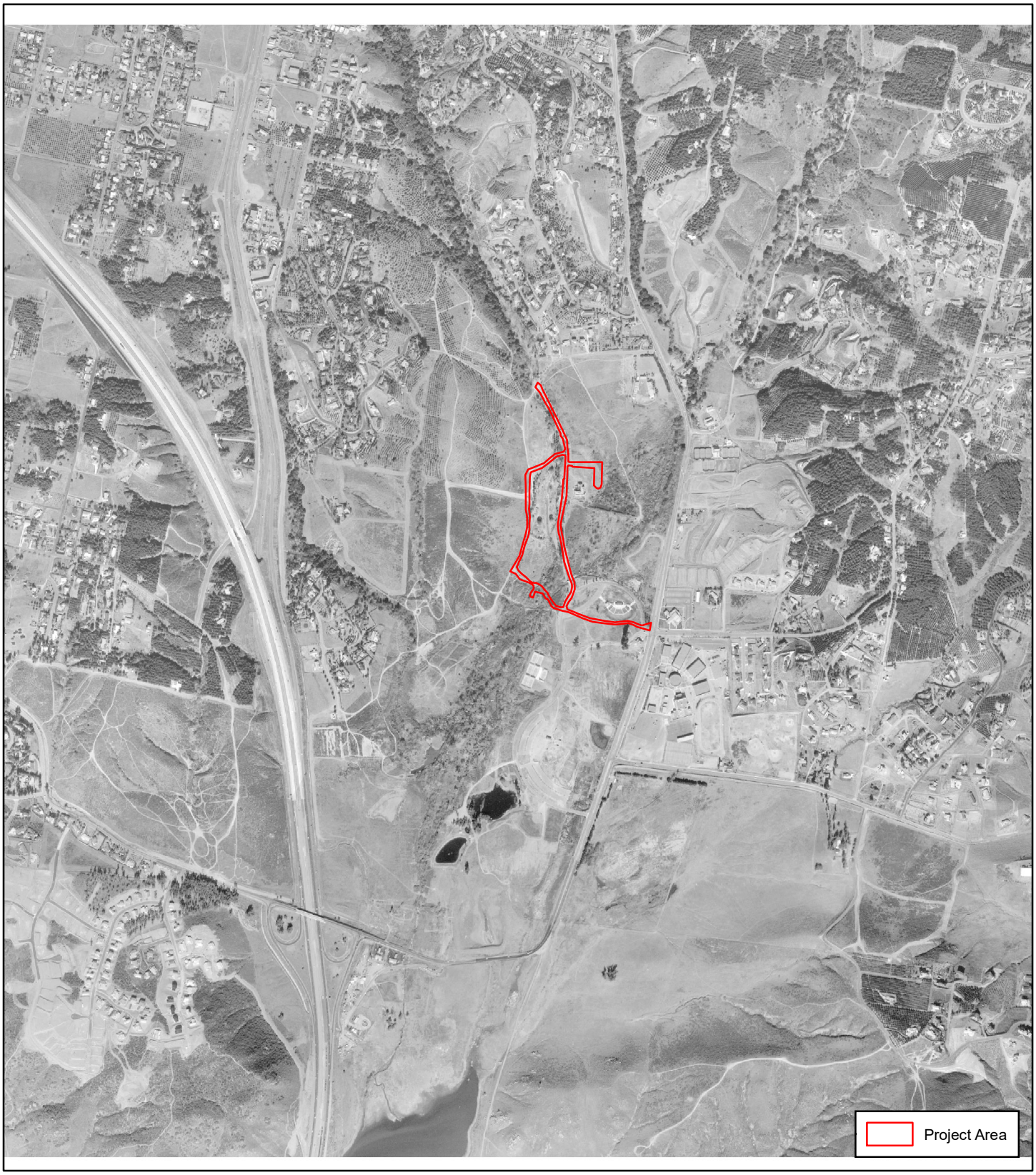
0 750 1,500 Feet
0 250 500 Meters

N

Scale 1:18,000
1 Inch = 1,500 Feet

Figure 12. Historic Aerial 1967
Kit Carson Park
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.



USGS 7.5' Quad: ESCONDIDO (1975)
Legal Description: SAN BERNARDO (SNOOK) Land Grant

0 700 1,400 Feet

0 250 500 Meters

N

Scale 1:18,000
1 Inch = 1,500 Feet

Figure 13. Historic Aerial 1980
Kit Carson Park
Eagle Scout Lake Bridge Project
San Diego County, California

KLEINFELDER
Bright People. Right Solutions.

APPENDIX C
RECORD SEARCH RESULTS (CONFIDENTIAL)

South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
nick@scic.org

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORDS SEARCH

Company: Kleinfelder/GANDA

Company Representative: Gregorio Pacheco

Date Processed: 7/6/2021

Project Identification: 20212084.001a W-Esondido, CA, Eagles Scout Lake Bridge

Search Radius: 1/4 mile

Historical Resources: JL

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: JL

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: JL

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: N/A

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Summary of SHRC Approved CHRIS IC Records Search Elements	
RSID:	2922
RUSH:	no
Hours:	1
Spatial Features:	28
Address-Mapped Shapes:	yes
Digital Database Records:	23
Quads:	1
Aerial Photos:	0
PDFs:	Yes
PDF Pages:	34

APPENDIX D
NATIVE AMERICAN HERITAGE COMMISSION CONSULTATION

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

September 1, 2021

Gregorio Pacheco
Kleinfelder, Inc.

Via Email to: gpacheco@kleinfelder.com

Re: 20212084.001A W-Escondido, CA; Eagle Scout Lake Bridge Project, San Diego County

Dear Mr. Pacheco:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Kwaaymii Laguna Band of Mission Indians and the San Luis Rey Band of Mission Indians on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

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

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

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Diego County
9/1/2021

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road — Diegueno
Lakeside, CA, 92040
Phone: (619) 443 - 6612
Fax: (619) 443-0681
cloyd@barona-nsn.gov

Campo Band of Diegueno Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Band of Kumeyaay Indians
Robert Pinto, Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 368 - 4382
Fax: (619) 445-9126
ceo@ebki-nsn.gov

Ewiiaapaayp Band of Kumeyaay Indians
Michael Garcia, Vice Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 933 - 2200
Fax: (619) 445-9126
michaelg@leaningrock.net

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 803 - 5694
cjlinton73@aol.com

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 765 - 0845
Fax: (760) 765-0320

Inaja-Cosmit Band of Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. — Diegueno
Escondido, CA, 92025
Phone: (760) 737 - 7628
Fax: (760) 747-8568

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 — Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817
epinto@jiv-nsn.gov

Jamul Indian Village
Lisa Cumper, Tribal Historic Preservation Officer
P.O. Box 612 — Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4855
lcumper@jiv-nsn.gov

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas,
P.O. Box 775 — Kwaaymii
Pine Valley, CA, 91962 — Diegueno
Phone: (619) 709 - 4207

La Posta Band of Diegueno Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 20212084.001A W-Escondido, CA; Eagle Scout Lake Bridge Project, San Diego County.

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 — Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

Mesa Grande Band of Diegueno Mission Indians
Michael Linton, Chairperson
P.O Box 270 — Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

Pala Band of Mission Indians
Shasta Gaughen, Tribal Historic Preservation Officer
PMB 50, 35008 Pala Temecula Rd. — Cupeno, Luiseno
Pala, CA, 92059
Phone: (760) 891 - 3515
Fax: (760) 742-3189
sgaughen@palatribe.com

Pechanga Band of Luiseno Indians
Paul Macarro, Cultural Resources Coordinator
P.O. Box 1477 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6306
Fax: (951) 506-9491
pmacarro@pechanga-nsn.gov

Pechanga Band of Luiseno Indians
Mark Macarro, Chairperson
P.O. Box 1477 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6000
Fax: (951) 695-1778
epreston@pechanga-nsn.gov

Rincon Band of Luiseno Indians
Cheryl Madrigal, Tribal Historic Preservation Officer
One Government Center Lane — Luiseno
Valley Center, CA, 92082
Phone: (760) 297 - 2635
crd@rincon-nsn.gov

Rincon Band of Luiseno Indians
Bo Mazzetti, Chairperson
One Government Center Lane — Luiseno
Valley Center, CA, 92082
Phone: (760) 749 - 1051
Fax: (760) 749-5144
bomazzetti@aol.com

San Luis Rey Band of Mission Indians
1889 Sunset Drive — Luiseno
Vista, CA, 92081
Phone: (760) 724 - 8505
Fax: (760) 724-2172
cjmojado@slrmissionindians.org

San Luis Rey Band of Mission Indians
San Luis Rey, Tribal Council
1889 Sunset Drive — Luiseno
Vista, CA, 92081
Phone: (760) 724 - 8505
Fax: (760) 724-2172
cjmojado@slrmissionindians.org

San Pasqual Band of Diegueno Mission Indians
John Flores, Environmental Coordinator
P. O. Box 365 — Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org

San Pasqual Band of Diegueno Mission Indians
Allen Lawson, Chairperson
P.O. Box 365 — Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
allenl@sanpasqualtribe.org

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 20212084.001A W-Escondido, CA; Eagle Scout Lake Bridge Project, San Diego County.

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Sycuan Band of the Kumeyaay Nation
Cody Martinez, Chairperson
1 Kwaaypaay Court — Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 2613
Fax: (619) 445-1927
ssilva@sycuan-nsn.gov

Sycuan Band of the Kumeyaay Nation
Kristie Orosco, Kumeyaay Resource Specialist
1 Kwaaypaay Court — Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 6917

Viejas Band of Kumeyaay Indians
Ernest Pingleton, Tribal Historic Officer, Resource Management
1 Viejas Grade Road — Diegueno
Alpine, CA, 91901
Phone: (619) 659 - 2314
epingleton@viejas-nsn.gov

Viejas Band of Kumeyaay Indians
John Christman, Chairperson
1 Viejas Grade Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 20212084.001A W-Escondido, CA; Eagle Scout Lake Bridge Project, San Diego County.

APPENDIX E
SURVEY PHOTOGRAPHS

Photo 1. Overview of Eagle Scout Lake (background) as viewed from the intersection of Castaneda Drive and Entrance Drive, facing west.

Photo 2. Overview of staging area east of Castaneda Drive, facing north.

Photo 3. Overview of staging area east of Castaneda Drive, facing south.

Photo 4. Overview of unpaved access route adjacent to western end of direct/indirect impact areas, facing southeast.

Photo 5. Overview of survey area at the northern end of Castaneda Drive, facing south.

Photo 6. Overview of direct impact area (bridge replacement) and adjacent indirect impact area, facing northeast.

Photo 7. Overview of direct impact area (bridge replacement in background) and access route to bridge as viewed from concrete spillway/culvert to the east, facing northwest.

Appendix D

Roadway Construction Noise Model Outputs

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/7/2022
Case Description: Eagle Scout Bridge

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
50 feet	Residential	45	45	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	50	0
Front End Loader	No	40		79.1	50	0
Excavator	No	40		80.7	50	0
Dump Truck	No	40		76.5	50	0
Compressor (air)	No	40		77.7	50	0
Concrete Mixer Truck	No	40		78.8	50	0
Concrete Pump Truck	No	20		81.4	50	0
Pumps	No	50		80.9	50	0
Jackhammer	Yes	20		88.9	50	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck		76.5	72.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)		77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck		78.8	74.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck		81.4	74.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps		80.9	77.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackhammer		88.9	81.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	88.9	84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Park	Residential	45	45	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	500	0
Front End Loader	No	40		79.1	500	0
Excavator	No	40		80.7	500	0
Dump Truck	No	40		76.5	500	0
Compressor (air)	No	40		77.7	500	0
Concrete Mixer Truck	No	40		78.8	500	0
Concrete Pump Truck	No	20		81.4	500	0
Pumps	No	50		80.9	500	0
Jackhammer	Yes	20		88.9	500	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe		57.6	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader		59.1	55.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		60.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck		56.5	52.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)		57.7	53.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck		58.8	54.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck		61.4	54.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps		60.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackhammer		68.9	61.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	68.9	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	45	45	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	1100	0
Front End Loader	No	40		79.1	1100	0
Excavator	No	40		80.7	1100	0

Dump Truck	No	40	76.5	1100	0
Compressor (air)	No	40	77.7	1100	0
Concrete Mixer Truck	No	40	78.8	1100	0
Concrete Pump Truck	No	20	81.4	1100	0
Pumps	No	50	80.9	1100	0
Jackhammer	Yes	20	88.9	1100	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	50.7	46.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	52.3	48.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	53.9	49.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck	49.6	45.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)	50.8	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	52	48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Pump Truck	54.6	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps	54.1	51.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackhammer	62	55.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	62	59.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/7/2022
Case Description: Eagle Scout Bridge

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
50 feet	Residential	45	45	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	50	0
Excavator	No	40		80.7	50	0
Dump Truck	No	40		76.5	50	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck		76.5	72.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	80.7	79.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Park	Residential	45	45	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	500	0
Excavator	No	40		80.7	500	0
Dump Truck	No	40		76.5	500	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		59.1	55.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		60.7	56.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck		56.5	52.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	68.9	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	45	45	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	1100	0
Excavator	No	40		80.7	1100	0
Dump Truck	No	40		76.5	1100	0

		Results Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader		52.3	48.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		53.9	49.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dump Truck		49.6	45.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	62	59.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.