HELIX Environmental Planning

Greenwood Park Project

Draft Initial Study/Proposed Mitigated Negative Declaration

September 2019 | GDR-02

Prepared for:

Georgetown Divide Recreation District
4401 State Route 193
Greenwood, CA 95635

Prepared by:

HELIX Environmental Planning, Inc.
590 Menlo Drive, Suite 5
Rocklin, CA 95765

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Materials
ALUCP	Airport Land Use Compatibility Plan
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalIPC	California Invasive Plant Council
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CIP	Capital Improvements Projects
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO2	carbon dioxide
CO2e	carbon dioxide-equivalent
dB	decibel
dBA	A-weighted- decibel
DPM	Diesel Particulate Matter
EDCAQMD	El Dorado County Air Quality Management District
EDCTC	El Dorado County Transportation Commission
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GDRD	Georgetown Divide Recreation District
GHG	greenhouse gas
Hz	hertz
IL	Industrial-Light
ISA	International Society of Arboriculture

ACRONYMS AND ABBREVIATIONS (cont.)

L_{EQ}	time-averaged noise levels
L_{MAX}	maximum noise level during given period
MaD	Mariposa gravelly silt loam, 3 to 30 percent slopes
MbE	Mariposa very rocky silt loam, 3 to 50 percent slopes
MBTA	Migratory Bird Treaty Act
MCAB	Mountain Counties Air Basin
mPa	micro-Pascals
MRZ-2a	Mineral Resource Zone – 2a
MRZ-2b	Mineral Resource Zone – 2b
MT	metric tons
N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards National Pollutant Discharge Elimination System
NAHC	Native American Heritage Council
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NOA	Naturally occurring asbestos
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Services
NSLU	noise-sensitive land uses
OSHA	Occupational and Safety Health Administration
PM_{10}	Particulate Matter, 10 microns in diameter (coarse particulate matter)
$PM_{2.5}$	Particulate Matter, 2.5 microns in diameter (fine particulate matter)
PPV	peak particle velocity
PRC	Public Resources Code
PrD	Placer diggings
R1A	One-acre Residential
RCNM	Roadway Construction Noise Model
RMS	root mean square
ROG	Reactive Organic Gas
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District

ACRONYMS AND ABBREVIATIONS (cont.)

SO_X	sulfur oxide
SPL	sound pressure level
sq ft	square feet
SR	State Route
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TPZ	tree protection zone
UAIC	United Auburn Indian Community of the Auburn Rancheria
U.S.C.	United States Code
U.S.	United States
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

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1.0 INTRODUCTION

1.1 INITIAL STUDY INFORMATION SHEET

1.	Project title:	Greenwood Park Project
2.	Lead agency name and address:	Georgetown Divide Recreation District 4401 State Route 193 Greenwood, CA 95635
3.	Contact person and phone number:	Contact: Carl Clark Phone: (530) 823-9090 (office); or (530) 333-9500 (direct)
4.	Project location:	4065 Main Street Greenwood, CA 95635
5.	Project sponsor's name and address:	Georgetown Divide Recreation District 4401 State Route 193 Greenwood, CA 95635
6.	General plan designation:	Public facilities, medium-density residential
7.	Zoning:	Industrial-Light (IL), one-acre Residential (R1A)

8. Description of project:

The Georgetown Divide Recreation District (GDRD) proposes to expand Greenwood Park from one acre (in current recreational use) to approximately six acres, through the acquisition of three adjacent parcels (APN 074-173-09, APN 074-173-10, and APN 074-173-11) bordering the south and southwest sides of the project site. The project would also include the construction of youth sports fields (one multi-use field and one combined youth soccer/softball/baseball field) for day-time use. Other proposed improvements would include a restroom building, a parcourse exercise stations, picnic tables, bicycle parking, and parking lot (Proposed Project) (see Figure 1, *Site and Vicinity*, Figure 2, *Project Site*, and Figure 3, *Proposed Project*). The expansion of Greenwood Park would provide enhanced recreational opportunities to the local community and the Old Greenwood School House building and adjacent playground would be retained in their current condition for continued use by the community. The project would include demolition of an existing 2,300 square-foot El Dorado County Maintenance Facility building and another 2,400 square-foot El Dorado County Maintenance facility building would be retained by GDRD for storage. Two houses facing Main Street within the project site would be renovated for use by GDRD as office space and community meeting rooms.

Background

GDRD currently owns and operates Greenwood Park at 4065 Main Street, Greenwood, CA. Greenwood Park currently includes the Old Greenwood School House, a children's playground, and associated informal parking. GDRD owns approximately 3.1 acres, one acre that encompasses an active park area and two acres of unimproved land. GDRD is an independent special district. As described by the El Dorado Local Agency Formation Commission, GDRD was:

> …established in 1988 pursuant to Public Resources Code 5780 et seq. for the purpose of providing recreational sites, facilities and programs to residents of the Georgetown Divide. The boundaries of the GDRD encompass approximately 412 square miles of the Divide, including the communities of Cool, Garden Valley, Georgetown, Greenwood, Kelsey and Pilot Hill. GDRD's stated goal is to develop a community park in each established community as well as a regional park complex (El Dorado Local Agency Formation Commission 2011).

Existing Facilities

Greenwood Park consists of the Old Greenwood School House, a children's playground, a picnic table, and informal parking adjacent to a school house covering approximately one acre of the project site. Access to the park is provided via a 9-foot-wide, 180-foot-long driveway from Main Street.

Proposed Project Features

Sports Fields

Overlapping soccer and baseball/softball fields would be constructed in the northern half of the site and would include striping, a backstop, bleachers, a little-league-sized infield with infield mix, and a short-radius turf outfield.

A multi-use sports field would be constructed and would include a turf open space and backstop to allow for baseball, softball, and soccer practice as well as unstructured active play.

Walking Paths

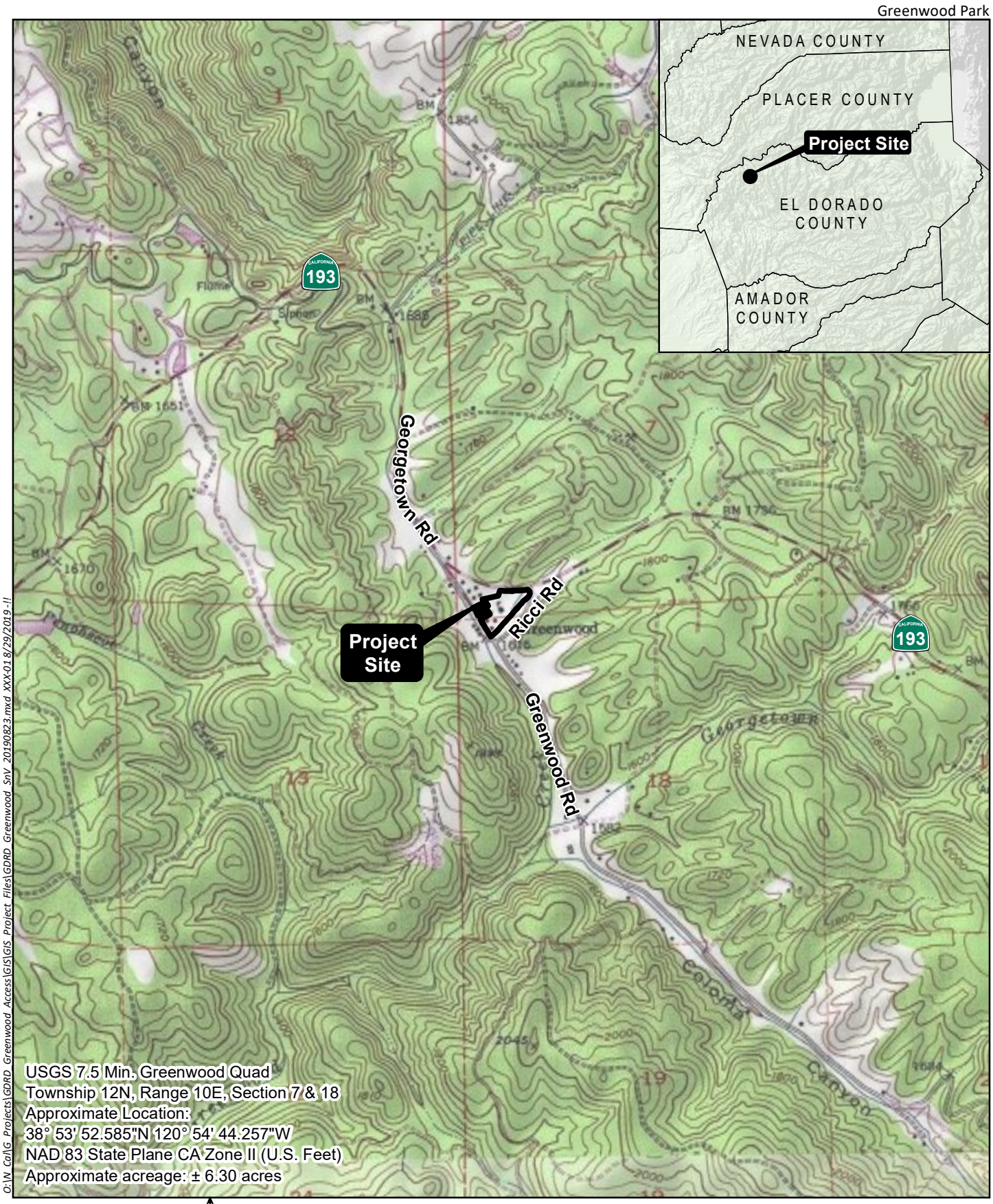
Walking paths would be constructed to loop around the park providing walking opportunities and access to the other recreation features. Three parcourse stations would be located along the path with a variety of exercise equipment designed for a wide range of users including seniors and disabled persons.

Picnic Area

Two picnic shelters would be constructed. One would be located near the baseball/softball and soccer field, and the other would be located near the existing playground. The shelter by the soccer field would include a barbeque area.

Other Park Buildings

The existing building facing Main Street would be renovated to provide meeting rooms.



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Site and Vicinity

Figure 1

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Source: Base Map Layers (ESRI; DigitalGlobe, 2018)

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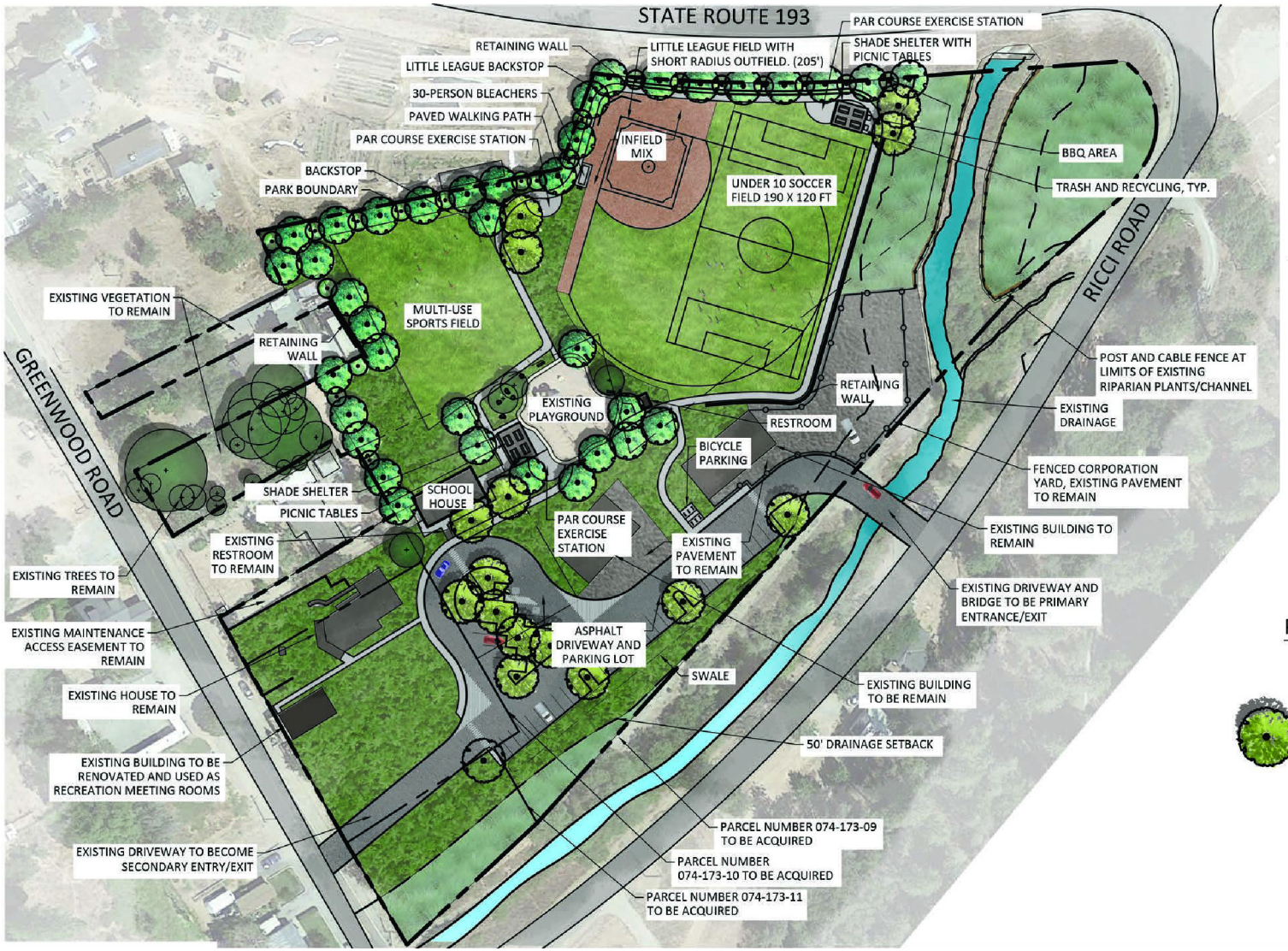
Project Site

Figure 2



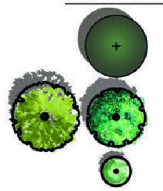
RECREATIONAL FEATURES

A. OVERLAPPING BASEBALL/SOFTBALL FIELD AND SOCCER FIELD
B. MULTI-USE SPORTS FIELD
C. WALKING LOOP WITH PAR COURSE EXERCISE STATIONS
D. TWO PICNIC SHELTERS
E. RENOVATION OF EXISTING BUILDING INTO RECREATION CENTER

MAJOR SUPPORT AMENITIES

F. PARKING LOT
G. NATIVE LANDSCAPING
H. RESTROOM

PLANTING LEGEND



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Source: Base Map Layers (ESRI; DigitalGlobe, 2018)

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Proposed Project

Figure 3

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Utilities

Water, electrical, and telecommunications utilities would tie-in with existing utility services in the area. Ground disturbance for utilities would occur within the project boundary.

Stormwater

Low-impact development features would be included to accommodate stormwater runoff and protect water quality. Bioswales would be constructed including along the parking lot's southeast side and at a center island. Stormwater from walking pathways would drain into planted areas.

Ingress/Egress

Existing access is provided via a 9-foot-wide, 180-foot-long driveway from Main Street. With the proposed project, the existing driveway towards the Old Greenwood School House would be limited to use by park maintenance. Public access would be primarily through an entrance from Ricci Road (which currently provides access to the County maintenance yard) and secondary access from a new driveway just north of the Ricci Road/Main Street intersection.

Lighting

For safety purposes, lighting would be included for the parking lots and possibly the existing entrance to the Old Greenwood School House. Lighting would be hooded or screened to direct the source of light downward. The fields at Greenwood Park would be for day-use only and would not be lighted.

Construction

Demolition

The project would include demolition of the existing 2,300 square-foot El Dorado County Maintenance Facility building. Fences and shed structures at the backyards of Assessor's Parcel Numbers (APNs) 074-173-09 and 074-173-10 would also be demolished, whereas the houses on these two parcels would be retained for park use.

Grading

The majority of grading would take place at the location of the sports fields to provide a level playing surface. Near the location of the baseball/softball infield, areas would be excavated to a maximum of approximately six feet, and fill would be placed at the location of the outfield. Retaining walls would be constructed between the baseball/softball field and parking lot.

Construction Staging

Construction staging would be located within the GDRD-owned parcels. Access to the site would be from Main Street-Greenwood Road or Ricci Road.

Construction Best Management Practices

Per Rule 223-1, Fugitive Dust, from the El Dorado County Air Quality Management District (EDCAQMD), a detailed Fugitive Dust Control Plan is required to be submitted to the EDCAQMD prior to the start of

any construction activity for which a grading permit was issued by the County. In addition, the rule requires implementation of the following applicable construction Best Management Practices (BMPs) from Tables 1 through 3 of the Rule 223-1 (EDCAQMD 2005a):

- Backfilling – Stabilize backfill material before and during handling and stabilize soils at the completion of the activity.

- Clearing and Grubbing – Maintain stability of the soil through pre-watering of the site prior to, during, and after clearing and grubbing.

- Clearing Forms – Use water spray, or sweeping and water spray, or a vacuum system to clear forms.

- Cut and Fill – Pre-water soils prior to cut and fill activities; and stabilize soil during and after cut and fill activities.

- Disturbed Soil – Stabilize disturbed soil throughout the construction site and between structures.

- Earth-Moving Activities – Pre-apply water and re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 50 feet or beyond property line in any direction. Stabilize soils once earth-moving activities are complete.

- Importing/Exporting of Bulk Materials – Stabilize or adequately wet material while loading to reduce fugitive dust emissions. Maintain at least six inches of freeboard on haul vehicles traveling offsite. Stabilize or adequately wet material while transporting to reduce fugitive dust emissions. Stabilize material while unloading to reduce fugitive dust emissions.

- Landscaping – Stabilize soils, material and slopes.

These BMPs and similar measures identified by obtained permits would be implemented. This includes measures identified in the National Pollutant Discharge Elimination System (NPDES) Construction General Permit required under Section 402 of the Clean Water Act.

Construction Access

Construction access is anticipated via Ricci Road at one of the new ingress/egress points. Secondary access via the existing driveway may be needed. Access from State Route (SR) 193 is not needed.

Construction Timing

Construction activities would take place during daytime hours. Construction is anticipated to last approximately four months from Spring 2021 to Summer 2021.

9. Surrounding land uses and setting:

The Proposed Project is bounded by SR 193 to the northwest with residential land use to the west and south.

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

    - State Water Resources Control Board (SWRCB) for Construction General Permit
    - EDCAQMD for construction Fugitive Dust Control Plan
    - California Department of Parks and Recreation (for Proposition 68 Grant Funding, as applicable)

11. 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.?

The Lead Agency reports that no tribes have requested consultation and/or notification of proposed projects pursuant to Public Resources Code Section 21080.3.1. A request to consult and response to an information request letter, however, was received from the United Auburn Indian Community of the Auburn Rancheria (UAIC). Coordination with UAIC is discussed in XVIII. Tribal Cultural Resources.

1.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

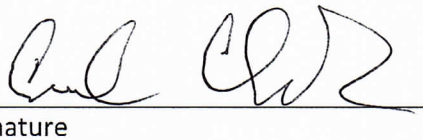
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ 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 (EIR) 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 EIR 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.



Signature

9/13/19

Date

Carl Clark

Printed Name

Georgetown Divide Recreation District

For

2.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST

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

A. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

B. "Less Than Significant with Mitigation Incorporated" applies where the inclusion of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.

C. "Less Than Significant Impact" applies where the project does not create an impact that exceeds a stated significance threshold.

D. "No Impact" applies where a project does not create an impact in that category. "No Impact" answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). 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).

The explanation of each issue identifies the significance criteria or threshold used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other California Environmental Quality Act (CEQA) process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. Where appropriate, the discussion identifies the following:

a) Earlier Analyses Used. Identifies where earlier analyses are available for review.

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

c) Mitigation Measures. For effects that are "Less Than Significant with Mitigation Incorporated," describes 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.

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)	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?

No impact. No naturally occurring or officially designated scenic vistas are present in the vicinity of the project site. There would be **no impact** 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?

Less than significant impact. Several existing trees would be removed within the project site to allow for construction of proposed park improvements. No designated scenic resources are located in the vicinity of the project. SR 193, adjacent to the project site, is not designated as a state scenic highway nor is it eligible as a scenic highway (Caltrans 2019).

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. The project site is currently characterized by a rural setting set amongst rural residences. Existing development on the project site consists of undeveloped space between SR 193; the Old Greenwood School House and playground; and residential homes. The adjacent three acres is characterized by County industrial buildings. While development of proposed improvements would change the character of the site from residential to recreational, landscaping is proposed to create an aesthetically appealing space. Shade trees would be planted along the site's boundaries to visually define the park and provide some screening between the park and residential lots. Construction-

related conditions would have the potential to result in short-term, **less than significant** visual impacts. Implementation of Minimization Measure AES-1 would minimize visual affects to potential viewers during construction.

Minimization

Minimization Measure AES-1 is proposed.

AES-1 **Minimize Construction Visual Disturbance**. The following shall be implemented during construction:

- Demolition debris will be removed in a timely manner for off-site disposal.
- Tree and vegetation removal will be limited to the extent needed to facilitate project construction and access to the site.

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. For safety purposes, lighting would be included for the parking lots and possibly the existing entrance to the Old Greenwood School House. Lighting would be hooded or screened to direct the source of light downward, consistent with the County's lighting ordinance (Ordinance 130.34.020, El Dorado County Code 2019). The fields at Greenwood Park would be for day-use only and would not be lighted. Impacts related to light or glare are, therefore, considered **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))?	☐	☐	☐	■

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

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 project site is mapped as "Urban and Built-Up Land" by the Farmland Mapping and Monitoring Program (FMMP) (California Department of Conservation 2016).

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

No impact. The project site is currently zoned for one-acre residential (R1A) and industrial-low (IL) (El Dorado County 2019b). No land within the project site is under 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))?

No impact. The project site is not located on forest land, timberland, or timberland zoned Timberland Production.

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

No Impact. Forest land, under Public Resources Code Section 12220(g), is defined as:

> "*Land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits*."

While the project site includes several native trees, the site consists of a six-acre area partially developed with the County Maintenance facility, buildings, including the Greenwood Schoolhouse, and is surrounded by local streets and SR 193. There would be **no impact** on forest land.

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

No impact. The project site is not characterized by Farmland, nor are agricultural uses present on the site. The project site is located in an area mapped as "Urban and Built-Up Land" by the FMMP (California Department of Conservation 2016). There would be **no impact** on farmland or forest land.

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?	☐	☐	■	☐

Environmental Setting

The project site is located in the western portion of El Dorado County and the Mountain Counties Air Basin (MCAB), which covers an area of approximately 11,000 square miles. The MCAB lies along the northern part of the Sierra Nevada mountains and encompasses El Dorado (western portion), Plumas, Sierra, Nevada, Placer (middle portion), Amador, Calaveras, Tuolumne, and Mariposa counties. The EDCAQMD is responsible for implementing emissions standards and other requirements of federal and state laws in the El Dorado County portion of the MCAB. Attainment plans for meeting the federal air quality standards are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the U.S. Environmental Protection Agency (US EPA), the federal agency that administrates the Federal Clean Air Act (CAA) of 1970, as amended in 1990.

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

more stringent California Ambient Air Quality Standards (CAAQS) and expanded the number of regulated air constituents.

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

Table 1
WESTERN EL DORADO COUNTY ATTAINMENT STATUS

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone	Nonattainment	Nonattainment
Coarse Particulate Matter (PM_{10})	Nonattainment	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Unclassified	Nonattainment
Carbon Monoxide	Unclassified	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Source: CARB 2017a; CARB 2018a.

The western portion of El Dorado County is designated as nonattainment for the state and federal ozone standards. The Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan was developed by the air districts in the Sacramento region to bring the region into attainment. The plan is a joint project between the Sacramento Metropolitan Air Quality Management District (SMAQMD), EDCAQMD, and three other air districts in the Sacramento region (SMAQMD 2017). The plan includes the MCAB portion of western El Dorado County, and thus the project site. In addition to not attaining the federal or state ozone standards, the region is classified nonattainment for the federal $PM_{2.5}$ standard and the state PM_{10} standard. The EDCAQMD and other Sacramento region air districts have submitted a $PM_{2.5}$ Implementation/Maintenance Plan and Re-Designation Requests to fulfill CAA requirements to re-designate the region from nonattainment to attainment of the $PM_{2.5}$ NAAQS (SMAQMD 2013).

Ground-level ozone is not emitted directly into the environment but is generated from complex chemical reactions between Reactive Organic Gases (ROG), or non-methane hydrocarbons, and oxides of nitrogen (NO_X) that occur in the presence of sunlight. PM_{10} and $PM_{2.5}$ is generated from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. In addition, PM_{10} and $PM_{2.5}$ can also be formed through chemical and photochemical reactions in the atmosphere. Anthropogenic ROG, NO_X, PM_{10}, and $PM_{2.5}$ sources in the county include motor vehicles and other transportation sources, residential wood burning for heating, and open burning of vegetation related to agriculture and wildfire fuel management. El Dorado County is mostly rural and sparsely populated, and sources of ROG, NO_X, PM_{10} and $PM_{2.5}$ within the county are limited. The County's nonattainment status for ozone, PM_{10} and $PM_{2.5}$ is primarily due to the transport

of pollutants from population centers and intense agriculture activity in California's central valley to the west.

Significance Thresholds

While the final determination of whether a project has a significant effect on the environment is within the purview of the lead agency pursuant to State CEQA Guidelines Section 15064(b), the EDCAQMD has developed thresholds of significance for mass emissions of the ozone precursors ROG and NO_X, which lead agencies within their jurisdiction can use to evaluate the air pollutant emission impacts of land use projects. These criteria pollutant and precursor thresholds and other assessment recommendations are contained in EDCAQMD's *Guide to Air Quality Assessment* and are discussed under the checklist questions below (EDCAQMD 2002). The EDCAQMD has not adopted thresholds of significance for a project's construction-period emissions of PM_{10} or $PM_{2.5}$. Therefore, the PM_{10} and $PM_{2.5}$ thresholds adopted by the adjacent air district SMAQMD in their *Thresholds of Significance Table* are used to determine the significance of the project PM emissions (SMAQMD 2015). The SMAQMD PM thresholds require implementation of all feasible BMPs.

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

Less than significant impact. The CAA requires states in violation of a NAAQS to prepare a SIP containing strategies and control measures to attain the NAAQS. The CARB is responsible for creating and periodically updating the SIP for California to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them, including the western El Dorado County portion of the MCAB. In 2018, CARB updated the SIP, including updated elements to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress (CARB 2018b). The USEPA reviews SIPs to determine if they conform to the mandates of the CAA amendments and would achieve air quality goals when implemented. The California 2018 updated SIP is the applicable air quality plan.

As discussed in "b" below, the project's estimated construction emissions would be below the thresholds established by the EDCAQMD and SMAQMD and long-term operation emissions are not anticipated to be significantly different from emissions resulting from existing land uses on the project site. The EDCAQMD has developed the mass emissions thresholds for ROG and NO_X such that projects with emissions below the thresholds would not be expected to affect the EDCAQMD's commitment to attain the NAAQS and CAAQS (EDCAQMD 2002). Similarly, the SMAQMD has determined that projects which do not exceed the mass emission thresholds for operational emissions of PM_{10} or $PM_{2.5}$ would not be considered to conflict with or obstruct implementation of the District's air quality planning efforts (SMAQMD 2016). Therefore, development of the proposed project would not conflict with or obstruct implementation of the SIP or the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan and impacts are considered **less than significant**.

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

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

Criteria pollutant and precursor emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip generation, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2017). The input data and subsequent construction and operation emission estimates for the Proposed Project are discussed below. The CalEEMod output files for the project are included in the *Greenwood Park Project Air Quality, Energy, and Greenhouse Gas Emissions Assessment* attached to this Initial Study as Appendix A.

Construction Emissions. The project's estimated construction emissions (including ROG, NO_X, CO, sulfur oxides [SO_X], PM_{10}, and $PM_{2.5}$) are shown below in Table 2, Project Construction Criteria Pollutant and Precursor Emissions. The emissions estimates assume: an export of approximately 1,660 cubic yards of vegetation, soil, and asphalt during grubbing and clearing, the demotion of a 2,300 square-feet maintenance facility building, and the use of low volatile organic compound (VOC) interior and exterior paint (50 grams per liter maximum VOC content per the project architect). The emissions estimate also assumes the implementation of the BMPs, described in Chapter 1, specifically watering exposed areas a minimum of twice per day and enforcing a 15 miles per hour speed limit on unpaved surfaces.

Table 2
PROJECT CONSTRUCTION CRITERIA POLLUTANT AND PRECURSOR EMISSIONS

Activity	Emissions (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Demolition	1.8	16.3	11.7	<0.1	1.0	0.8
Site Preparation	1.6	17.8	10.2	<0.1	3.9	2.3
Grading	1.3	12.5	8.6	<0.1	2.4	1.4
Paving	0.8	6.5	8.0	<0.1	0.5	0.4
Building Renovation	0.3	2.3	1.7	<0.1	0.4	0.2
Architectural Coatings	6.5	1.6	2.9	<0.1	0.4	0.2
Landscaping	0.5	4.0	4.9	<0.1	0.5	0.3
Maximum Daily Emissions[1,2]	**6.5**	**34.1**	**21.9**	**<0.1**	**4.9**	**3.1**
Threshold	82[3]	82[3]	None	None	80[4]	82[4]
Threshold exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Source: CalEEMod version 2016.3.2

1 Maximum daily emissions of ROG would occur during Architectural Coatings. All other maximum daily emissions would be the combined emissions during Demolition and Site Preparation which are assumed to occur concurrently.

2 Totals may not sum due to rounding.

3 EDCAQMD 2002.

4 SMAQMD 2015.

As shown in Table 2, the project's construction emissions related to the criteria pollutants for which western El Dorado County is designated nonattainment (ROG, NO_X, PM_{10}, and $PM_{2.5}$) would not exceed

the EDCAQMD or SMAQMD thresholds. Therefore, the project's construction emissions of criteria pollutants and precursors would be less than cumulatively considerable.

Operational Emissions. Long-term operation of the project would result in emissions of criteria pollutants and precursors from: mobile sources related to the use of vehicles of park patrons and employees of the GDRD traveling to and from the project site; and area sources such as the use of landscape maintenance equipment, cleaning products, and the re-application of architectural coatings for maintenance (e.g., painting). These emissions would be offset by the emissions from the exiting uses of the project site, including tenants of the two residential building, activities at the County maintenance facility, and existing park recreational uses. It is not anticipated that project-related vehicle trips or area source emissions would substantially increase compared to existing conditions. Therefore, the project's long-term operational emissions of criteria pollutants and precursors would be less than cumulatively considerable.

Impact Summary. The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard during either construction or operation. The impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact. The project would not expose sensitive receptors to substantial pollutant concentrations, including Diesel Particulate Matter (DPM) and asbestos. A detailed discussion follows.

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

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The closest sensitive receptors to the project site are two single-family residential properties adjacent to the western project site boundary.

The generation of DPM during construction would be variable and sporadic due to the nature of construction activity. Maximum emissions of DPM would occur during the demolition and site preparation phases which are anticipated to last approximately 2 months. The most intense use of diesel-powered equipment would be required for the demolition of the maintenance building and the clearing and creation of a level pad for the sports fields on the south and east sides of the project site, more than 200 feet from the closest residences. Due to the short duration and sporadic nature of construction activities requiring the use of heavy diesel-powered equipment, and because the use of heavy construction equipment would not be concentrated near the residential property lines, project construction related DPM emissions during construction would not expose sensitive receptors to substantial pollutant concentrations and the impact would be **less than significant**.

Asbestos. Asbestos dust is a known carcinogen and is classified as a TAC by CARB. Asbestos may be a component of building materials such as walls, ceilings, insulation, or fireproofing in older (pre-1979 buildings). Demolition of the maintenance facility building and renovation of other existing structures on the project site project site could result in the disturbance of Asbestos Containing Materials (ACMs). Airborne asbestos is regulated in accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) asbestos regulations. Federal and state regulations prohibit emissions of asbestos from demolition or construction activities. Following identification of friable ACMs, federal and state Occupational and Safety Health Administration (OSHA) regulations require that asbestos-trained and certified abatement personnel perform asbestos abatement and that all asbestos-containing materials removed from on-site structures must be hauled to a licensed receiving facility and disposed of under proper manifest by a transportation company certified to handle asbestos. These regulations specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers and require notice to federal and/or local government agencies prior to beginning demolition or renovation that could disturb asbestos-containing materials.

Naturally occurring asbestos (NOA) most commonly occurs in ultramafic rock (i.e., igneous and metamorphic rock with low silica content) that has undergone partial or complete alteration to serpentine rock (or serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, is associated with ultramafic rock, particularly near geologic faults. NOA is known to occur in certain areas of El Dorado County. Based on the map Asbestos Review Areas for the Western Slope of El Dorado County, the project site is within the 0.25-mile buffer of an area or fault line more likely to contain NOA (EDCAQMD 2015). CARB has adopted an air toxic control measure (17 CCR Section 93105) limiting emissions from construction, grading, quarrying, and surface mining in areas with ultramafic rock. In addition to the CARB air toxic control measure, the EDCAQMD has adopted Rule 223-2, Fugitive Dust-Asbestos Hazard Mitigation to reduce the amount of asbestos particulate matter entrained in the ambient air as a result of any construction or construction related activities that disturbs or potentially disturbs naturally occurring asbestos by requiring actions to prevent, reduce or mitigate asbestos emissions (EDCAQMD 2005b). Rule 223-2 requires the land owner or designated contractor to submit an Asbestos Dust Mitigation Plan to the EDCAQMD and that construction activities shall not commence until the Air Pollution Control Officer has approved or conditionally approved the Asbestos Dust Mitigation Plan. Rule 223-2 also requires testing for NOA prior to construction activities in areas likely to contain NOA and implementation of best management practices to control dust during construction. A countywide ordinance was also adopted on January 4, 2000 (Ordinance 4548, codified as Chapter 8.44 of the El Dorado County Ordinance Code) adopting the CARB asbestos content level as a "permissible asbestos content level." With adherence to the BMPs listed in Table 1 in EDCAQMD Rule 223-2, and compliance with all applicable EDCAQMD rules, County ordinances, and State and Federal regulations, construction-related activities would not expose sensitive receptors to substantial asbestos related pollutant concentrations and the impact would be less than significant.

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

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

Less than significant impact. Heavy diesel equipment could generate odors during construction activities. The generation of odors during the construction period would be temporary and would tend to be dispersed within a short distance from the active work area. Once operational, the project would

not be a significant source odors or other emissions. Therefore, due to the short duration of construction activity near any individual residence, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and the impact would be **less than significant**.

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 discussion below is based on the *Greenwood Park Biological Resources Assessment* (HELIX 2019b), which is attached to this Initial Study as Appendix B.

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

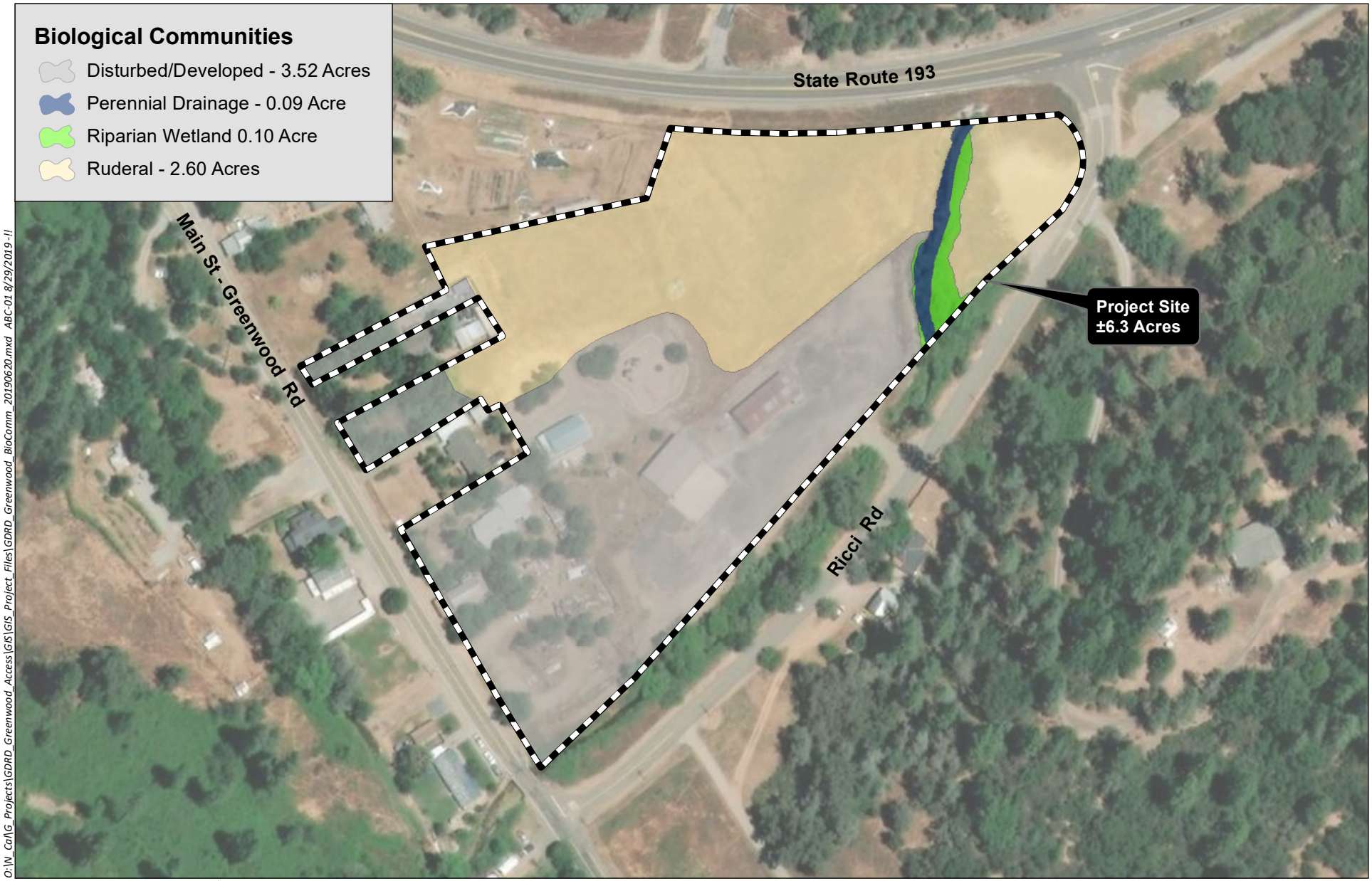
regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?

Less than significant impact with mitigation incorporated. The 6.30-acre Biological Resource Assessment study area coincides with the boundaries identified for the project site and it is largely developed and previously disturbed. As depicted in Figure 4, *Biological Communities*, the project site contains riparian wetland habitat (approximately 0.10 acre), ruderal habitat (approximately 2.60 acres), and disturbed/developed areas (approximately 3.52 acres). Additional aquatic resources within the project site include a perennial drainage (approximately 0.09 acre). Developed portions of the project site include the County maintenance yard and two associated buildings, residential housing, and the Greenwood Park playground. Seven listed and special-status wildlife species have the potential to occur within the project site. Foothill yellow-legged frog (*Rana boylii*) has a high potential to occur, and California red-legged frog (*Rana draytonii*), western pond turtle (*Emys marmorata*), pallid bat (*Antrozous pallidus*), silver-haired bat (*Lasionycteris noctivagans*), Townsend's big-eared bat (*Corynorhinus townsendii*), and Yuma myotis (*Myotis yumanensis*) have a low potential to occur.

Foothill yellow-legged frog is a State Candidate Threatened Species and State Species of Special Concern. The perennial drainage within the project site provides suitable habitat for foothill yellow-legged frog. Seven occurrences are documented in the CNDDB within five miles of the project site (CDFW 2019). Although this species was not observed during the field survey on June 18, 2019, the perennial drainage crossing the project site is comprised of rocky bottoms and has open sunny banks that would be suitable for and preferred by foothill yellow-legged frog. Based upon the number of occurrences within five miles of the project site and suitable habitat present, this species has a high potential to occur within the project site.

The California red-legged frog is listed as a Threatened species by USFWS and a Species of Special Concern by CDFW. The perennial drainage and riparian wetland within the project site provide minimally suitable habitat for California red-legged frog. The perennial drainage is fairly small and shallow, and no pools occur within the project site; therefore, breeding is unlikely to occur. The project site is also within an area that is lacking preferred habitat types, such as humid forest or woodland, and it does not contain suitable estivation sites. However, California red-legged frog may utilize the perennial drainage as a movement corridor to more suitable habitat outside of the project site. Two occurrences are documented within five miles of the project site (CDFW 2019). Although this species was not observed during the field survey on June 18, 2019, minimally suitable habitat is present within the project site and California red-legged frog may periodically occur within the perennial drainage or riparian wetland habitat. Without mitigation, impacts to foothill yellow-legged frog and California red-legged frog is potentially significant. Implementation of mitigation measures BIO-1 and BIO-2 would reduce this impact to a **less than significant** level.

The western pond turtle is designated as a Species of Special Concern by CDFW. The onsite perennial drainage and riparian wetland provide minimally suitable habitat for western pond turtle. The perennial drainage within the project site does not contain pools and is likely too small and shallow to support a permanent population of western pond turtle. The project site is also lacking woody vegetation and leaf litter suitable for overwintering. However, western pond turtle may utilize the perennial drainage as a movement corridor to other more suitable habitat. One occurrence is documented within five miles of the project site (CDFW 2019). Although this species was not observed during the field survey on June 18, 2019, minimally suitable habitat is present within the project site and western pond turtle may periodically occur within the perennial drainage or riparian wetland habitat. Without mitigation, impacts



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Source: USGS Soils Conservation Service; Base Map Layers (ESRI; DigitalGlobe, 2018)

HELIX Environmental Planning

Biological Communities

Figure 4

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to western pond turtle are potentially significant. Implementation of mitigation measure BIO-2 would reduce this impact to a **less than significant** level.

Townsend's big-eared bat is designated as a Species of Special Concern by CDFW, and silver-haired bat, pallid bat, and Yuma myotis are all included on the CDFW Special Animals List. The project site provides minimally suitable roosting habitat for these species within the various existing buildings, structures, and trees onsite. Although some potential roost sites are present, the current level of human disturbance from adjacent roads and houses may limit the likelihood of roosting occurring within the project site. No signs of roosting (guano, stains, noise) were observed during the field survey on June 18, 2019.

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10; this also includes feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). All raptors, including common species not considered special-status, are protected under the California Fish and Wildlife Code (Section 3503.5). Removal or destruction of an active raptor nest is considered a violation of this Fish and Wildlife Code. Migratory birds and raptors have the potential to nest in or adjacent to the project site. Suitable nest locations may include but are not limited to trees and shrubs, bare ground, buildings and structures, and grasses and weeds. Without mitigation, impacts to migratory birds would be considered potentially significant. Implementation of mitigation measure BIO-2 and BIO-3 would reduce this impact to a **less than significant** level.

Mitigation Measures

BIO-1 Pre-construction surveys shall be conducted for California red-legged frog, foothill yellow-legged frog, western pond turtle, special-status bats and nesting migratory birds and raptors (during the nesting season) 14 days prior to the initiation of construction or ground disturbing activities. If construction or ground disturbing activities do not commence within 14 days, or halt for more than 7 days, then additional surveys are required prior to resuming or starting work. An additional survey for California red-legged frog and foothill yellow-legged frog should be conducted no more than 24 hours prior to the start of construction.

- If California red-legged frog and/or foothill yellow-legged frog are observed within the project site, then resource agency consultation is required to determine appropriate buffers and additional measures to reduce impacts to these species during construction.

- If western pond turtle is observed within the project site, then wildlife exclusion fencing should be installed in an area identified by a designated biologist. This fencing shall be comprised of general silt fencing, will remain in place the duration of construction, and will be removed upon the completion of construction.

BIO-2 Worker environmental awareness trainings should be conducted for all construction personnel prior to the initiation of work for California red-legged frog, foothill yellow-legged frog, western pond turtle, special-status bats and nesting migratory birds and raptors.

BIO-3 Ground-disturbing and other development activities including grading, vegetation clearing, tree removal, and construction could impact nesting birds if these activities occur during the nesting season (generally February 1 to August 31). To avoid impacts to nesting birds, all vegetation removal should be completed between September 1 and January 31, if feasible. If development activities occur during the nesting season, then a qualified biologist should conduct a nesting bird survey to determine the presence of any active nests within the Study Area. Additionally, the surrounding 500 feet of the Study Area should be surveyed for active raptor nests, where accessible, and with binoculars as necessary. The nesting bird survey should be conducted within 14 days prior to commencement of ground-disturbing or other development activities. If the nesting bird survey shows that there is no evidence of active nests, then a letter report should be prepared to document the survey and provided to GDRD, and no additional measures are recommended. If development does not commence within 14 days of the nesting bird survey, or halts for more than 7 days, then an additional survey is required prior to starting or resuming work.

- If active nests are found, then the qualified biologist should establish species-specific buffer zones to prohibit development activities and minimize nest disturbance until the young have successfully fledged or the biologist determines that a nest is no longer active. Buffer distances may range from 20 feet for some songbirds up to 250 to 500 feet for most raptors. Nest monitoring may also be warranted during certain phases of development to ensure nesting birds are not adversely impacted by adjacent construction. If active nests are found within any trees slated for removal, then an appropriate buffer should be established around the tree and trees within the buffer should not be removed until a qualified biologist determines that the nest has successfully fledged and is no longer active.

- In addition, a qualified biologist should conduct an environmental awareness training for all construction personnel for the potential of nesting birds to occur onsite prior to the initiation of work. This training shall follow the same guideless as for special-status amphibians. As applicable, the pre-construction survey and environmental training may be combined with other recommended surveys and trainings. If construction occurs outside of the nesting bird season (September 1 to January 31 is outside of the nesting bird season) then a nesting bird survey and environmental training are not required.

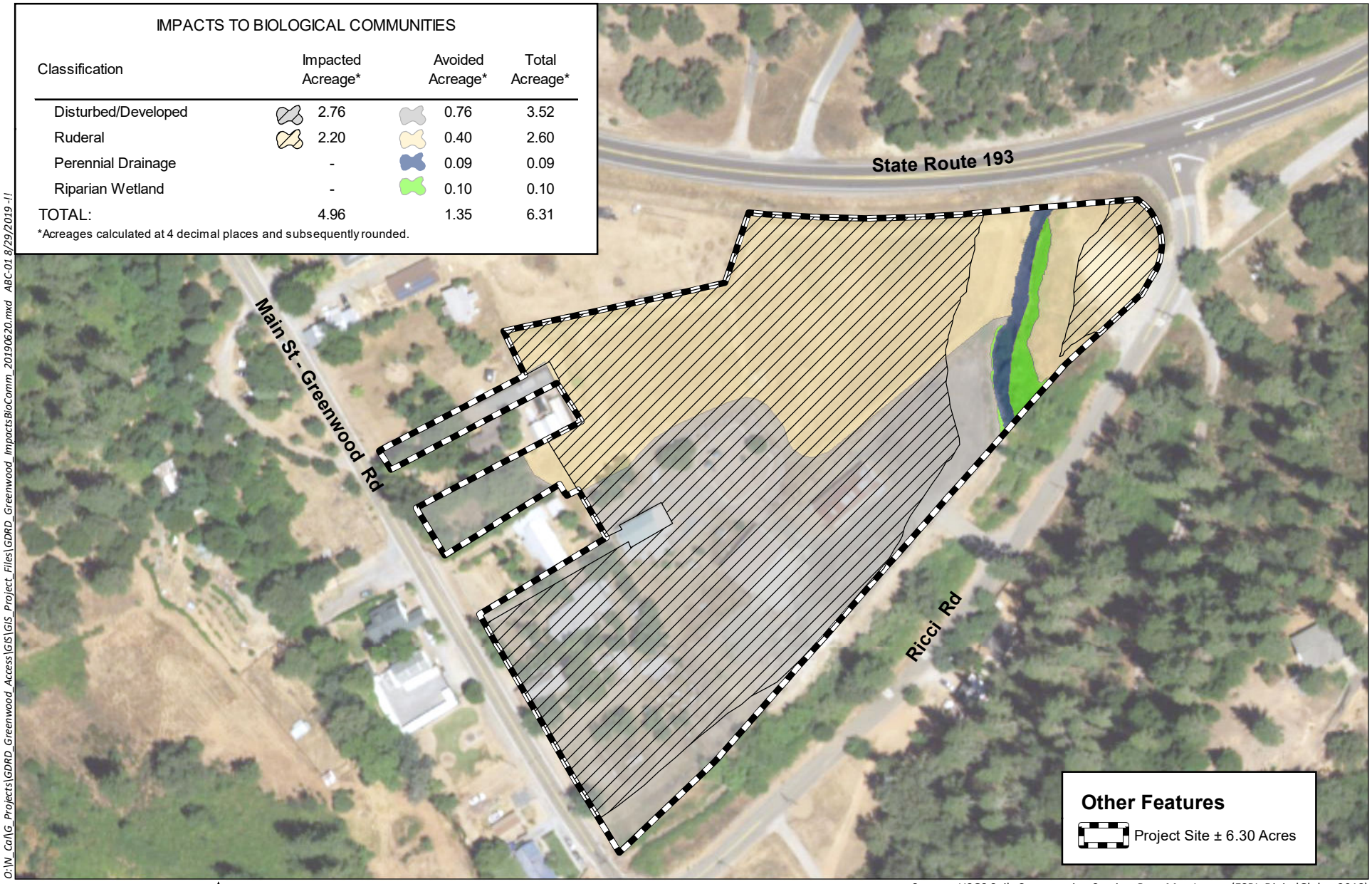
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the CDFW or USFWS?

Less than significant impact with mitigation incorporated. As depicted in Figure 5, *Impacts to Biological Communities*, approximately 0.10 acre of riparian wetland and 0.09 acre of perennial drainage were delineated within the project site. Project development is anticipated to avoid these aquatic features and there would be a minimum 50’ setback from the riparian area. However, if final project design/construction would result in impacts to onsite aquatic resources, impacts would be considered potentially significant. Implementation of BIO-4 and BIO-5 would reduce potential impacts to **less than significant** levels.

IMPACTS TO BIOLOGICAL COMMUNITIES

Classification	Impacted Acreage*	Avoided Acreage*	Total Acreage*
Disturbed/Developed	2.76	0.76	3.52
Ruderal	2.20	0.40	2.60
Perennial Drainage	-	0.09	0.09
Riparian Wetland	-	0.10	0.10
TOTAL:	4.96	1.35	6.31

*Acreages calculated at 4 decimal places and subsequently rounded.



Source: USGS Soils Conservation Service; Base Map Layers (ESRI; DigitalGlobe, 2018)

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HELIX Environmental Planning

Impacts to Biological Communities

Figure 5

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BIO-4 If the project will result in impacts to regulated aquatic features, then the GDRD would be required to obtain a Section 404 permit under the CWA for any impacts to wetlands or other waters subject to USACE jurisdiction. Impacts would also require a 401 Water Quality Certification from the RWQCB under Section 401 of the CWA or Waste Discharge Requirements (WDRs) for non-federal aquatic resources considered Waters of the State. Impacts to aquatic features on the site will also require preparation of a Streambed Alteration Notification for submittal to the CDFW. Regulatory authorizations will include terms and conditions to minimize impacts and to fully mitigate for any permanent impacts to wetlands and other waters.

BIO-5 Construction fencing shall be installed a minimum of 50 feet from all aquatic resources or at the limits of construction. The appropriate placement of construction fencing shall be verified by a qualified biologist prior to commencement of construction. The buffer area or limits of construction should be designated by standard silt fencing with straw wattles and general orange construction fencing (optional for visibility). The fencing should remain in place the duration of construction and shall be removed upon the completion of construction.

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. As described above, the project would avoid aquatic features. However, if final design/construction of proposed improvements would involve impacts to state or federally protected wetlands, then impacts would be reduced to less than significant with implementation of Mitigation Measures BIO-4 and BIO-5.

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. Although some wildlife species may utilize portions of the project site for foraging, breeding, or other behavior, the project site does not link two significant natural areas and is not considered to lie within a wildlife migration corridor, as the project site is bordered by residential properties and SR 193, which likely limit the potential of any significant wildlife movement or travel through the project site. If wildlife travel through the project site, then it would most likely occur along the perennial drainage. The Proposed Project is currently expected to avoid these aquatic features and there would be a minimum 50' setback from the riparian area. Impacts to movement of native resident or migratory fish or wildlife species would, therefore, be considered **less than significant**. In the event that project development encroached within riparian limits, implementation of Mitigation Measure BIO-5 would ensure impacts to the riparian area remain less than significant.

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

Less than significant impact with mitigation incorporated. The Proposed Project is subject to compliance with the El Dorado County's *Oak Resources Management Plan* (2017). The *Oak Resources Management Plan* designates three classes of protected oak resources: oak woodlands, heritage oak trees, and individual native oak trees. A total of 59 trees accessible to the arborist were inventoried and

included 10 incense cedars (*Calocedrus decurrens*), one Douglas-fir (*Pseudotsuga menziesii*), seven valley oaks (*Quercus lobata*), 29 black locusts (*Robinia pseudoacacia*), and 12 red willows (*Salix laevigata*). All species inventoried are native to California with the exception of black locust, which is considered invasive by the California Invasive Plant Council (CalIPC) (California Invasive Plant Council 2018). No oak woodland exists within the project site. No protected trees were inventoried within accessible areas of the project site.

A permit is required prior to impacting or removing protected oak resources. Impacts to oak trees include pruning, grading within the root zone, or any other disturbance to the tree. Oak woodland is considered impacted by any development activity, such as clearing, grading, and other modifications for roads, buildings, landscaping, or other development activities. Mitigation is required for impacts to protected oak resources. Mitigation for individual oak trees is based on an inch-for-inch basis; heritage tree inch-for-inch replacement is required at a 3:1 ratio.

Confirmation survey would be implemented with to confirm oak trees are not present within previously-inaccessible areas. Without mitigation, impacts to protected oak trees are potentially significant. Implementation of mitigation measures BIO-6 through BIO-21 would reduce this potential impact to a **less than significant** level.

Mitigation Measures

BIO-6 Survey previously inaccessible areas to confirm oak trees are not present.

BIO-7 Obtain an Oak Tree Permit from El Dorado County for impacts or removal of protected oak resources.

BIO-8 Protection Fencing, consisting of a minimum 4-foot tall high-visibility fence (orange plastic snow fence or similar), shall be placed around the perimeter of the tree protection zone (TPZ) (dripline radius +1 foot). The TPZ is the minimum distance for placing protective fencing, but tree protection fencing should be placed as far outside of the TPZ as possible. Each sign shall be a minimum of 2 feet by 2 feet and shall include the following:

TREE PROTECTION ZONE
DO NOT MOVE OR RELOCATE FENCE
UNTIL PROJECT COMPLETION WITHOUT
PERMISSION OF PROJECT ARBORIST
OR COUNTY OF EL DORADO

If permanent site improvements (e.g., paving and structures) encroach into the protected area, install fence at limit of work. If temporary impacts (e.g., grading, utility installation) require encroachment into the protected area, move fence to limit of work during active construction of item and return to edge of protected area once work is completed.

Protection fencing shall not be moved without prior authorization from the Project Arborist, the County of El Dorado, or as indicated on approved plans and contract documents.

BIO-9 No parking, portable toilets, dumping or storage of any construction materials, including oil, gas, or other chemicals, or other infringement by workers or domesticated animals is allowed in the protected area.

BIO-10 No signs, ropes, cables, metal stakes, or any other items shall be attached to a protected tree, unless recommended by an International Society of Arboriculture (ISA)-Certified Arborist.

BIO-11 Grading, excavation, or trenching within the TPZ of existing native oaks should be avoided to the greatest extent possible. Under no circumstances should fill soil be placed against the trunk of an existing tree.

BIO-12 Underground utilities should be avoided in the TPZ, but, if necessary, shall be bored or drilled. No trenching is allowed within the TPZ unless specifically approved by the Project Arborist.

BIO-13 Drains shall be installed according to County specifications to avoid harm to existing oak trees due to excess watering.

BIO-14 Pruning of living limbs or roots shall be done under the supervision of an ISA-Certified Arborist. All excavation within the TPZ should be done by hand, air knife, or water jet, in accordance with ISA standards using best practices. Climbing spikes should not be used on living trees. Limbs should be removed with clean cuts just outside the crown collar.

BIO-15 Cover exposed roots or cut root ends in trenches with damp burlap to prevent drying out.

BIO-16 Minimize disturbance to the native ground surface (grass, leaf, litter, or mulch) under preserved trees to the greatest extent feasible.

BIO-17 Native woody plant material (trees and shrubs to be removed) may be chipped or mulched on the Project Site and placed in a 4 to 6-inch deep layer around existing trees to remain. Do not place mulch in contact with the trunk of preserved trees.

BIO-18 Deep water preserved trees that have had roots cut during project activities once a month throughout the summer as needed or as recommended by the Project Arborist.

BIO-19 Appropriate fire prevention techniques shall be employed around all trees to be preserved. This includes cutting tall grass, removing flammable debris within the TPZ, and prohibiting the use of tools that may cause sparks, such as metal-bladed trimmers or mowers.

BIO-20 No open flames shall be permitted within 15 feet of the tree canopy.

BIO-21 Damage to any protected tree during construction shall be immediately reported to County of El Dorado Planning Services. Damage shall be corrected as required by the County representative.

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

No impact. No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans have been adopted for El Dorado County (CDFW 2019b).

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 discussion below is based on the *Greenwood Park Project Cultural Resource Assessment* (HELIX 2019e), which is attached to this Initial Study as Appendix C.

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

Less than significant impact with mitigation incorporated. The Old Greenwood School House was constructed in 1902 and used as a schoolhouse until 1954. It also served the Greenwood community as a meeting hall, polling site, and emergency shelter. The building is in very good condition and is in its original location. The Old Greenwood School House is California Historic Landmark #521 for El Dorado County. The building was evaluated in 2019 and meets the criteria for eligibility for listing on the California Register of Historical Resources under Criterion 1: Event as a good example of the classic American one-room school house and under Criterion 3: Design/Construction as a good example of the one-room school house type of architecture. Therefore, the Old Greenwood School House is considered to be a historic resource for the purposes of CEQA. The project does not propose modifications to the Old Greenwood School House, therefore, adverse impacts from permanent project features would not result.

Construction of surrounding park features could have impacts to the Old Greenwood School House if unmitigated. During construction, the largest potential source of vibration during project construction would be a vibratory roller, primarily used to achieve soil, aggregate and asphalt compaction. Vibratory rollers could be used in the construction of parking lots, driveways, and paths on the project site, including within 10 feet of the Greenwood Schoolhouse. A large vibratory roller is assumed to generate a vibration level of approximately 0.210 inches per second (in/sec) peak particle velocity (PPV) at a distance of 25 feet (Caltrans 2013). At a distance of 10 feet, a large vibratory roller could produce

vibration levels as high as 0.58 in/sec PPV.[1] This would exceed the 0.1 in/sec PPV vibration criteria for potential architectural damage to historical structures and would be a potentially significant impact.

To reduce vibration levels to acceptable levels (0.10 in/sec PPV), the use of vibratory rollers would need to be set back from the Old Greenwood School House or other historic structures by at least 50 feet or be used in static mode (no vibrations) near the buildings. Further, reducing vibration levels to 0.10 in/sec PPV would ensure that surrounding occupied residences would not be adversely affected by project construction.

Mitigation measure CUL-1, which is also identified as NOI-2 under Section XIII. Noise, would require vibratory rollers to be used in static mode when operating within 50 feet of any historic structure (including the Old Greenwood School House) or occupied residence. With implementation of mitigation measure CUL-1/NOI-2, project construction activities would not result in excessive groundborne vibration or groundborne noise levels that would damage structures on or near the project site or result in vibration-related annoyance to building occupants. Construction vibration impacts would be **less than significant following mitigation**.

Mitigation Measure

CUL-1/NOI-2 **Construction Vibration Limits. Construction Vibration Limits**. Vibration-generating construction equipment shall not generate vibration levels that exceed 0.1 in/sec PPV at historic structures or occupied residences. This shall be demonstrated by ensuring that construction plans submitted to GDRD prior to approval of building permits specify that large vibratory rollers are to be set back from historic structures (including the Greenwood Schoolhouse) or any occupied residence by 50 feet or be used in static mode only (no vibrations) when operating within 50 feet of historic structures or occupied residences. If vibration-generating equipment other than large vibratory rollers are used during construction, project construction plans shall include specifications that demonstrate that vibration limits do not exceed 0.1 in/sec PPV at the historic structure or occupied residences.

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

Less than significant impact with mitigation incorporated. A cultural resources field survey of the project area was conducted on June 25, 2019. No precontact resources have been previously recorded within the project area or a 0.25-mile radius and none were observed during the field survey. Although it is highly unlikely that there would be an impact to cultural resources from project development and no additional studies are recommended, the possibility exists that ground-disturbing activities during construction may inadvertently uncover previously unknown buried cultural resources, resulting in potentially significant impacts. Therefore, implementation of Mitigation Measure CUL-2, Accidental Discovery of Cultural Resources, would reduce potential impacts related to inadvertent discovery to less than significant levels.

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

Mitigation Measure

CUL-2 **Accidental Discovery of Cultural Resources.** In accordance with Public Resources Code Section 21082 and Section 15064.5 of the State CEQA Guidelines and [36 CFR 800] of Section 106 of the NHPA, if buried cultural resources are discovered during construction, then operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The archaeologist shall make recommendations to the lead agency concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds, consistent with Section 15064.5 of the State CEQA Guidelines and 36 CFR 800. Cultural resources could consist of but are not limited to stone, bone, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. In accordance with PRC Section 21082 and Section 15064.5 of the State CEQA Guidelines, no further grading or construction activity shall occur within 50 feet of the discovery until the lead agency approves the measures to protect these resources.

In addition, reasonable efforts to avoid, minimize, or mitigate adverse effects to the property will be taken and the State Historic Preservation Officer (SHPO) and Indian tribes with concerns about the property, and the Advisory Council on Historic Preservation (Council) will be notified within 48 hours in compliance with 36 CFR 800.13 (b)(3).

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

Less than significant impact with mitigation incorporated. Surveys conducted for preparation of the *Cultural Resource Assessment for the Greenwood Park Project* (HELIX 2019e) did not find indications of precontact cultural resources. However, the possibility exists that ground-disturbing activities during construction may inadvertently uncover previously unknown buried human remains or cultural resources. Although it is highly unlikely that there would be an impact to cultural resources from project development and no additional studies are recommended, there is always the possibility that ground-disturbing activities during construction may uncover previously unknown buried human remains or cultural resources. Therefore, implementation of Mitigation Measure CUL-3, Inadvertent Discovery Procedures, would ensure that impacts related to inadvertent discovery remain less than significant.

Mitigation Measure

CUL-3 **Implement Inadvertent Discovery Procedures for Accidental Discovery of Human Remains.** In the event of an accidental discovery or recognition of any human remains, Public Resource Code Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, then the coroner shall contact the NAHC within 24 hours, and the NAHC shall

identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may recommend to the landowner, or the person responsible for the excavation work, means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:

- The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
- The descendent identified fails to make a recommendation; or
- The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

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. The Proposed Project would involve the expansion of an existing community park. While construction activities would result in the temporary consumption of energy resources in the form of vehicle and equipment fuels (gasoline and diesel fuel) and electricity/natural gas (directly or indirectly), such consumption would be incidental and temporary and would not have the potential to result in wasteful, inefficient, or unnecessary consumption of energy resources. Long-term operation of the project would result in energy use from: the direct use of electricity and/or natural gas; the use of fuel (e.g., gasoline, diesel, or electricity) by vehicles of park patrons or GDRD employees traveling to and from the project site; and the indirect use of electricity and/or natural gas used for the conveyance and treatment of freshwater and wastewater. These energy uses would be

offset by the energy use of the project site under existing conditions, including from vehicle fuel, electricity, natural gas, and water use by the existing park recreational activity, the tenants of the two residential buildings on the southwest side of the project site, and by the County maintenance facility. It is not anticipated that project-related vehicle trips or direct energy use would substantially increase compared to existing conditions. Therefore, the project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction of operation and the impact 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. As discussed in "a", above, the project would not result in a substantial new demand for energy resources. Any plumbing fixtures used in the proposed new public restroom would be subject to the California Building Energy Efficiency Standards (Title 24, Part 6) (California Energy Commission 2018), which establishes energy efficiency standards for non-residential buildings constructed in California to reduce energy demand and consumption. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and the impact 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?	☐	☐	☐	■

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

No impact. The Proposed Project is not within an Alquist-Priolo Earthquake Fault Zoning Map (California Geological Survey 2019).

ii. Strong seismic ground shaking?

Less than significant impact. Based on the *Fault Activity Map of California* (Jennings and Bryant, California Geological Survey 2010) un-named faults mapped in the Greenwood area are pre-Quaternary age and are not considered active. The Maidu East Fault and Rescue Fault 6 miles to the west are Late-Quaternary age and are considered potentially active (Jennings and Bryant, California Geological Survey 2010). The park features, including structures, would be constructed in accordance with building codes. As a result, seismic ground shaking impacts would be **less than significant**.

iii. Seismic-related ground failure, including liquefaction?

No impact. Areas mapped as landslide and liquefaction zones are present within El Dorado County, however they are at the Emerald Bay Quadrangle and Echo Lakes Quadrangles (Department of Conservation 2019), approximately 45 miles to the east. As a result, the project is not at risk for seismic-related ground failure and there would be **no impact**.

iv. Landslides?

No impact. While the project site would require areas of cut and fill to provide level playing surfaces, the site overall is not at a substantial slope or hillside and is in a relatively level location compared to its surroundings. The project is not in a location at risk for landslides and there would be **no impact**.

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

Less than significant impact. To allow for level playing surfaces and parking, the project site would be graded at the sports field, active play grass area, and parking lot for a net export of 428 cubic yards of

soil. Soil erosion or loss of topsoil is not anticipated, because areas of the park would be landscaped, retaining walls would be placed between the baseball/softball field and parking lot and behind the baseball/softball field backstop, and the playing fields would be surfaced with grass. During construction, implementation of construction-related BMPs would minimize and avoid soil erosion. The project would have a **less than significant** impact on soil erosion or 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?

Less than significant impact. Development of the proposed project would be required to adhere to California Building Code Regulations and would be required to incorporate appropriate engineering and geotechnical parameters. The project site is relatively level, and onsite soils are not known to be of unstable nature. Impacts with regard to geologic unit or unstable soils would, therefore, be considered **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?

No impact. Based on review of the Natural Resources Conservation (NRCS) soil survey, the project site is on Mariposa gravelly silt loam, 3 to 30 percent slopes (MaD); Placer diggings (PrD); and Mariposa very rocky silt loam, 3 to 50 percent slopes (MbE) soils. These soils have low linear extensibility ratings of 2.6 percent or lower (NRCS 2019), indicating that these are non-expansive soils. This area of California generally contains “little or no swelling clay” (Olive et.al., U.S. Geological Survey 1989).

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

No impact. The proposed project facilities would tie-in with existing sewer lines. No septic tanks are proposed.

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

Less than significant impact. Ground disturbance associated with the Proposed Project would not destroy a unique paleontological resource. The bedrock underlaying the project limits may contain invertebrate fossils of the Mariposa Formation, however, these fauna are well-documented. Bedrock disturbance may encounter new or unanticipated paleontological resources; however, the project’s depth of vertical disturbance is not anticipated to reach bedrock. Impacts would be **less than significant**.

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?	☐	☐	■	☐

The discussion below is based on the *Greenwood Park Project Air Quality, Energy, and Greenhouse Gas Emissions Assessment* (HELIX 2019a), which is attached to this Initial Study as Appendix A.

Environmental Setting

Greenhouse gases (GHGs), as defined under California's Assembly Bill (AB) 32, CO2, methane (CH4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). AB 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states (State of California Legislature 2006):

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

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

Significance Criteria

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

The EDCAQMD has not established GHG thresholds of significance or other guidance for determining the significance of a land use development project's GHG impacts. Therefore, the guidance and threshold of significance from the adjoining air district, SMAQMD, for a land use development project's GHG emissions were used in this analysis. The SMAQMD recommends a bright line screening threshold of 1,100 metric tons (MT) or carbon dioxide equivalents (CO_2e) per year for a project's construction-period GHG emissions (SMAQMD 2018). The SMAQMD's GHG thresholds were developed to meet the year 2020 statewide GHG emissions targets as mandated by AB 32 and implemented by the CARB Scoping Plan. The SMAQMD has not adopted guidance or revised thresholds to account for GHG reduction target beyond 2020. Accordingly, this analysis compares the project's emissions to a reduced threshold corresponding to the SB 32 reduction target of emissions 40 percent below 1990 levels by 2030. Even though the project is anticipated to be operational before 2030, to be conservative, a threshold adjusted to the full 40 percent below the SMAQMD thresholds (or 660 MT CO_2e per year) is used.

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

Less than significant impact. Based on the construction and operational emissions analysis, below, construction emissions thresholds would not be significant and operational emissions would be similar to that of the existing condition.

Construction Emissions. Construction GHG emission sources include construction equipment exhaust, on-road hauling trucks exhaust, vendor vehicle exhaust, and worker commuting vehicle exhaust. The Proposed Project's construction is estimated to start in June 2021 and require approximately 19 months to complete. Construction GHG emissions were estimated using California Emissions Estimator Model (CalEEMod) version 2016.3.2, as described previously in Section. III. Air Quality. The estimated construction GHG emissions for the Proposed Project are shown in Table 3, Annual GHG Emissions from Project Construction. As shown in Table 3, the Proposed Project's maximum annual construction emissions of 128.8 MT carbon dioxide-equivalent (CO2e) would be below the SMAQMD's 2030 adjusted construction screening threshold of 660 MT CO2e per year. Therefore, the Proposed Project's construction-period GHG emissions would be less than cumulatively considerable and **less than significant**.

Table 3
ANNUAL GHG EMISSIONS FROM PROJECT CONSTRUCTION

Construction Year	Emissions (MT CO_2e per year)[1]
2021	128.8
2022	98.6
SMAQMD 2030 Adjusted Threshold	**660**
Threshold Exceeded?	*No*

Source: CalEEMod version 2016.3.2; Thresholds – SMAQMD 2018b.
MT CO_2e = metric tons of carbon dioxide equivalents.

Operational Emissions. Long-term operation of the project would result in emissions of GHGs from area sources such as the use landscape maintenance equipment; energy sources form the use of electricity or natural gas; mobile sources related to the use of vehicles by park patrons or GDRD employees traveling to and from the project site; solid waste sources related to the disposal and decomposition of waste generated by the project; and water sources related to the energy used for the conveyance and treatment of freshwater and wastewater. These emissions would be offset by GHG emissions under existing conditions, including from mobile emissions and energy use by the existing park recreational activity, the tenants of the two residential buildings on the southwest side of the project site, and by the County maintenance facility. It is not anticipated that project-related vehicle trips or energy use would substantially increase compared to existing conditions. Therefore, project's operational-period GHG emissions would be less than cumulatively considerable.

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

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

Less than significant impact. As discussed in "a", above, the project would not exceed the screening GHG emissions threshold during construction of the project. In addition, many long-term GHG reduction plans, including the CARB Scoping Plan, estimate future GHG emissions and corresponding reduction targets based on local and statewide growth estimates. The project could result in the County changing the land use designation and zoning from residential and industrial to recreational facility. A new designation would result in a reduction in potential population and employment growth for the project site compared to the existing land use designation. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The impact would be **less than significant**.

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 with mitigation incorporated. Development of the proposed project would involve handling, transport and use of hazardous materials for routine operations and maintenance. During operation, hazardous materials used would typically be for maintenance and upkeep purposes, such as paint and cleaning products. During construction, contractors may transport, use, or dispose of hazardous materials. Handling of hazardous materials during operation and construction would be conducted in accordance with regulations, including applicable OSHA requirements. Compliance with existing regulations applicable to hazardous materials use and handling would be required for project-related activities. Potentially significant impacts may occur if materials are handled near aquatic

resources. With implementation of mitigation measures HAZ-1 and HAZ-2, therefore, potential impacts would be reduced to a **less than significant level**.

Mitigation Measures

HAZ-1 Hazardous materials such as fuels, oils, solvents, etc., shall be stored in sealable containers in a designated location that is at least 200 feet from aquatic resources.

HAZ-2 All fueling and maintenance of vehicles and other equipment, and staging areas shall occur at least 200 feet from any aquatic habitat.

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. Based on review of the Geotracker tool (SWRCB 2019), no cleanup sites are located at or near the project site; the nearest site or facility is approximately 0.8 mile away and located at Placerville Industries – Chile Bar Slate Mine. As discussed in "a", hazardous materials use at the park would be maintenance-related, such as minor amounts of paint or cleaning products. Therefore, the potential impact from upset and accident conditions would be considered **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?

Less than significant impact. The nearest school is Divide High School, 4405 State Route 193, Greenwood, CA located approximately 0.7 mile northeast of the project site. Hazardous materials, substances, or waste at the park would be materials used for maintenance and upkeep purposes, such as paint and cleaning products and are not likely to result in emissions. Potential impacts are considered **less than significant**.

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?

Less than significant impact. No sites on the Cortese List are in El Dorado County (Department of Toxic Substances Control [DTSC] 2019). Based on a review of the Geotracker tool (SWRCB 2019), no cleanup sites are located at or near the project site; the nearest is site or facility is approximately 0.8 mile away at Placerville Industries – Clile Bar Slate Mine. Potential impacts would, therefore, be considered **less than significant**.

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 nearest airport is Georgetown Airport, located approximately 2.7 miles northeast of the project site. The Proposed Project is outside of the airport land use plan influence area of Georgetown Airport and the other airports in the County (Cameron Park Airpark Airport, Placerville Airport) (El Dorado County Transportation Commission 2012). There would be **no impact**.

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

No impact. Long-term operation of the expanded park would not impair or interfere with an adopted emergency evacuation plan. The nearest emergency facility is the Greenwood Fire Department, 4131 Zdolsek Place, approximately 0.5 mile north of the project site. No emergency facilities are located directly adjacent to the project site, and points of ingress/egress would be required to be developed consistent with County of El Dorado standards. No impact related to emergency plans would result from development of the proposed project.

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. Three biological communities, riparian wetland, ruderal, and disturbed/developed currently characterize the project site, which is surrounded by rural residential development and SR 193. The project site is currently used for recreational uses, included use of the Greenwood Schoolhouse for community meetings. Proposed improvements would not substantially change the current use of the project site and does not include expanded facilities for public gatherings. The exposure of people or structures to wildland fire risk would not be different than existing conditions. Therefore, impacts related to wildland fires are considered **less than significant** and no mitigation is required.

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:				
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?	☐	☐	■	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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. The nearest water feature is Greenwood Creek, a perennial drainage mapped within the northeastern end of the project site. Improvements are not proposed within 50 feet of the creek channel, except for native plantings within upland areas adjacent to the creek. As described in the project description in Chapter 1 of this Initial Study, project design would integrate construction and post-construction BMPs and low-impact development features, such as bioswales. Correspondingly, impacts 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. Due to the relatively small footprint of the project, combined with the development of parking in areas already generally paved, a substantial decrease in groundwater supplies or interference with recharge would not take place. Project-related impacts on groundwater 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. As described in the project description in Chapter 1 of this Initial Study, post-construction low-impact development features/BMPs, such as bioswales, would be incorporated into project design to protect water quality, while construction BMPs detailed within the project Stormwater Pollution Prevention Plan (SWPPP) would be implemented during construction to prevent erosion or siltation during construction. Impacts related to erosion or siltation would, therefore, 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. Existing impervious surfaces currently present on the project site total approximately 63,000 square feet. Proposed walking paths and the parking lot would increase the impervious surface area to approximately 65,000 square feet, resulting in an approximate 3 percent increase from the existing condition. Correspondingly, development of the Proposed Project is not anticipated to result in flooding on-or off-site. Further, bioswales proposed around the parking lot and plantings adjacent to walking paths would be incorporated into the final design to facilitate infiltration, accommodate runoff from the site, and protect water quality.

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?

Less than significant impact. The proposed parking lot would increase impervious surface area by approximately 2,000 square feet. No stormwater drainage systems are located within the vicinity of the proposed project and no project-related storm water would be conveyed to existing or planned storm water drainage systems. Low impact development features/post-construction BMPs, such as bioswales, would be incorporated into final project design to facilitate infiltration, reduce runoff from the site, and protect water quality. Impacts related to storm water runoff are, therefore, considered **less than significant**.

iv. Impede or redirect flood flows?

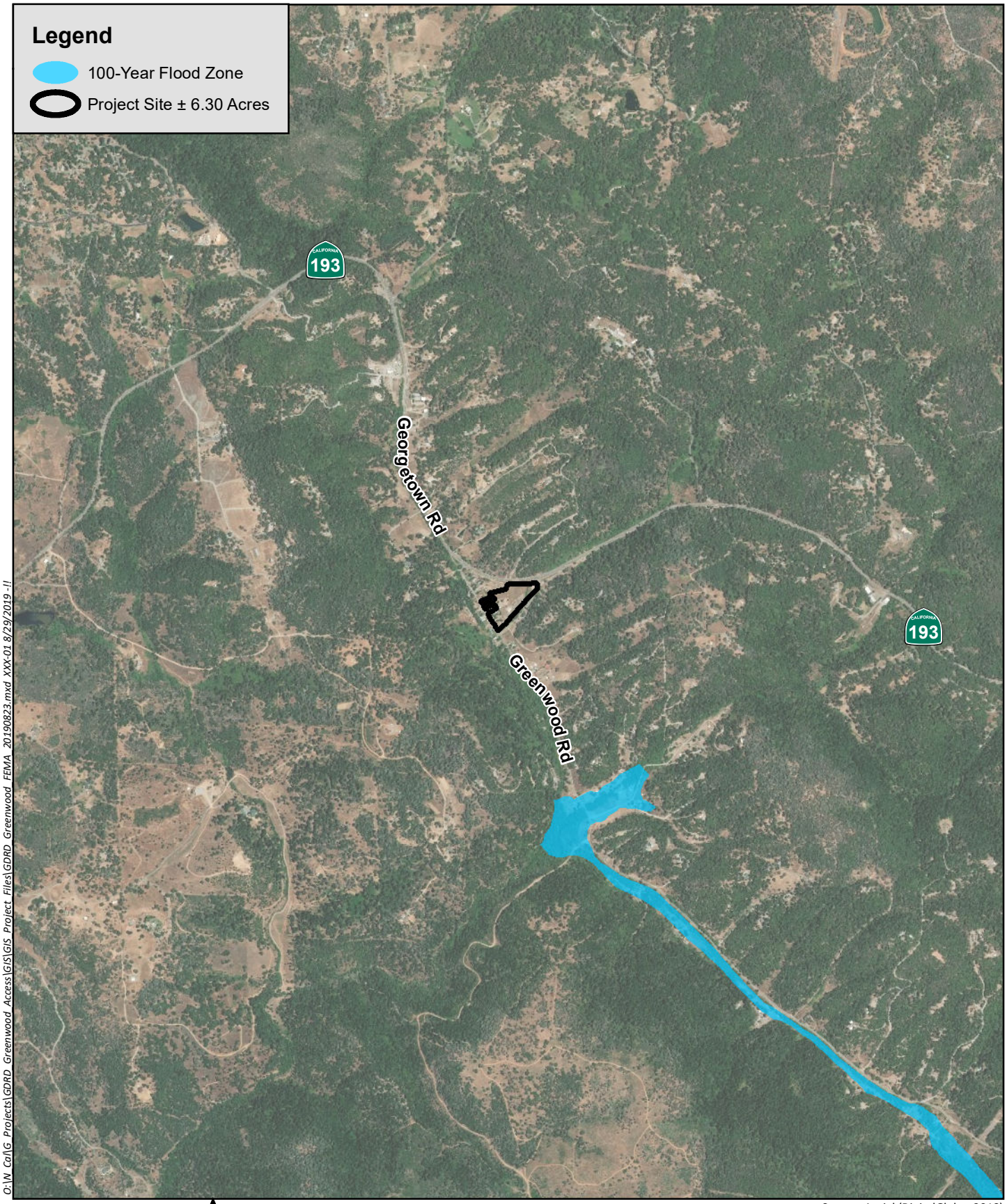
No impact. As depicted in Figure 6, *FEMA Map*, the project site is mapped within Zone X, and outside of the 100-year floodplain (Federal Emergency Management Agency 2008). No project features are proposed at the Greenwood Creek channel or its banks and riparian area. There would be **no impact** on flood flows.

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

No impact. The project is approximately 100 miles inland from the Pacific Ocean and is not subject to tsunamis. The project is also approximately 12 miles from the nearest lake, Folsom Lake, and is not subject to seiche.

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

Less than significant impact. The Proposed Project site is in Hydrologic Unit Code 180201290701 (USEPA 2019) within the Sacramento Hydrologic Basin Planning Area of the Central Valley Region. The applicable water quality control plan is the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition* (May 2018). As described in the project description in Chapter 1, the Proposed Project would include low-impact development features to accommodate stormwater runoff and protect water quality. Bioswales would be constructed around the parking lot, including in the center island and along the southeast side. Stormwater from walking pathways will drain into planted areas. Stormwater drainage would be in compliance with requirements of the area's NPDES Municipal Separate Storm Sewer System (MS4) Permit, including post-construction storm water runoff requirements. Correspondingly, the project is not anticipated to conflict with the water quality control plan or groundwater management plan and project's impact would be **less than significant.**



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FEMA Map

Figure 6

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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. Development of the proposed project would provide increased recreational opportunities for community members, as well as visitors to the region and would not physically divide an established community. No impact would result from development of the proposed project.

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. As depicted in Figure 7, *Zoning*, the Proposed Project is located on parcels zoned one-acre residential (R1A) and industrial low (IL). Day-use public parks are a permitted/allowable use in zone R1A and public parking lots are a permitted/allowable use in zone IL (El Dorado County 2019c). The proposed parking lot is largely within zone IL, as is the existing playground and the Old Greenwood School House.

It is anticipated that the park will be determined to be consistent with the permitted/allowable uses under the County's zoning ordinance and conditions identified as part of the County planning or development permit process would be implemented. County approval of a planning or development permit would resolve land use inconsistences, if any. The impact 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?

Less than significant impact. The project site is located in an area mapped as MRZ-2b (h-2) in the California Department of Conservation Map (Busch 2001). MRZ-2b zones are defined as:

> Areas underlain by mineral deposits where geological information indicate that significant inferred resources are present. Areas classified MRZ-2b contain discovered mineral deposits that are significant inferred resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration could result in upgrading areas classified MRZ-2b to MRZ-2a.

The project site is currently partially developed with residential buildings, the existing Greenwood Park, and the County Maintenance Facility, and is immediately surrounded by local roadways and SR 193. The proposed development of youth-size sports fields, demolition of two existing buildings, and placement of parking largely in an already paved area, would not result in the loss of availability of a known resource that would be of value to the region and residents of the State. The impact is considered **less than significant.**

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?

Less than significant impact. The El Dorado County General Plan (2004, amended 2018) identifies the site within an important mineral resource area mapped as MRZ 2a and 2b. This is consistent with the California Department of Conservation Map (Busch 2001). As discussed in the answer to "a", above, considering the amount of partial development at the site, the project would result in little change in the availability of mineral resources compared to the existing condition. Potential impacts related to mineral resource recovery are, therefore, considered **less than significant.**

Source: Base Map Layers (ESRI; DigitalGlobe, 2018)

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Zoning

Figure 7

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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?	☐	☐	☐	■

The discussion below is based on the *Greenwood Park Project Noise Assessment* (HELIX 2019f), which is attached to this Initial Study as Appendix D.

Environmental Setting

Noise Terminology and Metrics

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this wide range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 mPa.

Because decibels are logarithmic units, SPL cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

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

Groundborne Vibration Terminology and Metrics

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

Regulatory Framework

El Dorado County General Plan

The El Dorado County General Plan Public Health, Safety, and Noise Element contains Goal 6.5: "Ensure that County residents are not subjected to noise beyond acceptable levels." The following objective and policies from the General Plan would be applicable to the project (El Dorado County 2004):

Objective 6.5.1: Protection of Noise-Sensitive Development

Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels.

Policy 6.5.1.2	Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 6-2 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.
Policy 6.5.1.7	Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6-2 for noise-sensitive uses.
Policy 6.5.1.11	The standards outlined in Tables 6-3, 6-4, and 6-5 shall not apply to those activities associated with actual construction of a project as long as such

construction occurs between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally-recognized holidays. Further, the standards outlined in Tables 6-3, 6-4, and 6-5 shall not apply to public projects to alleviate traffic congestion and safety hazards.

Table 6-2, Noise Level Performance Protection Standards for Noise Sensitive Land Uses Affected by Non-Transportation Sources, of the General Plan establishes noise level standards for sensitive land uses. For rural areas, the noise standard limits are: 50 dBA L_{EQ} and an L_{MAX} of 60 dBA from 7:00 a.m. to 7:00 p.m.; 45 dBA L_{EQ} and an L_{MAX} of 55 dBA from 7:00 p.m. to 10:00 p.m.; and 40 dBA LEQ and an L_{MAX} of 50 dBA from 7:00 a.m. to 7:00 p.m.

Table 6-4, Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in Rural Centers – Construction Noise, of the General Plan establishes construction noise level standards (that occurs outside the hours specified in Policy 6.5.1.11) of: 55 dBA L_{EQ} and an L_{MAX} of 75 dBA from 7:00 a.m. to 7:00 p.m.; 50 dBA L_{EQ} and an L_{MAX} of 65 dBA from 7:00 p.m. to 10:00 p.m.; and 45 dBA L_{EQ} and an L_{MAX} of 60 dBA from 7:00 a.m. to 7:00 p.m.

El Dorado County Municipal Code

The El Dorado County Municipal Code, Chapter 9.16, Noise, defines and prohibits loud or raucous noise:

Section 9.16.040 – Loud and raucous noises—Definitions.

Loud and raucous noise means:

1. Any noise made by the motor of any automobile, truck, tractor, motorcycle, or aircraft of any kind not reasonably required in the operation thereof under the circumstances and shall include, but not be limited to, backfiring, motor racing, and the buzzing by airplanes;

2. The sound of the discharge of any explosive except by or with the permission of any appropriate State or local licensing agency;

3. The human voice or any record or recording thereof when amplified by any device whether electrical or mechanical or otherwise to such an extent as to cause it to unreasonably carry on to public or private property or to be heard by others using the public highways, public thoroughfares, or public buildings;

4. Any sound not included in the foregoing which is of such volume, intensity, or carrying power as to interfere with the peace and quiet of persons upon public or private property or other users of the public highways, thoroughfares, and buildings.

Section 9.16.040 – Loud and raucous noises—Prohibited.

> Except as otherwise provided in this chapter, it is unlawful for any person to willfully make, emit, or transmit or cause to be made, emitted, or transmitted any loud and raucous noise upon or from any public highway or public thoroughfare or from any aircraft of any kind whatsoever, or from any public or private property to such an extent that it unreasonably interferes with the peace and quiet of another's private property.

Existing Noise and Vibration Setting

Greenwood is a sparsely populated unincorporated rural community. The existing noise environment is dominated by vehicular traffic noise on SR 193, adjacent to the project site's northern boundary. Other noise sources include traffic on local streets and general noise associated with rural community residences adjacent to the project including heating, ventilation, and air conditioning (HVAC) systems; landscape maintenance equipment; and pets.

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, including residences, schools, libraries, or similar facilities where quiet is an important attribute of the environment. Noise receptors are individual locations that may be affected by noise. The closest NSLUs to the project site are a single-family residence at 4057 Main Street, less than 10 feet north of the existing park public entrance (and future maintenance access); a single family residence at 4049 Main Street, approximately 90 feet west of the proposed central multi-use sports field; and a single family residence at 4059 Main Street, approximately 45 feet north of the project site and approximately 100 feet northwest of the proposed central multi-use sports field. There is also a cemetery located at SR 193 and Ricci Road, approximately 100 feet from the project site.

Vibration-sensitive land uses are those that would be susceptible to disturbance or damage by excessive vibration. Vibration sensitive land uses may include residences, facilities containing sensitive equipment, or structures that are old or fragile. The structures on or near the project site include residences, which may be susceptible to annoyance from vibration, and the Greenwood Schoolhouse, which is an older, potentially historic building, would be potentially susceptible to structural damage from excessive vibration.

Two short-term (15-minute) ambient and traffic noise measurements (M1 and M2) were conducted during a site visit on July 9, 2019. Site M1 was located within the project site, adjacent to the existing playground and west of the Greenwood Schoolhouse. Site M2 was located near the project site boundary along SR 193, approximately 90 feet west of Ricci Road. A Larson Davis Sound Track LxT sound level meter was used for noise measurements. The sound level meter was field-calibrated immediately prior to the noise measurements to ensure accuracy using a Larson Davis model CAL150 calibrator. All sound level measurements conducted and presented in this report were made with a sound level meter that conforms to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI SI.4 1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

The measured noise levels and related weather conditions for the short-term measurements are shown in Table 4, Project Site Visit Noise Measurement Results. On-site noise measurements are included in Appendix D.

Table 4
PROJECT SITE VISIT NOISE MEASUREMENT RESULTS

M1 - Ambient	
Date:	July 9, 2019
Conditions:	Temperature: 697°F. Wind Speed: 1 mph. 49% humidity. Sunny.
Time:	9:41 a.m. – 9:56 a.m.
Location:	Within the project site, approximately 20 feet west of the playground and 40 feet east of the Greenwood Schoolhouse.
Measured Noise Level:	38.3 dBA L_{EQ}
Notes:	Traffic along State Route 193, approximately 390 feet north of the measurement location was the dominant noise source; some noise from barking dogs and the backup alarm from a commercial vehicle occurred the measurement.
M2 - Traffic	
Date:	July 9, 2019
Conditions:	Temperature: 70°F. Wind Speed: 2 mph. 45% humidity. Sunny.
Time:	10:14 a.m. – 10:29 a.m.
Location:	Approximately 30 feet south of the State Route 193 centerline and 90 feet west of Ricci Road.
Measured Noise Level:	69.3 dBA L_{EQ}
Notes:	Traffic along State Route 193 was the dominant noise source. 55 cars, 1 medium truck, and 3 heavy trucks were counted during measurement.

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 with mitigation incorporated. Based on the analysis in the *Noise Letter Report* (HELIX 2019f), potential impacts related to substantial temporary or permanent increases in ambient noise levels in the vicinity of the project in excess of existing standards or regulations would be considered less than significant. Details of the existing, construction, and operational noise environment follow.

Construction. Construction of the project would generate noise from the use of heavy construction equipment for site-preparation, demolition, and grading. The equipment to be used for project construction had not been determined at the time of this analysis. Based on the construction equipment from the air quality emissions modeling for the project, heavy equipment used for the project construction would include: rubber-tired dozers; excavators; graders; backhoes; and forklifts (HELIX 2019f).

Project construction noise was analyzed using the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM) (FHWA 2008), which utilizes estimates of sound levels from standard construction equipment based on measurements and surveys conducted on a project site in Boston, Massachusetts (FHWA 2008). The RCNM output report is included in the *Noise Letter Report* (HELIX 2019f), attached to this Initial Study as Appendix D.

Construction equipment would be used sporadically throughout the project site but would be concentrated primarily in areas requiring demolition or substantial earth moving (such as the County maintenance facility area on the southeast side of the project site and the proposed sports fields in the center and eastern areas of the project site). Multiple pieces of construction equipment would be rarely

used simultaneously in close proximity to each other. A conservative scenario was modeled consisting of the simultaneous use of a dozer, grader, and excavator operating for one or more hours in the area requiring grading for the center sports field, approximately 60 feet from the nearest noise sensitive land use, a residential property adjacent to the eastern project site boundary. Other project construction activities would be expected to use less intensive equipment or fewer number of equipment simultaneously. The resulting construction noise at the residential property line would be approximately 82.1 dBA L_{EQ} (1 hour) and 83.4 dBA L_{MAX}. This noise level would exceed the daytime construction noise limits of 55 dBA L_{EQ} and an L_{MAX} of 75 dBA as well as the evening and nighttime construction noise limits from Table 6-4, as discussed in the Regulatory Framework, above. Without mitigation, this would be a potentially significant impact.

Per Policy 6.5.1.11 of the General Plan: The standards outlined in Table 6-4 [of the General Plan Noise Element] shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally-recognized holidays. Mitigation Measure NOI-1 would limit project construction activity to the hours specified in Policy 6.5.1.11. With implementation of Mitigation Measure NOI-01, construction of the project would not result in the generation of a substantial temporary increase in ambient noise levels in excess of the standards established in the General Plan Noise Element and construction impacts would, therefore, be **less than significant with mitigation incorporated**.

Operation. Long-term operation of the project would result in new and changed sources of noise in the community from use of the expanded reactional facilities, community buildings, and offices. However, the project would eliminate noise from use of the County maintenance facility. Relocation the park's primary public entrance and parking from Main Street to Ricci Road would shift vehicle and parking lot noise away from the residences along main street. The project is not anticipated to significantly increase traffic in the area. The outdoor recreational facilities would not include lighting and would, therefore, be limited to daytime use. Any persons using the park's public facilities would be subject to the County Ordinance Chapter 9.16 which prohibits loud or raucous noises which unreasonably interferes with the peace and quiet of another's private property, as described in the Regulatory Framework discussion, above. Therefore, long-term operation of the project would not result in the generation of a substantial permanent increase in ambient noise levels in excess of the standards established in the General Plan Noise Element and operational impacts would be **less than significant**.

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

Less than significant impact with mitigation incorporated. Long-term operation of the project would include recreational uses and would, therefore, not be a source of significant groundborne vibrations or groundborne noise. Operational vibration impacts would be considered **less than significant**.

During construction, the largest potential source of vibration during project construction would be a vibratory roller, primarily used to achieve soil, aggregate and asphalt compaction. Vibratory rollers could be used in the construction of parking lots, driveways, and paths on the project site, including within 10 feet of the Greenwood Schoolhouse, a listed historical structure on the project site. A large vibratory roller could create approximately 0.210 in/sec PPV at a distance of 25 feet (Caltrans 2013). A vibratory roller producing a 0.210 in/sec PPV vibration level could result in vibrations as high as 0.10 in/sec PPV at a distance of 50 feet and as high as 0.58 in/sec PPV at a distance of 10 feet. This would exceed the

0.1 in/sec PPV vibration criteria for potential architectural damage to historical structures and would be a potentially significant impact.

Mitigation measure CUL-1 would require vibratory rollers to be used in static mode only (no vibrations) when operating within 50 feet of the Greenwood Schoolhouse or any other potentially historic structure, or with 50 feet of any occupied structure. With implementation of mitigation measure CUL-1, project construction activities would not result in excessive groundborne vibration or groundborne noise levels that would damage structures on or near the project site or result in vibration-related annoyance to building occupants. Without mitigation, construction vibration impacts would be potentially significant. Implementation of mitigation measures NOI-1 and NOI-2 would reduce impacts to a **less than significant** level.

Mitigation Measures

NOI-1 **Construction Hours.** The GDRD shall restrict construction activity involving the use of noise generating equipment to the hours between 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally-recognized holidays. If construction activity is to be performed by contractors, then the GDRD shall specify the construction time limitations on contract documents. The designated contractor shall post at all project site entrances the construction hour limitations and the contact information (including phone number) of a designated public liaison for construction noise complaints.

CUL-1/NOI-2 **Construction Vibration Limits.** The GDRD shall ensure that, during project construction activities, all vibratory rollers are used in static mode only (no vibrations) when operating within 50 feet of the Greenwood Schoolhouse or any other potentially historic structure, or with 50 feet of any occupied structure. If construction activity is to be performed by contractors, the GDRD shall specify the vibratory roller use limitations on contract documents.

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 closest public airport or private airstrip to the project site is the Georgetown Airport, approximately three miles northeast of the project site. Per the El Dorado County Transportation Commission's (EDCTC) El Dorado County Airport Land Use Compatibility Plan, the project site is not within the Georgetown Airport Influence Area (EDCTC 2012). Therefore, the project would not expose people residing or working in the project area to excessive noise levels from airport operations and there would be **no impact**.

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 Proposed Project would not induce unplanned population growth directly or indirectly as proposed improvements would not result in the construction of new homes and would not extend roads or utilities to previously inaccessible areas. Greenwood Park is an existing recreational facility that would be expanded. Therefore, **no impact** related to unplanned population growth would result from development of the proposed project.

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

Less than significant impact. Three parcels (APNs 074-173-09, 074-173-10, and 074-173-11) would need to be acquired to implement the project as proposed. GDRD anticipates coordination with property owners and acquisition of these properties during the final design of the project and construction of replacement housing is not anticipated. The proposed project would not result in displacement of substantial numbers of people or housing and impacts are considered **less than significant impact**.

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 Proposed Project would expand recreational opportunities within the existing Greenwood Park and would expand recreational opportunities on an additional three acres adjacent to the existing Greenwood Park. No new fire protection services or facilities are necessary.

b) Police protection?

No impact. The project site is located in an area served by the El Dorado County Sheriff's Office. The nearest Sheriff's Office location is at 300 Fair Lane, Placerville, CA, approximately 13 miles to the southeast (20 miles driving distance). No new police protection or Sheriff services or facilities are needed because the park expansion does not include new housing or substantial employment opportunities that would induce population growth. The park would primarily serve people already in the district service area.

c) Schools?

No impact. The nearest school is Divide High School, 4405 Highway 193, Greenwood, CA, located approximately 0.7 mile northeast of the project site. The Proposed Project would not construct new homes or commercial businesses that would induce population growth or cause an influx of new residents generating a demand for additional classroom capacity or schools. No impact on existing schools is anticipated, and project development is not anticipated to require new school facilities.

d) Parks?

Less than significant impact with mitigation incorporated. The Proposed Project is expected to serve youth sports and other residents in the local community. As documented elsewhere in this Initial Study,

proposed improvements could result in impacts related to Aesthetic Resources, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise, Public Services, and Tribal Cultural Resources. However, implementation of proposed mitigation measures discussed in the respective sections would reduce all potentially significant impacts to a **less than significant level with mitigation**.

e) Other public facilities?

No impact. Public facilities improvements beyond the project site boundaries are not needed. Parking spaces are proposed within the new parking lot and within the project site boundaries. Water, sewer, electric, and telecommunications utilities serving the project are accessible from the project site.

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. Development of the Proposed Project is expected to provide expanded opportunities for local youth sports activities and the proposed park would include on-site parking facilities and bathroom facilities to accommodate the expansion. An increased rate of physical deterioration is not anticipated.

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 with mitigation incorporated. The Project proposes an expansion of an existing recreational facility to meet the needs of the local community. As discussed in this Initial Study, development of the proposed project would result in potential impacts to the environment. Mitigation measures are identified in Sections IV. Biological Resources, V. Cultural Resources and XIII. Noise that would mitigate impacts to a less than significant level. Impacts would be **less than significant with mitigation.**

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. Greenwood Park is currently served by a driveway connecting to Main Street. With the park expansion, the existing driveway would be used only for maintenance access and proposed new public entrance points would be developed from Ricci Road and Main Street. The site currently hosts community group meetings and playground use. Proposed improvements would expand recreational opportunities on the site, however, with only two sports fields usable at a time and use being limited to daytime hours, changes to local traffic would not be substantial. No conflicts with plans, ordinances, or policies addressing the circulation system are anticipated and potential 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. The Proposed Project would serve park users in the GDRD area and, as a local park, is not expected to host regional games nor would proposed improvements draw park users from outside the region. Vehicle trips from outside of the district or regional traffic is not anticipated. The Proposed Project's impact on vehicle miles traveled 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)?

No impact. The Proposed Project does not propose changes to local roadways; therefore, no hazards due to geometric design or incompatible use would result. There would be **no impact** related to transportation-related hazards.

d) Result in inadequate emergency access?

Less than significant impact. During operation, emergency access in and out of the park would be available through two points of ingress/egress — one from Main Street and one from Ricci Road. During construction, equipment staging would be at the GDRD parcels and outside of the adjacent roadways. Proposed points of ingress/egress would require encroachment permits from the County of El Dorado ensuring that access improvements are designed and constructed consistent with County standards, including adequate emergency access. Impacts are, therefore, considered 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	☐	■	☐	☐
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 PRC 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)?

Less than significant with mitigation incorporated. Based upon information received by the Native American Heritage Commission and a search of their Sacred Lands File, information request letters were sent to eight Native American tribal representatives who might have additional information about the

project area. On August 27, 2019 a response was received from Mr. Gene Whitehouse, Chairman of the UAIC. The letter states that their "records do not show any known cultural resources within the project area; however, the UAIC's Preservation Department has identified the area as potentially sensitive for cultural resources/tribal cultural resources." In the letter, Mr. Whitehouse requested a copy of the completed archaeological report for the project. A copy was sent to Mr. Whitehouse on September 3, 2019. As of September 9, 2019, no other responses have been received from Native American representatives. While no locations of known tribal cultural resources have been identified, comments from UAIC indicate the project site is considered potentially sensitive. Therefore, project development may have the potential to inadvertently impact cultural resources during construction. Implementation of mitigation measures CUL-2 and CUL-3, detailed in Section V. Cultural Resources define required procedures in the event of inadvertent discovery and would reduce potential impacts **to less than significant levels**.

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 discussed previously under Section V. Cultural Resources, the Old Greenwood School House meets the criteria for eligibility for listing on the California Register of Historical Resources and is considered to be a historic resource for purposes of CEQA. The project does not propose modifications to the Old Greenwood School House. However, during construction, vibration from compaction equipment could result in damage to the structure and, without mitigation, could result in potentially significant impacts. Implementation of mitigation measure CUL-1/NOI-2, detailed in Sections V. Cultural Resources and XIII. Noise would reduce potential impacts to **less than significant** levels.

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?	☐	☐	■	☐

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

No impact. The Proposed Project would tie-in to existing utilities and service systems at the site. Relocation or construction of additional facilities would not be necessary. No impact would result from development of the proposed project.

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 project does not include large residential or commercial development that would generate demand and require substantial water supplies. Impacts are considered 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. No residential or commercial development is included in the project. Development of the proposed project would include a single restroom that would rely on existing sewer services. Development of the proposed project would, therefore, result in **less than significant impacts** related to wastewater treatment capacity.

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. Solid waste generated from the park would include refuse from park users, and anticipated volumes of solid waste are not anticipated to result in an excess of standards or capacity of infrastructure. There would be a **less than significant impact** on solid waste.

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

Less than significant impact. Solid waste disposal at the park would be implemented in compliance with federal, state, and local management and statutes and regulations. Existing trash collection services are provided by El Dorado Disposal Service, which collects trash and transports to the Western El Dorado Recovery Systems Material Recovery Facility for separation of recyclables. Remaining trash is transported to an approved solid waste landfill. Landfills used by El Dorado Disposal are at Potrero Hills, Forward, and Kiefer, which are projected to be open until 2048, 2021, and 2035 based on projections (El Dorado County Solid Waste Advisory Committee 2015). Waste collection services are currently available at the project site and estimated landfill capacity is anticipated to be adequate to meet the disposal needs related to development of the proposed project. Impacts are, therefore, considered **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?

No impact. Long-term operation of the expanded park would not impair or interfere with an adopted emergency evacuation plan. The nearest emergency facility is the Greenwood Fire Department, 4131 Zdolsek Place, approximately 0.5 mile north of the project site. No emergency facilities are located directly on the project site and points of ingress/egress would be required to be developed consistent with County of El Dorado standards. **No impact** related to emergency plans would result from development of the proposed project.

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. The Proposed Project does not propose new residential or commercial development to a previously undeveloped area. Three biological communities, riparian wetland, ruderal, and disturbed/developed currently characterize the project site, which is surrounded by rural residential development and Highway 193. The project site is currently used for recreational uses, including use of the Greenwood Schoolhouse for community meetings. Proposed improvements would not substantially change current use of the project site. The exposure of people or structures to wildland fire risk or pollutant concentrations from a wildfire, or uncontrolled spread of a fire would not be different than existing conditions. Therefore, impacts related to wildfire risks are considered **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. As detailed in answer “b”, the Proposed Project does not propose new homes or commercial development to a previously undeveloped area and proposed improvements would not substantially change the current use of the project site. Additional infrastructure that may exacerbate fire risk is needed.

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. Existing impervious surfaces currently present on the project site total approximately 63,000 square feet. Proposed walking paths and the parking lot would increase the impervious surface area to approximately 65,000 square feet, resulting in an approximate three percent increase from the existing condition. Correspondingly, development of the Proposed Project is not anticipated to result in flooding on-or off-site. Further, bioswales proposed around the parking lot and plantings adjacent to walking paths would be incorporated into the final design to facilitate infiltration, accommodate runoff from the site, and protect water quality. The project is not at risk of flooding or affecting downslope or downstream floods. While the project site would require areas of cut and fill to provide level playing surfaces, the site overall is not at a substantial slope or hillside and is in a relatively level location compared to its surroundings. The project is not in a location at risk for landslides. Impacts related to downslope or downstream flooding or landslides as a result of runoff or post-fire slope instability or drainage 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?	☐	■	☐	☐

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

Less than significant impact with mitigation incorporated. Proposed mitigation measures would reduce the level of all project-related impacts to less than significant levels, as discussed in Section IV. Biological Resources, V. Cultural Resources, and XIII. Noise. Therefore, impacts are considered **less than significant with mitigation.**

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 with mitigation incorporated. Considering past, present, and probable future projects, cumulative impacts would be less than significant. Key areas of concern are discussed in detail below.

Biological Resources. Cumulative biological resource impacts are not anticipated. The project site is largely developed and it has been previously disturbed. Mitigation measures would be implemented to

address suitable habitat for protected species, aquatic resources, and trees. Potential impacts to biological resources would be reduced to a less than significant level through implementation of proposed mitigation measures and potentially cumulative impacts to biological resources would be avoided.

Cultural resources. The Old Greenwood School House is a California Historic Landmark #521 for El Dorado County and meets the criteria for eligibility for listing on the California Register of Historical Resources. The Proposed Project would implement measures to prevent construction vibration impacts to the structure. Regarding potential impacts to the character of the project site's setting, a cursory review of aerials dating back to 1946 indicates that the area around the Old Greenwood School House has changed dramatically since it was originally built with the addition of new homes, ancillary buildings, nearby storage sheds and the playground constructed circa 2011. Therefore, although the current viewshed would be modified by development of the proposed project, the character of the projects site's visual setting has experienced many changes since the time the schoolhouse was built. Development of the proposed project is, therefore, not anticipated to result in significant changes to the character of the setting. No cumulative impacts would result from project development.

Hydrology and Water Quality. Construction and post-construction storm water BMPs and low-impact development features, such as bioswales, would be implemented as part of the project. Potential impacts to hydrology and water quality would be reduced to a less than significant level and potentially cumulative impacts would be avoided.

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. Project-related adverse effects on human beings have been identified within this Initial Study related to air quality and construction noise. As discussed in Section III. Air Quality, air quality impacts are considered **less than significant**, and as discussed in Section XIII. Noise, answer "a", potential noise impacts from construction would be **less than significant with mitigation incorporated**. Project-related effects on human beings are, therefore, considered less than significant with mitigation incorporated.

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IS/MND Appendix A

Greenwood Park Air Quality, Energy, and Greenhouse Gas Emissions Assessment

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August 9, 2019 GDR-02

Mr. Carl Clark
Georgetown Divide Recreation District
4401 State Highway 193
Greenwood, CA 95635

Subject: Greenwood Park Project Air Quality, Energy, and Greenhouse Gas Emissions Assessment

Dear Mr. Clark:

HELIX Environmental Planning, Inc. (HELIX) has assessed the air quality, energy, and greenhouse gas (GHG) emissions associated with the construction and operation of the proposed Greenwood Park Project (project). The analysis has been prepared to support environmental review under the California Environmental Quality Act (CEQA) being conducted by the Georgetown Divide Recreation District (GDRD).

PROJECT DESCRIPTION

The project site is located at 4065 Main Street in the unincorporated community of Greenwood in western El Dorado County (County), California. The site consists of 8 parcels within a triangular area formed by State Route (SR) 193/Georgetown Road to the north, Main Street/Greenwood Road to the southwest and Ricci Road to the southeast.

The project would expand the existing Greenwood Park operated by GDRD from 1 acre (in current recreational use) to approximately 6 acres and construct youth sports fields (one multi-use field and one combined youth soccer/softball/baseball field) for day-time use. Other proposed improvements would include a restroom building, parcourse exercise station, picnic tables, bicycle parking, and parking lot. The proposed expansion of the existing Greenwood Park would facilitate enhanced recreational opportunities to the local community. The existing Greenwood Schoolhouse and adjacent playground would be retained for continued use by the community. The project would acquire two adjacent parcels currently owned by El Dorado County and currently used as a maintenance facility. One 2,300 square-foot (SF) maintenance facility building would be demolished, and another 2,450 SF maintenance facility building would be retained by GDRD for storage. The primary public entrance and parking area would be shifted from the current location along Main Street to the area along Ricci Road currently occupied by the County maintenance facility. Two existing single-family residences facing Main Street within the project site would be renovated for use by GDRD for offices and community meeting rooms.

Project Construction

Project construction is anticipated to begin in June 2021. Site preparation/grubbing and demolition would last approximately two months and may occur concurrently. Grading is anticipated to start in August 2021 and would last approximately two months. Paving of approximately 7,750 SF of parking and 12,350 SF of paths and miscellaneous hard surfaces is anticipated to occur in October 2021. Installation of the remaining project features and landscaping, including a pre-fabricated public restroom building, is anticipated to start in December 2021 and last approximately one year. Project construction is anticipated to be completed in December 2022.

Best Management Practices

Per Rule 223-1, *Fugitive Dust*, from the El Dorado County Air Quality Management District (EDCAQMD), a detailed Fugitive Dust Control Plan is required to be submitted to the EDCAQMD prior to the start of any construction activity for which a grading permit was issued by the County. In addition, the rule requires implementation of the following applicable construction Best Management Practices (BMPs) from Tables 1 through 3 of the Rule 223-1 (EDCAQMD 2005a):

- Backfilling – Stabilize backfill material before and during handling and stabilize soils at the completion of the activity.
- Clearing and Grubbing – Maintain stability of the soil through pre-watering of the site prior to, during, and after clearing and grubbing activities.
- Clearing Forms – Use water spray, or sweeping and water spray, or a vacuum system to clear forms.
- Cut and Fill – Pre-water soils prior to cut and fill activities; and stabilize soil during and after cut and fill activities.
- Disturbed Soil – Stabilize disturbed soil throughout the construction site and between structures.
- Earth-Moving Activities – Pre-apply water and re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 50 feet or beyond property line in any direction. Stabilize soils once earth-moving activities are complete.
- Importing/Exporting of Bulk Materials – Stabilize or adequately wet material while loading to reduce fugitive dust emissions. Maintain at least six inches of freeboard on haul vehicles traveling offsite. Stabilize or adequately wet material while transporting to reduce fugitive dust emissions. Stabilize material while unloading to reduce fugitive dust emissions.
- Landscaping – Stabilize soils, material and slopes.
- Staging Areas – Stabilize staging areas during use and at project completion.

- Stockpiles/Bulk Material Handling – Stabilize stockpiled materials. Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.

- Traffic Areas for Construction Activities – Stabilize or maintain adequate moisture on all off-road traffic and parking areas. Stabilize or maintain adequate moisture on all haul routes. Direct construction traffic over established haul routes.

- Truck Loading – Pre-water material prior to loading or apply water as loader bucket is being emptied. Freeboard must be 6 inches or greater.

- Unpaved roads/Parking Lots – Stabilize soils to meet the applicable performance standards (Surface crusting). Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.

- Removal of Trackout Material – Manually sweep; or use a rotary brush broom accompanied or preceded by sufficient wetting; or use a PM_{10}-efficient street sweeper; or flush with water, where the use of water will not result in adverse impacts on storm water drainage systems or violate any National Pollutant Discharge Elimination System permit program. The use of blower devices, or dry rotary brushes or dry brooms is expressly prohibited.

- Frequency of Trackout Material Removal – At a minimum, trackout must be removed at the end of the day. Trackout must be immediately removed when it extends 50 feet or more from the nearest unpaved surface exit point of a site. On interior paved roads, trackout must be removed at least once per workday.

AIR QUALITY ANALYSIS

Setting

The project site is located in the western portion of El Dorado County and the Mountain Counties Air Basin (MCAB), which covers an area of approximately 11,000 square miles. The MCAB lies along the northern part of the Sierra Nevada mountains and encompasses El Dorado (western portion), Plumas, Sierra, Nevada, Placer (middle portion), Amador, Calaveras, Tuolumne, and Mariposa counties. The EDCAQMD is responsible for implementing emissions standards and other requirements of federal and state laws in the El Dorado County portion of the MCAB. Attainment plans for meeting the federal air quality standards are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the U.S. Environmental Protection Agency (USEPA), the federal agency that administrates the Federal Clean Air Act (CAA) of 1970, as amended in 1990.

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

the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air constituents.

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

Table 1
WESTERN EL DORADO COUNTY ATTAINMENT STATUS

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone	Nonattainment	Nonattainment
Coarse Particulate Matter (PM_{10})	Nonattainment	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Unclassified	Nonattainment
Carbon Monoxide	Unclassified	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Source: CARB 2017a; CARB 2018a.

The western portion of El Dorado County is designated as nonattainment for the state and federal ozone standards. The Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan was developed by the air districts in the Sacramento region to bring the region into attainment. The plan is a joint project between the Sacramento Metropolitan Air Quality Management District (SMAQMD), EDCAQMD, and three other air districts in the Sacramento region (SMAQMD 2017). The plan includes the MCAB portion of western El Dorado County, and thus the project site. In addition to not attaining the federal or state ozone standards, the region is classified nonattainment for the federal $PM_{2.5}$ standard and the state PM_{10} standard. The EDCAQMD and other Sacramento region air districts have submitted a $PM_{2.5}$ Implementation/Maintenance Plan and Re-Designation Requests to fulfill CAA requirements to re-designate the region from nonattainment to attainment of the $PM_{2.5}$ NAAQS (SMAQMD 2013).

Ground-level ozone is not emitted directly into the environment but is generated from complex chemical reactions between Reactive Organic Gases (ROG), or non-methane hydrocarbons, and Oxides of Nitrogen (NO_X) that occur in the presence of sunlight. PM_{10} and $PM_{2.5}$ is generated from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. In addition, PM_{10} and $PM_{2.5}$ can also be formed through chemical and photochemical reactions in the atmosphere. Anthropogenic ROG, NO_X, PM_{10}, and $PM_{2.5}$ sources in the County include motor vehicles and other transportation sources, residential wood burning for heating, and open burning of vegetation related to agriculture and wildfire fuel management. El Dorado County is mostly rural and sparsely populated, and sources of ROG, NO_X, PM_{10} and $PM_{2.5}$ within the County are

limited. The County's nonattainment status for ozone, PM_{10} and $PM_{2.5}$ is primarily due to the transport of pollutants from population centers and intense agriculture activity in California's central valley to the west.

Significance Criteria

While the final determination of whether or not a project has a significant effect on the environment is within the purview of the lead agency pursuant to CEQA Guidelines Section 15064(b), the EDCAQMD has developed thresholds of significance for mass emissions of the ozone precursors ROG and NO_X, which lead agencies within their jurisdiction can use to evaluate the air pollutant emission impacts of land use projects. These criteria pollutant and precursor thresholds and other assessment recommendations are contained in EDCAQMD's *Guide to Air Quality Assessment* and are discussed under the checklist questions below (EDCAQMD 2002). The EDCAQMD has not adopted thresholds of significance for a project's construction-period emissions of PM_{10} or $PM_{2.5}$. Therefore, the PM_{10} and $PM_{2.5}$ thresholds adopted by the adjacent air district SMAQMD in their *Thresholds of Significance Table* are used to determine the significance of the project PM emissions (SMAQMD 2015). The SMAQMD PM thresholds require implementation of all feasible BMPs. The following potential air quality impacts are based on Appendix G of the State CEQA Guidelines, a significant impact is identified if the project would result in any of the following:

a) *Conflict with or obstruct implementation of the applicable air quality plan?*
b) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*
c) *Expose sensitive receptors to substantial pollutant concentrations?*
d) *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Project Analysis

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

The CAA requires states in violation of a NAAQS to prepare a SIP containing contains strategies and control measures to attain the NAAQS. CARB is responsible for creating and periodically updating the SIP for California to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them, including the western El Dorado County portion of the MCAB. In 2018, CARB updated the SIP, including updated elements to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress (CARB 2018b). The USEPA reviews SIPs to determine if they conform to the mandates of the CAA amendments and would achieve air quality goals when implemented. The California 2018 updated SIP is the applicable air quality plan.

As discussed in criterion b), below, the project's estimated construction emissions would be below the thresholds established by the EDCAQMD and SMAQMD and long-term operation emissions are not anticipated to be significantly different from emissions resulting from existing land uses on the project site. The EDCAQMD has developed the mass emissions thresholds for ROG and NO_X such that projects with emissions below the thresholds would not be expected to affect the EDCAQMD's commitment to attain the NAAQS and CAAQS (EDCAQMD 2002). Similarly, the SMAQMD has determined that projects

which do not exceed the mass emission thresholds for operational emissions of PM_{10} or $PM_{2.5}$ would not be considered to conflict with or obstruct implementation of the District's air quality planning efforts (SMAQMD 2016). Therefore, the project would not conflict with or obstruct implementation of the SIP or the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan and the impact would be **less than significant**.

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

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

Criteria pollutant and precursor emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip generation, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2017). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. The CalEEMod output files for the project are included as Attachment A to this letter report.

Construction Emissions

The project's estimated construction emissions are shown below in Table 2, *Project Construction Criteria Pollutant and Precursor Emissions*. The emissions estimates assume: an export of approximately 1,660 cubic yards of vegetation, soil, and asphalt during grubbing and clearing; the demotion of a 2,300 square-feet maintenance facility building; and the use of low VOC interior and exterior paint (50 grams per liter maximum VOC content per the project architect). The emissions estimate also assumes the implementation of the BMPs, described above, specifically watering exposed areas a minimum of twice per day and enforcing a 15 miles per hour speed limit on unpaved surfaces.

Table 2
PROJECT CONSTRUCTION CRITERIA POLLUTANT AND PRECURSOR EMISSIONS

Activity	Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	1.8	16.3	11.7	<0.1	1.0	0.8
Site Preparation	1.6	17.8	10.2	<0.1	3.9	2.3
Grading	1.3	12.5	8.6	<0.1	2.4	1.4
Paving	0.8	6.5	8.0	<0.1	0.5	0.4
Building Renovation	0.3	2.3	1.7	<0.1	0.4	0.2
Architectural Coatings	6.5	1.6	2.9	<0.1	0.4	0.2
Landscaping	0.5	4.0	4.9	<0.1	0.5	0.3
Maximum Daily Emissions[1,2]	**6.5**	**34.1**	**21.9**	**<0.1**	**4.9**	**3.1**
Threshold	82[3]	82[3]	None	None	80[4]	82[4]
Threshold exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Source: CalEEMod version 2016.3.2.

[1] Maximum daily emissions of ROG would occur during Architectural Coatings. All other maximum daily emissions would be the combined emissions during Demolition and Site Preparation which are assumed to occur concurrently.

[2] Totals may not sum due to rounding.

[3] EDCAQMD 2002.

[4] SMAQMD 2015.

As shown in Table 2, the project's construction emissions related to the criteria pollutants for which western Eldorado County is designated nonattainment (ROG, NO_X, PM_{10} and $PM_{2.5}$) would not exceed the EDCAQMD or SMAQMD thresholds. Therefore, the project's construction emissions of criteria pollutants and precursors would be less than cumulatively considerable.

Operational Emissions

Long-term operation of the project would result in emissions of criteria pollutants and precursors from mobile sources related to the use of vehicles of park patrons and employees of the GDRD traveling to and from the project site; and area sources such as the use of landscape maintenance equipment, cleaning products, and the re-application of architectural coatings for maintenance (e.g., painting). These emissions would be offset by the emissions from the exiting uses of the project site, including tenants of the two residential building, activities at the County maintenance facility, and existing park recreational uses. It is not anticipated that project-related vehicle trips or area source emissions would substantially increase compared to existing conditions. Therefore, the project's long-term operational emissions of criteria pollutants and precursors would be less than cumulatively considerable.

Impact Summary

The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard during either construction or operation. The impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Diesel Particulate Matter

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

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The closest sensitive receptors to the project site are two single-family residential properties adjacent to the western project site boundary. The generation of DPM during construction would be variable and sporadic due to the nature of construction activity. Maximum emissions of DPM would occur during the demolition and site preparation phases which are anticipated to last approximately two months. The most intense use of diesel-powered equipment would be required for the demolition of the maintenance building and the clearing and creation of a level pad for the sports fields on the south and east sides of the project site, more than 200 feet from the closest residences. Due to the short duration and sporadic nature of construction activities requiring the use of heavy diesel-powered equipment, and because the use of heavy construction equipment would not be concentrated near the residential property lines, project construction related DPM emissions during construction would not expose sensitive receptors to substantial pollutant concentrations and the impact would be less than significant.

Asbestos

Asbestos dust is a known carcinogen and is classified as a TAC by CARB. Asbestos may be a component of building materials such as walls, ceilings, insulation, or fireproofing in older (pre-1979 buildings). Demolition of the maintenance facility building and renovation of other existing structures on the project site project site could result in the disturbance of Asbestos Containing Materials (ACMs). Airborne asbestos is regulated in accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) asbestos regulations. Federal and state regulations prohibit emissions of asbestos from demolition or construction activities. Following identification of friable ACMs, federal and state Occupational and Safety Health Administration (OSHA) regulations require that asbestos trained, and certified abatement personnel perform asbestos abatement and that all asbestos-containing materials removed from on-site structures must be hauled to a licensed receiving facility and disposed of under proper manifest by a transportation company certified to handle asbestos. These regulations specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers and require notice to federal and/or local government agencies prior to beginning demolition or renovation that could disturb asbestos-containing materials.

Naturally occurring asbestos (NOA) most commonly occurs in ultramafic rock (i.e., igneous and metamorphic rock with low silica content) that has undergone partial or complete alteration to

serpentine rock (or serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, is associated with ultramafic rock, particularly near geologic faults. NOA is known to occur in certain areas of El Dorado County. Based on the map *Asbestos Review Areas for the Western Slope of El Dorado County*, the project site is within the 0.25-mile buffer of an area or fault line more likely to contain NOA (EDCAQMD 2015). CARB has adopted an air toxic control measure (17 CCR Section 93105) limiting emissions from construction, grading, quarrying, and surface mining in areas with ultramafic rock. In addition to the CARB air toxic control measure, the EDCAQMD has adopted Rule 223-2, *Fugitive Dust-Asbestos Hazard Mitigation* to reduce the amount of asbestos particulate matter entrained in the ambient air as a result of any construction or construction related activities that disturbs or potentially disturbs naturally occurring asbestos by requiring actions to prevent, reduce or mitigate asbestos emissions (EDCAQMD 2005b). Rule 223-2 requires the land owner or designated contractor to submit an Asbestos Dust Mitigation Plan to the EDCAQMD and that construction activities shall not commence until the Air Pollution Control Officer has approved or conditionally approved the Asbestos Dust Mitigation Plan. Rule 223-2 also requires testing for NOA prior to construction activities in areas likely to contain NOA and implementation of best management practices to control dust during construction. A countywide ordinance was also adopted on January 4, 2000 (Ordinance 4548, codified as Chapter 8.44 of the El Dorado County Ordinance Code) adopting the CARB asbestos content level as a "permissible asbestos content level." With adherence to the BMPs listed in Table 1 in EDCAQMD Rule 223-2, and compliance with all applicable EDCAQMD rules, County ordinances, and State and Federal regulations, construction-related activities would not expose sensitive receptors to substantial asbestos related pollutant concentrations and the impact would be less than significant.

Impact Summary

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

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

Heavy diesel equipment could generate odors during construction activities. The generation of odors during the construction period would be temporary and would tend to be dispersed within a short distance from the active work area. Once operational, the project would not be a significant source odors or other emissions. Therefore, due to the short duration of construction activity near any individual residence, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and the impact would be **less than significant**.

ENERGY

Significance Criteria

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

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction of operation?
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Project Analysis

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

While construction activities would result in the temporary consumption of energy resources in the form of vehicle and equipment fuels (gasoline and diesel fuel) and electricity/natural gas (directly or indirectly), such consumption would be incidental and temporary and would not have the potential to result in wasteful, inefficient, or unnecessary consumption of energy resources. Long-term operation of the project would result in energy use from: the direct use of electricity and/or natural gas; the use of fuel (e.g., gasoline, diesel, or electricity) by vehicles of park patrons or GDRD employees traveling to and from the project site; and the indirect use of electricity and/or natural gas used for the conveyance and treatment of freshwater and wastewater. These energy uses would be offset by the energy use of the project site under existing conditions, including from vehicle fuel, electricity, natural gas, and water use by the existing park recreational activity, the tenants of the two residential buildings on the southwest side of the project site, and by the County maintenance facility. Due to the existing park usage, it is not anticipated that project-related vehicle trips or direct energy use would substantially increase compared to existing conditions. Therefore, the project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction of operation and the impact would be **less than significant**.

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

As discussed in criterion a), above, the project would not result in a substantial new demand for energy resources. Any plumbing fixtures used in the proposed new public restroom would be subject to the California Building Energy Efficiency Standards (Title 24, Part 6), which establishes energy efficiency standards for non-residential buildings constructed in California to reduce energy demand and consumption. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and the impact would be **less than significant**.

GREENHOUSE GAS ANALYSIS

Setting

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). AB 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states (State of California Legislature 2006):

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

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

Significance Criteria

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

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

a) *Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*
b) *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?*

The EDCAQMD has not established GHG thresholds of significance or other guidance for determining the significance of a land use development project's GHG impacts. Therefore, the guidance and threshold of significance from the adjoining air district, SMAQMD, for a land use development project's GHG emissions was used in this analysis. The SMAQMD recommends a bright line screening threshold of 1,100 metric tons (MT) or carbon dioxide equivalents (CO_2e) per year for a project's construction-period GHG emissions (SMAQMD 2018). The SMAQMD's GHG thresholds were developed to meet the year 2020 statewide GHG emissions targets as mandated by AB 32 and implemented by the CARB Scoping Plan. The SMAQMD has not adopted guidance or revised thresholds to account for GHG reduction target beyond 2020. Accordingly, this analysis compares the project's emissions to a reduced threshold corresponding to the SB 32 reduction target of emissions 40 percent below 1990 levels by 2030. Even though the project is anticipated to be operational before 2030, to be conservative, a threshold adjusted the full 40 percent below the SMAQMD thresholds (or 660 MT CO_2e per year) is used.

Project Analysis

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

Construction Emissions

Construction GHG emission sources include construction equipment exhaust, on-road hauling trucks exhaust, vendor vehicle exhaust, and worker commuting vehicle exhaust. Project construction is estimated to start in June 2021 and require approximately 19 months to complete. Construction GHG emissions were estimated using CalEEMod version 2016.3.2, as described in the Air Quality analysis, above. The estimated construction GHG emissions for the project are shown in Table 4, *Annual GHG Emissions from Project Construction*. As shown in Table 4, the project's maximum annual construction emissions of 128.8 MT CO_2e would be below the SMAQMD 2030 adjusted construction screening threshold of 660 MT CO_2e per year. Therefore, the project's construction-period GHG emissions would be less than cumulatively considerable.

Table 4
ANNUAL GHG EMISSIONS FROM PROJECT CONSTRUCTION

Construction Year	Emissions (MT CO_2e per year)[1]
2021	128.8
2022	98.6
SMAQMD 2030 Adjusted Threshold	**660**
Threshold Exceeded?	*No*

Source: CalEEMod version 2016.3.2; Thresholds – SMAQMD 2018b.
[1] MT CO_2e = Metric tons of carbon dioxide equivalents.

Operational Emissions

Long-term operation of the project would result in emissions of GHGs from: area sources such as the use landscape maintenance equipment; energy sources form the use of electricity or natural gas; mobile sources related to the use of vehicles by park patrons or GDRD employees traveling to and from the project site; solid waste sources related to the disposal and decomposition of waste generated by the project; and water sources related to the energy used for the conveyance and treatment of freshwater and wastewater. These emissions would be offset by GHG emissions under existing conditions, including from mobile emissions and energy use by the existing park recreational activity, the tenants of the two residential buildings on the southwest side of the project site, and by the County maintenance facility. It is not anticipated that project-related vehicle trips or energy use would substantially increase compared to existing conditions. Therefore, project's operational-period GHG emissions would be less than cumulatively considerable.

Impact Summary

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

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

As discussed in criterion a), above, the project would not exceed the screening GHG emissions threshold during construction of the project. In addition, many long-term GHG reduction plans, including the CARB Scoping Plan, estimate future GHG emissions and corresponding reduction targets based on local and statewide growth estimates. The project does not propose new residential, commercial, or industrial uses or activities. Therefore, the project would not result in an increase in new residents or a substantial increase in employees to the area. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The impact would be **less than significant**.

SUMMARY

As described above, the project's construction emissions of criteria pollutants and precursors, with the incorporation of the BMPs described above, would be below EDCAQMD and SMAQMD thresholds and would result in a less than significant impact. With compliance with EDCAQMD rules, County Ordinances, and State and Federal regulations for the testing for, control of dust, and handling and disposal of ACMs the project would not result in the exposure of sensitive receptors to significant concentrations of TACs. No mitigation measures are required in regard to air quality. The project's construction GHG emissions would also be below the SMAQMD 2030 adjusted screening thresholds and would be less than significant. Long-term operation of the project would not substantially increase regional GHG emissions compared to existing conditions. No mitigation measures are required in regard to GHG emissions.

Sincerely,

Martin Rolph
Air Quality Specialist

Victor Ortiz
Senior Air Quality Specialist

Attachments:

Attachment A: CalEEMod Output

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Attachment A

CalEEMod Output

GDR-02 Greenwood Park

El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.00	Acre	5.54	261,360.00	0
Parking Lot	7.75	1000sqft	0.18	7,750.00	0
Other Asphalt Surfaces	12.35	1000sqft	0.28	12,350.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This model is for construction emissions only.

Land Use - Buildings are exsiting, only renovation is required.

Construction Phase - Estimated schedule per landscape architect.

Off-road Equipment - Equipment adusted for extended schedule.

Off-road Equipment - Equipment adjusted for extended schedule.

Off-road Equipment - Equipment/hours adjusted for extenede schedule.

Off-road Equipment - Equipment adjusted for paved area.

Off-road Equipment - Building renovation only, grid power to be used.

Off-road Equipment -

Off-road Equipment - Equipment for park landscape/hardscape installation.

Grading - 1,600 CY soil/vegetation and 60 CY of asphalt removed during site prep.
80 CY soil import during grading.

Demolition - One 2,300 SF building to be demolished.

Trips and VMT - A crew of 10 and 3 vendor deliveries per day assumed for buiding renovation and landscaping.

Architectural Coating - Low VOC (50 g/L or less) interior/exterior paint per architect.

Vehicle Trips - Contruction emissions only this model.

Consumer Products - Contruction emissions only this model.

Area Coating - Contruction emissions only this model.

Landscape Equipment - Contruction emissions only this model.

Energy Use - Contruction emissions only this model.

Water And Wastewater - Contruction emissions only this model.

Solid Waste - Contruction emissions only this model.

Construction Off-road Equipment Mitigation - Dust Mitigation per EDCAQMD Rule 223-1.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	ReapplicationRatePercent	10	0

GDR-02 Greenwood Park - El Dorado-Mountain County County, Annual

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	230.00	262.00
tblConstructionPhase	PhaseEndDate	7/10/2023	11/26/2021
tblConstructionPhase	PhaseEndDate	6/27/2022	11/19/2021
tblConstructionPhase	PhaseEndDate	6/28/2021	7/30/2021
tblConstructionPhase	PhaseEndDate	8/9/2021	9/30/2021
tblConstructionPhase	PhaseEndDate	6/12/2023	10/30/2021
tblConstructionPhase	PhaseEndDate	7/12/2021	6/30/2021
tblConstructionPhase	PhaseEndDate	5/15/2023	12/1/2022
tblConstructionPhase	PhaseStartDate	6/13/2023	11/20/2021
tblConstructionPhase	PhaseStartDate	8/10/2021	11/1/2021
tblConstructionPhase	PhaseStartDate	7/13/2021	8/1/2021
tblConstructionPhase	PhaseStartDate	5/16/2023	10/1/2021
tblConstructionPhase	PhaseStartDate	6/29/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	6/28/2022	12/1/2021
tblEnergyUse	LightingElect	0.35	0.00
tblGrading	AcresOfGrading	11.00	22.00
tblGrading	MaterialExported	0.00	80.00
tblGrading	MaterialExported	0.00	1,660.00
tblLandUse	LotAcreage	6.00	5.54
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

tblSolidWaste	SolidWasteGenerationRate	0.52	0.00
tblTripsAndVMT	VendorTripNumber	46.00	6.00
tblTripsAndVMT	VendorTripNumber	46.00	6.00
tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblTripsAndVMT	WorkerTripNumber	8.00	18.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblTripsAndVMT	WorkerTripNumber	118.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblTripsAndVMT	WorkerTripNumber	118.00	20.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblWater	OutdoorWaterUseRate	7,148,888.10	0.00

2.0 Emissions Summary

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					
2021	0.1165	0.9652	0.7251	1.4200e-003	0.1658	0.0460	0.2118	0.0797	0.0427	0.1224	0.0000	126.0406	126.0406	0.0290	0.0000	126.7658
2022	0.0535	0.4342	0.5652	1.1000e-003	0.0335	0.0197	0.0532	9.0000e-003	0.0185	0.0275	0.0000	98.2446	98.2446	0.0149	0.0000	98.6167
Maximum	**0.1165**	**0.9652**	**0.7251**	**1.4200e-003**	**0.1658**	**0.0460**	**0.2118**	**0.0797**	**0.0427**	**0.1224**	**0.0000**	**126.0406**	**126.0406**	**0.0290**	**0.0000**	**126.7658**

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					
2021	0.1165	0.9652	0.7251	1.4200e-003	0.0858	0.0460	0.1318	0.0389	0.0427	0.0815	0.0000	126.0405	126.0405	0.0290	0.0000	126.7657
2022	0.0535	0.4342	0.5652	1.1000e-003	0.0335	0.0197	0.0532	9.0000e-003	0.0185	0.0275	0.0000	98.2445	98.2445	0.0149	0.0000	98.6166
Maximum	**0.1165**	**0.9652**	**0.7251**	**1.4200e-003**	**0.0858**	**0.0460**	**0.1318**	**0.0389**	**0.0427**	**0.0815**	**0.0000**	**126.0405**	**126.0405**	**0.0290**	**0.0000**	**126.7657**

	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**	**40.14**	**0.00**	**30.18**	**46.05**	**0.00**	**27.25**	**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	6-1-2021	8-31-2021	0.7462	0.7462
2	9-1-2021	11-30-2021	0.2637	0.2637
3	12-1-2021	2-28-2022	0.1367	0.1367
4	3-1-2022	5-31-2022	0.1340	0.1340
5	6-1-2022	8-31-2022	0.1336	0.1336
6	9-1-2022	9-30-2022	0.0436	0.0436
		Highest	0.7462	0.7462

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	0.0178	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-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	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	**0.0178**	**0.0000**	**2.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.7000e-004**	**4.7000e-004**	**0.0000**	**0.0000**	**5.0000e-004**

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	0.0178	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-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	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	**0.0178**	**0.0000**	**2.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.7000e-004**	**4.7000e-004**	**0.0000**	**0.0000**	**5.0000e-004**

	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

GDR-02 Greenwood Park - El Dorado-Mountain County County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	7/30/2021	5	44	
2	Site Preparation	Site Preparation	6/1/2021	6/30/2021	5	22	
3	Grading	Grading	8/1/2021	9/30/2021	5	44	
4	Paving	Paving	10/1/2021	10/30/2021	5	21	
5	Building Renovation	Building Construction	11/1/2021	11/19/2021	5	15	
6	Architectural Coating	Architectural Coating	11/20/2021	11/26/2021	5	5	
7	Landscaping	Building Construction	12/1/2021	12/1/2022	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 0.46

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,400; Non-Residential Outdoor: 1,800; Striped Parking Area: 1,206 (Architectural Coating – sqft)

OffRoad Equipment

GDR-02 Greenwood Park - El Dorado-Mountain County County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	4.00	158	0.38
Building Renovation	Cranes	0	7.00	231	0.29
Building Renovation	Forklifts	1	4.00	89	0.20
Building Renovation	Generator Sets	0	2.00	84	0.74
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	4.00	247	0.40
Building Renovation	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Grading	Graders	1	4.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Building Renovation	Welders	0	8.00	46	0.45
Landscaping	Cranes	0	7.00	231	0.29
Landscaping	Forklifts	1	4.00	89	0.20
Landscaping	Generator Sets	1	2.00	84	0.74
Landscaping	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Landscaping	Welders	0	8.00	46	0.45

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
Demolition	3	15.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	18.00	0.00	208.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	15.00	0.00	8.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Renovation	2	20.00	6.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	4	20.00	6.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					1.1500e-003	0.0000	1.1500e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0365	0.3556	0.2416	4.4000e-004		0.0178	0.0178		0.0167	0.0167	0.0000	38.3237	38.3237	9.2600e-003	0.0000	38.5551
Total	**0.0365**	**0.3556**	**0.2416**	**4.4000e-004**	**1.1500e-003**	**0.0178**	**0.0190**	**1.7000e-004**	**0.0167**	**0.0169**	**0.0000**	**38.3237**	**38.3237**	**9.2600e-003**	**0.0000**	**38.5551**

3.2 Demolition - 2021

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	4.0000e-005	1.5800e-003	4.6000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3841	0.3841	0.0000	0.0000	0.3842
Vendor	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
Worker	2.1900e-003	1.3500e-003	0.0142	4.0000e-005	4.0400e-003	3.0000e-005	4.0700e-003	1.0700e-003	3.0000e-005	1.1000e-003	0.0000	3.4590	3.4590	1.0000e-004	0.0000	3.4615
Total	**2.2300e-003**	**2.9300e-003**	**0.0147**	**4.0000e-005**	**4.1200e-003**	**4.0000e-005**	**4.1600e-003**	**1.0900e-003**	**4.0000e-005**	**1.1300e-003**	**0.0000**	**3.8431**	**3.8431**	**1.0000e-004**	**0.0000**	**3.8457**

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					5.2000e-004	0.0000	5.2000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0365	0.3556	0.2416	4.4000e-004		0.0178	0.0178		0.0167	0.0167	0.0000	38.3236	38.3236	9.2600e-003	0.0000	38.5550
Total	**0.0365**	**0.3556**	**0.2416**	**4.4000e-004**	**5.2000e-004**	**0.0178**	**0.0183**	**8.0000e-005**	**0.0167**	**0.0168**	**0.0000**	**38.3236**	**38.3236**	**9.2600e-003**	**0.0000**	**38.5550**

3.2 Demolition - 2021

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	4.0000e-005	1.5800e-003	4.6000e-004	0.0000	8.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3841	0.3841	0.0000	0.0000	0.3842
Vendor	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
Worker	2.1900e-003	1.3500e-003	0.0142	4.0000e-005	4.0400e-003	3.0000e-005	4.0700e-003	1.0700e-003	3.0000e-005	1.1000e-003	0.0000	3.4590	3.4590	1.0000e-004	0.0000	3.4615
Total	**2.2300e-003**	**2.9300e-003**	**0.0147**	**4.0000e-005**	**4.1200e-003**	**4.0000e-005**	**4.1600e-003**	**1.0900e-003**	**4.0000e-005**	**1.1300e-003**	**0.0000**	**3.8431**	**3.8431**	**1.0000e-004**	**0.0000**	**3.8457**

3.3 Site Preparation - 2021

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					0.0664	0.0000	0.0664	0.0364	0.0000	0.0364	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0156	0.1624	0.0941	1.6000e-004		8.3200e-003	8.3200e-003		7.6500e-003	7.6500e-003	0.0000	14.2616	14.2616	4.6100e-003	0.0000	14.3769
Total	**0.0156**	**0.1624**	**0.0941**	**1.6000e-004**	**0.0664**	**8.3200e-003**	**0.0747**	**0.0364**	**7.6500e-003**	**0.0441**	**0.0000**	**14.2616**	**14.2616**	**4.6100e-003**	**0.0000**	**14.3769**

3.3 Site Preparation - 2021

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	8.6000e-004	0.0329	9.4700e-003	8.0000e-005	1.7300e-003	1.3000e-004	1.8600e-003	4.7000e-004	1.2000e-004	6.0000e-004	0.0000	7.9892	7.9892	9.0000e-005	0.0000	7.9916
Vendor	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
Worker	1.3100e-003	8.1000e-004	8.5500e-003	2.0000e-005	2.4200e-003	2.0000e-005	2.4400e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.0754	2.0754	6.0000e-005	0.0000	2.0769
Total	**2.1700e-003**	**0.0337**	**0.0180**	**1.0000e-004**	**4.1500e-003**	**1.5000e-004**	**4.3000e-003**	**1.1100e-003**	**1.4000e-004**	**1.2600e-003**	**0.0000**	**10.0646**	**10.0646**	**1.5000e-004**	**0.0000**	**10.0684**

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					0.0299	0.0000	0.0299	0.0164	0.0000	0.0164	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0156	0.1624	0.0941	1.6000e-004		8.3200e-003	8.3200e-003		7.6500e-003	7.6500e-003	0.0000	14.2615	14.2615	4.6100e-003	0.0000	14.3769
Total	**0.0156**	**0.1624**	**0.0941**	**1.6000e-004**	**0.0299**	**8.3200e-003**	**0.0382**	**0.0164**	**7.6500e-003**	**0.0240**	**0.0000**	**14.2615**	**14.2615**	**4.6100e-003**	**0.0000**	**14.3769**

3.3 Site Preparation - 2021

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	8.6000e-004	0.0329	9.4700e-003	8.0000e-005	1.7300e-003	1.3000e-004	1.8600e-003	4.7000e-004	1.2000e-004	6.0000e-004	0.0000	7.9892	7.9892	9.0000e-005	0.0000	7.9916
Vendor	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
Worker	1.3100e-003	8.1000e-004	8.5500e-003	2.0000e-005	2.4200e-003	2.0000e-005	2.4400e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.0754	2.0754	6.0000e-005	0.0000	2.0769
Total	**2.1700e-003**	**0.0337**	**0.0180**	**1.0000e-004**	**4.1500e-003**	**1.5000e-004**	**4.3000e-003**	**1.1100e-003**	**1.4000e-004**	**1.2600e-003**	**0.0000**	**10.0646**	**10.0646**	**1.5000e-004**	**0.0000**	**10.0684**

3.4 Grading - 2021

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					0.0779	0.0000	0.0779	0.0377	0.0000	0.0377	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0252	0.2721	0.1744	3.3000e-004		0.0128	0.0128		0.0117	0.0117	0.0000	28.6591	28.6591	9.2700e-003	0.0000	28.8908
Total	**0.0252**	**0.2721**	**0.1744**	**3.3000e-004**	**0.0779**	**0.0128**	**0.0907**	**0.0377**	**0.0117**	**0.0494**	**0.0000**	**28.6591**	**28.6591**	**9.2700e-003**	**0.0000**	**28.8908**

3.4 Grading - 2021

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	3.0000e-005	1.2700e-003	3.6000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3073	0.3073	0.0000	0.0000	0.3074
Vendor	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
Worker	2.1900e-003	1.3500e-003	0.0142	4.0000e-005	4.0400e-003	3.0000e-005	4.0700e-003	1.0700e-003	3.0000e-005	1.1000e-003	0.0000	3.4590	3.4590	1.0000e-004	0.0000	3.4615
Total	**2.2200e-003**	**2.6200e-003**	**0.0146**	**4.0000e-005**	**4.1100e-003**	**3.0000e-005**	**4.1400e-003**	**1.0900e-003**	**3.0000e-005**	**1.1200e-003**	**0.0000**	**3.7663**	**3.7663**	**1.0000e-004**	**0.0000**	**3.7688**

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					0.0351	0.0000	0.0351	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0252	0.2721	0.1744	3.3000e-004		0.0128	0.0128		0.0117	0.0117	0.0000	28.6590	28.6590	9.2700e-003	0.0000	28.8908
Total	**0.0252**	**0.2721**	**0.1744**	**3.3000e-004**	**0.0351**	**0.0128**	**0.0478**	**0.0170**	**0.0117**	**0.0287**	**0.0000**	**28.6590**	**28.6590**	**9.2700e-003**	**0.0000**	**28.8908**

3.4 Grading - 2021

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	3.0000e-005	1.2700e-003	3.6000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3073	0.3073	0.0000	0.0000	0.3074
Vendor	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
Worker	2.1900e-003	1.3500e-003	0.0142	4.0000e-005	4.0400e-003	3.0000e-005	4.0700e-003	1.0700e-003	3.0000e-005	1.1000e-003	0.0000	3.4590	3.4590	1.0000e-004	0.0000	3.4615
Total	**2.2200e-003**	**2.6200e-003**	**0.0146**	**4.0000e-005**	**4.1100e-003**	**3.0000e-005**	**4.1400e-003**	**1.0900e-003**	**3.0000e-005**	**1.1200e-003**	**0.0000**	**3.7663**	**3.7663**	**1.0000e-004**	**0.0000**	**3.7688**

3.5 Paving - 2021

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					
Off-Road	6.5900e-003	0.0678	0.0769	1.2000e-004		3.5600e-003	3.5600e-003		3.2700e-003	3.2700e-003	0.0000	10.5123	10.5123	3.4000e-003	0.0000	10.5973
Paving	6.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1900e-003**	**0.0678**	**0.0769**	**1.2000e-004**		**3.5600e-003**	**3.5600e-003**		**3.2700e-003**	**3.2700e-003**	**0.0000**	**10.5123**	**10.5123**	**3.4000e-003**	**0.0000**	**10.5973**

3.5 Paving - 2021

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	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
Vendor	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
Worker	1.0400e-003	6.4000e-004	6.8000e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.3000e-004	0.0000	1.6509	1.6509	5.0000e-005	0.0000	1.6521
Total	**1.0400e-003**	**6.4000e-004**	**6.8000e-003**	**2.0000e-005**	**1.9300e-003**	**1.0000e-005**	**1.9400e-003**	**5.1000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.6509**	**1.6509**	**5.0000e-005**	**0.0000**	**1.6521**

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					
Off-Road	6.5900e-003	0.0678	0.0769	1.2000e-004		3.5600e-003	3.5600e-003		3.2700e-003	3.2700e-003	0.0000	10.5123	10.5123	3.4000e-003	0.0000	10.5973
Paving	6.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1900e-003**	**0.0678**	**0.0769**	**1.2000e-004**		**3.5600e-003**	**3.5600e-003**		**3.2700e-003**	**3.2700e-003**	**0.0000**	**10.5123**	**10.5123**	**3.4000e-003**	**0.0000**	**10.5973**

3.5 Paving - 2021

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	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
Vendor	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
Worker	1.0400e-003	6.4000e-004	6.8000e-003	2.0000e-005	1.9300e-003	1.0000e-005	1.9400e-003	5.1000e-004	1.0000e-005	5.3000e-004	0.0000	1.6509	1.6509	5.0000e-005	0.0000	1.6521
Total	**1.0400e-003**	**6.4000e-004**	**6.8000e-003**	**2.0000e-005**	**1.9300e-003**	**1.0000e-005**	**1.9400e-003**	**5.1000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.6509**	**1.6509**	**5.0000e-005**	**0.0000**	**1.6521**

3.6 Building Renovation - 2021

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					
Off-Road	1.1900e-003	0.0115	0.0129	2.0000e-005		7.3000e-004	7.3000e-004		6.7000e-004	6.7000e-004	0.0000	1.5272	1.5272	4.9000e-004	0.0000	1.5396
Total	**1.1900e-003**	**0.0115**	**0.0129**	**2.0000e-005**		**7.3000e-004**	**7.3000e-004**		**6.7000e-004**	**6.7000e-004**	**0.0000**	**1.5272**	**1.5272**	**4.9000e-004**	**0.0000**	**1.5396**

3.6 Building Renovation - 2021

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	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
Vendor	1.5000e-004	4.9400e-003	1.6400e-003	1.0000e-005	2.6000e-004	1.0000e-005	2.8000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0442	1.0442	2.0000e-005	0.0000	1.0447
Worker	9.9000e-004	6.1000e-004	6.4700e-003	2.0000e-005	1.8400e-003	1.0000e-005	1.8500e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.5723	1.5723	4.0000e-005	0.0000	1.5734
Total	**1.1400e-003**	**5.5500e-003**	**8.1100e-003**	**3.0000e-005**	**2.1000e-003**	**2.0000e-005**	**2.1300e-003**	**5.7000e-004**	**2.0000e-005**	**5.9000e-004**	**0.0000**	**2.6164**	**2.6164**	**6.0000e-005**	**0.0000**	**2.6181**

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					
Off-Road	1.1900e-003	0.0115	0.0129	2.0000e-005		7.3000e-004	7.3000e-004		6.7000e-004	6.7000e-004	0.0000	1.5272	1.5272	4.9000e-004	0.0000	1.5396
Total	**1.1900e-003**	**0.0115**	**0.0129**	**2.0000e-005**		**7.3000e-004**	**7.3000e-004**		**6.7000e-004**	**6.7000e-004**	**0.0000**	**1.5272**	**1.5272**	**4.9000e-004**	**0.0000**	**1.5396**

3.6 Building Renovation - 2021

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	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
Vendor	1.5000e-004	4.9400e-003	1.6400e-003	1.0000e-005	2.6000e-004	1.0000e-005	2.8000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.0442	1.0442	2.0000e-005	0.0000	1.0447
Worker	9.9000e-004	6.1000e-004	6.4700e-003	2.0000e-005	1.8400e-003	1.0000e-005	1.8500e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.5723	1.5723	4.0000e-005	0.0000	1.5734
Total	**1.1400e-003**	**5.5500e-003**	**8.1100e-003**	**3.0000e-005**	**2.1000e-003**	**2.0000e-005**	**2.1300e-003**	**5.7000e-004**	**2.0000e-005**	**5.9000e-004**	**0.0000**	**2.6164**	**2.6164**	**6.0000e-005**	**0.0000**	**2.6181**

3.7 Architectural Coating - 2021

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					
Archit. Coating	0.0153					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.0159**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.7 Architectural Coating - 2021

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	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
Vendor	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
Worker	4.0000e-004	2.5000e-004	2.5900e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6289	0.6289	2.0000e-005	0.0000	0.6294
Total	**4.0000e-004**	**2.5000e-004**	**2.5900e-003**	**1.0000e-005**	**7.3000e-004**	**1.0000e-005**	**7.4000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6289**	**0.6289**	**2.0000e-005**	**0.0000**	**0.6294**

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					
Archit. Coating	0.0153					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.0159**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.7 Architectural Coating - 2021

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	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
Vendor	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
Worker	4.0000e-004	2.5000e-004	2.5900e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6289	0.6289	2.0000e-005	0.0000	0.6294
Total	**4.0000e-004**	**2.5000e-004**	**2.5900e-003**	**1.0000e-005**	**7.3000e-004**	**1.0000e-005**	**7.4000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6289**	**0.6289**	**2.0000e-005**	**0.0000**	**0.6294**

3.8 Landscaping - 2021

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					
Off-Road	3.9200e-003	0.0377	0.0433	6.0000e-005		2.2500e-003	2.2500e-003		2.1100e-003	2.1100e-003	0.0000	5.5363	5.5363	1.3500e-003	0.0000	5.5700
Total	**3.9200e-003**	**0.0377**	**0.0433**	**6.0000e-005**		**2.2500e-003**	**2.2500e-003**		**2.1100e-003**	**2.1100e-003**	**0.0000**	**5.5363**	**5.5363**	**1.3500e-003**	**0.0000**	**5.5700**

3.8 Landscaping - 2021

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	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
Vendor	2.3000e-004	7.5700e-003	2.5200e-003	2.0000e-005	4.1000e-004	2.0000e-005	4.3000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.6011	1.6011	3.0000e-005	0.0000	1.6018
Worker	1.5300e-003	9.4000e-004	9.9300e-003	3.0000e-005	2.8200e-003	2.0000e-005	2.8400e-003	7.5000e-004	2.0000e-005	7.7000e-004	0.0000	2.4108	2.4108	7.0000e-005	0.0000	2.4125
Total	**1.7600e-003**	**8.5100e-003**	**0.0125**	**5.0000e-005**	**3.2300e-003**	**4.0000e-005**	**3.2700e-003**	**8.7000e-004**	**4.0000e-005**	**9.1000e-004**	**0.0000**	**4.0119**	**4.0119**	**1.0000e-004**	**0.0000**	**4.0143**

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					
Off-Road	3.9200e-003	0.0377	0.0433	6.0000e-005		2.2500e-003	2.2500e-003		2.1100e-003	2.1100e-003	0.0000	5.5363	5.5363	1.3500e-003	0.0000	5.5700
Total	**3.9200e-003**	**0.0377**	**0.0433**	**6.0000e-005**		**2.2500e-003**	**2.2500e-003**		**2.1100e-003**	**2.1100e-003**	**0.0000**	**5.5363**	**5.5363**	**1.3500e-003**	**0.0000**	**5.5700**

3.8 Landscaping - 2021

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	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
Vendor	2.3000e-004	7.5700e-003	2.5200e-003	2.0000e-005	4.1000e-004	2.0000e-005	4.3000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.6011	1.6011	3.0000e-005	0.0000	1.6018
Worker	1.5300e-003	9.4000e-004	9.9300e-003	3.0000e-005	2.8200e-003	2.0000e-005	2.8400e-003	7.5000e-004	2.0000e-005	7.7000e-004	0.0000	2.4108	2.4108	7.0000e-005	0.0000	2.4125
Total	**1.7600e-003**	**8.5100e-003**	**0.0125**	**5.0000e-005**	**3.2300e-003**	**4.0000e-005**	**3.2700e-003**	**8.7000e-004**	**4.0000e-005**	**9.1000e-004**	**0.0000**	**4.0119**	**4.0119**	**1.0000e-004**	**0.0000**	**4.0143**

3.8 Landscaping - 2022

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					
Off-Road	0.0363	0.3508	0.4462	6.6000e-004		0.0193	0.0193		0.0181	0.0181	0.0000	57.5664	57.5664	0.0140	0.0000	57.9153
Total	**0.0363**	**0.3508**	**0.4462**	**6.6000e-004**		**0.0193**	**0.0193**		**0.0181**	**0.0181**	**0.0000**	**57.5664**	**57.5664**	**0.0140**	**0.0000**	**57.9153**

3.8 Landscaping - 2022

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	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
Vendor	2.2100e-003	0.0747	0.0246	1.7000e-004	4.2100e-003	2.0000e-004	4.4200e-003	1.2200e-003	1.9000e-004	1.4100e-003	0.0000	16.5167	16.5167	2.9000e-004	0.0000	16.5240
Worker	0.0150	8.8100e-003	0.0945	2.7000e-004	0.0293	2.1000e-004	0.0295	7.7800e-003	1.9000e-004	7.9700e-003	0.0000	24.1615	24.1615	6.3000e-004	0.0000	24.1774
Total	**0.0172**	**0.0835**	**0.1190**	**4.4000e-004**	**0.0335**	**4.1000e-004**	**0.0339**	**9.0000e-003**	**3.8000e-004**	**9.3800e-003**	**0.0000**	**40.6782**	**40.6782**	**9.2000e-004**	**0.0000**	**40.7014**

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					
Off-Road	0.0363	0.3508	0.4462	6.6000e-004		0.0193	0.0193		0.0181	0.0181	0.0000	57.5663	57.5663	0.0140	0.0000	57.9153
Total	**0.0363**	**0.3508**	**0.4462**	**6.6000e-004**		**0.0193**	**0.0193**		**0.0181**	**0.0181**	**0.0000**	**57.5663**	**57.5663**	**0.0140**	**0.0000**	**57.9153**

3.8 Landscaping - 2022

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	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
Vendor	2.2100e-003	0.0747	0.0246	1.7000e-004	4.2100e-003	2.0000e-004	4.4200e-003	1.2200e-003	1.9000e-004	1.4100e-003	0.0000	16.5167	16.5167	2.9000e-004	0.0000	16.5240
Worker	0.0150	8.8100e-003	0.0945	2.7000e-004	0.0293	2.1000e-004	0.0295	7.7800e-003	1.9000e-004	7.9700e-003	0.0000	24.1615	24.1615	6.3000e-004	0.0000	24.1774
Total	**0.0172**	**0.0835**	**0.1190**	**4.4000e-004**	**0.0335**	**4.1000e-004**	**0.0339**	**9.0000e-003**	**3.8000e-004**	**9.3800e-003**	**0.0000**	**40.6782**	**40.6782**	**9.2000e-004**	**0.0000**	**40.7014**

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
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	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
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	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
City Park	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342
Other Asphalt Surfaces	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342
Parking Lot	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342

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

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					
City Park	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
Other Asphalt Surfaces	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
Parking Lot	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					
City Park	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
Other Asphalt Surfaces	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
Parking Lot	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			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	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			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	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

	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	0.0178	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Unmitigated	0.0178	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004

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	0.0178					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Total	**0.0178**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.7000e-004**	**4.7000e-004**	**0.0000**	**0.0000**	**5.0000e-004**

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	0.0178					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.7000e-004	4.7000e-004	0.0000	0.0000	5.0000e-004
Total	**0.0178**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.7000e-004**	**4.7000e-004**	**0.0000**	**0.0000**	**5.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	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			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	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			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	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

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

GDR-02 Greenwood Park

El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.00	Acre	5.54	261,360.00	0
Parking Lot	7.75	1000sqft	0.18	7,750.00	0
Other Asphalt Surfaces	12.35	1000sqft	0.28	12,350.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This model is for construction emissions only.

Land Use - Buildings are exsiting, only renovation is required.

Construction Phase - Estimated schedule per landscape architect.

Off-road Equipment - Equipment adusted for extended schedule.

Off-road Equipment - Equipment adjusted for extended schedule.

Off-road Equipment - Equipment/hours adjusted for extenede schedule.

Off-road Equipment - Equipment adjusted for paved area.

Off-road Equipment - Building renovation only, grid power to be used.

Off-road Equipment -

Off-road Equipment - Equipment for park landscape/hardscape installation.

Grading - 1,600 CY soil/vegetation and 60 CY of asphalt removed during site prep.
80 CY soil import during grading.

Demolition - One 2,300 SF building to be demolished.

Trips and VMT - A crew of 10 and 3 vendor deliveries per day assumed for buiding renovation and landscaping.

Architectural Coating - Low VOC (50 g/L or less) interior/exterior paint per architect.

Vehicle Trips - Contruction emissions only this model.

Consumer Products - Contruction emissions only this model.

Area Coating - Contruction emissions only this model.

Landscape Equipment - Contruction emissions only this model.

Energy Use - Contruction emissions only this model.

Water And Wastewater - Contruction emissions only this model.

Solid Waste - Contruction emissions only this model.

Construction Off-road Equipment Mitigation - Dust Mitigation per EDCAQMD Rule 223-1.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	ReapplicationRatePercent	10	0

GDR-02 Greenwood Park - El Dorado-Mountain County County, Summer

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	230.00	262.00
tblConstructionPhase	PhaseEndDate	7/10/2023	11/26/2021
tblConstructionPhase	PhaseEndDate	6/27/2022	11/19/2021
tblConstructionPhase	PhaseEndDate	6/28/2021	7/30/2021
tblConstructionPhase	PhaseEndDate	8/9/2021	9/30/2021
tblConstructionPhase	PhaseEndDate	6/12/2023	10/30/2021
tblConstructionPhase	PhaseEndDate	7/12/2021	6/30/2021
tblConstructionPhase	PhaseEndDate	5/15/2023	12/1/2022
tblConstructionPhase	PhaseStartDate	6/13/2023	11/20/2021
tblConstructionPhase	PhaseStartDate	8/10/2021	11/1/2021
tblConstructionPhase	PhaseStartDate	7/13/2021	8/1/2021
tblConstructionPhase	PhaseStartDate	5/16/2023	10/1/2021
tblConstructionPhase	PhaseStartDate	6/29/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	6/28/2022	12/1/2021
tblEnergyUse	LightingElect	0.35	0.00
tblGrading	AcresOfGrading	11.00	22.00
tblGrading	MaterialExported	0.00	80.00
tblGrading	MaterialExported	0.00	1,660.00
tblLandUse	LotAcreage	6.00	5.54
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

tblSolidWaste	SolidWasteGenerationRate	0.52	0.00
tblTripsAndVMT	VendorTripNumber	46.00	6.00
tblTripsAndVMT	VendorTripNumber	46.00	6.00
tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblTripsAndVMT	WorkerTripNumber	8.00	18.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblTripsAndVMT	WorkerTripNumber	118.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblTripsAndVMT	WorkerTripNumber	118.00	20.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblWater	OutdoorWaterUseRate	7,148,888.10	0.00

2.0 Emissions Summary

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					
2021	6.5187	34.0173	21.9931	0.0467	6.6740	1.5808	8.2548	3.4772	1.4686	4.9458	0.0000	4,586.4101	4,586.4101	0.9472	0.0000	4,610.0897
2022	0.4542	3.6129	4.8098	9.4200e-003	0.2920	0.1652	0.4572	0.0783	0.1550	0.2332	0.0000	926.2444	926.2444	0.1377	0.0000	929.6869
Maximum	**6.5187**	**34.0173**	**21.9931**	**0.0467**	**6.6740**	**1.5808**	**8.2548**	**3.4772**	**1.4686**	**4.9458**	**0.0000**	**4,586.4101**	**4,586.4101**	**0.9472**	**0.0000**	**4,610.0897**

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					
2021	6.5187	34.0173	21.9931	0.0467	3.3270	1.5808	4.9078	1.6513	1.4686	3.1199	0.0000	4,586.4101	4,586.4101	0.9472	0.0000	4,610.0896
2022	0.4542	3.6129	4.8098	9.4200e-003	0.2920	0.1652	0.4572	0.0783	0.1550	0.2332	0.0000	926.2444	926.2444	0.1377	0.0000	929.6869
Maximum	**6.5187**	**34.0173**	**21.9931**	**0.0467**	**3.3270**	**1.5808**	**4.9078**	**1.6513**	**1.4686**	**3.1199**	**0.0000**	**4,586.4101**	**4,586.4101**	**0.9472**	**0.0000**	**4,610.0896**

	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**	**48.05**	**0.00**	**38.42**	**51.36**	**0.00**	**35.26**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.0977	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
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
Total	**0.0977**	**2.0000e-005**	**2.6600e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**5.7100e-003**	**5.7100e-003**	**1.0000e-005**	**0.0000**	**6.0900e-003**

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	0.0977	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
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
Total	**0.0977**	**2.0000e-005**	**2.6600e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**5.7100e-003**	**5.7100e-003**	**1.0000e-005**	**0.0000**	**6.0900e-003**

	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	Demolition	Demolition	6/1/2021	7/30/2021	5	44	
2	Site Preparation	Site Preparation	6/1/2021	6/30/2021	5	22	
3	Grading	Grading	8/1/2021	9/30/2021	5	44	
4	Paving	Paving	10/1/2021	10/30/2021	5	21	
5	Building Renovation	Building Construction	11/1/2021	11/19/2021	5	15	
6	Architectural Coating	Architectural Coating	11/20/2021	11/26/2021	5	5	
7	Landscaping	Building Construction	12/1/2021	12/1/2022	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 0.46

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,400; Non-Residential Outdoor: 1,800; Striped Parking Area: 1,206 (Architectural Coating – sqft)

OffRoad Equipment

GDR-02 Greenwood Park - El Dorado-Mountain County County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	4.00	158	0.38
Building Renovation	Cranes	0	7.00	231	0.29
Building Renovation	Forklifts	1	4.00	89	0.20
Building Renovation	Generator Sets	0	2.00	84	0.74
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	4.00	247	0.40
Building Renovation	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Grading	Graders	1	4.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Building Renovation	Welders	0	8.00	46	0.45
Landscaping	Cranes	0	7.00	231	0.29
Landscaping	Forklifts	1	4.00	89	0.20
Landscaping	Generator Sets	1	2.00	84	0.74
Landscaping	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Landscaping	Welders	0	8.00	46	0.45

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
Demolition	3	15.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	18.00	0.00	208.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	15.00	0.00	8.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Renovation	2	20.00	6.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	4	20.00	6.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					0.0523	0.0000	0.0523	7.9100e-003	0.0000	7.9100e-003			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591		1,920.2088	1,920.2088	0.4638		1,931.8031
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.0523**	**0.8100**	**0.8623**	**7.9100e-003**	**0.7591**	**0.7670**		**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8031**

3.2 Demolition - 2021

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	1.8600e-003	0.0698	0.0203	1.8000e-004	3.9200e-003	2.8000e-004	4.2000e-003	1.0700e-003	2.7000e-004	1.3400e-003		19.3356	19.3356	2.2000e-004		19.3412
Vendor	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
Worker	0.1048	0.0538	0.7215	1.8900e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		187.8875	187.8875	5.3200e-003		188.0205
Total	**0.1067**	**0.1236**	**0.7418**	**2.0700e-003**	**0.1955**	**1.6200e-003**	**0.1971**	**0.0519**	**1.5100e-003**	**0.0534**		**207.2231**	**207.2231**	**5.5400e-003**		**207.3616**

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					0.0235	0.0000	0.0235	3.5600e-003	0.0000	3.5600e-003			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591	0.0000	1,920.2088	1,920.2088	0.4638		1,931.8030
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.0235**	**0.8100**	**0.8335**	**3.5600e-003**	**0.7591**	**0.7626**	**0.0000**	**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8030**

3.2 Demolition - 2021

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	1.8600e-003	0.0698	0.0203	1.8000e-004	3.9200e-003	2.8000e-004	4.2000e-003	1.0700e-003	2.7000e-004	1.3400e-003		19.3356	19.3356	2.2000e-004		19.3412
Vendor	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
Worker	0.1048	0.0538	0.7215	1.8900e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		187.8875	187.8875	5.3200e-003		188.0205
Total	**0.1067**	**0.1236**	**0.7418**	**2.0700e-003**	**0.1955**	**1.6200e-003**	**0.1971**	**0.0519**	**1.5100e-003**	**0.0534**		**207.2231**	**207.2231**	**5.5400e-003**		**207.3616**

3.3 Site Preparation - 2021

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					6.0332	0.0000	6.0332	3.3119	0.0000	3.3119			0.0000			0.0000
Off-Road	1.4209	14.7629	8.5583	0.0147		0.7560	0.7560		0.6955	0.6955		1,429.1523	1,429.1523	0.4622		1,440.7078
Total	**1.4209**	**14.7629**	**8.5583**	**0.0147**	**6.0332**	**0.7560**	**6.7892**	**3.3119**	**0.6955**	**4.0074**		**1,429.1523**	**1,429.1523**	**0.4622**		**1,440.7078**

3.3 Site Preparation - 2021

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	0.0775	2.9037	0.8437	7.6900e-003	0.1631	0.0115	0.1746	0.0445	0.0110	0.0556		804.3609	804.3609	9.2700e-003		804.5927
Vendor	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
Worker	0.1258	0.0645	0.8658	2.2600e-003	0.2299	1.6100e-003	0.2315	0.0610	1.4800e-003	0.0625		225.4650	225.4650	6.3800e-003		225.6246
Total	**0.2033**	**2.9682**	**1.7095**	**9.9500e-003**	**0.3930**	**0.0131**	**0.4061**	**0.1055**	**0.0125**	**0.1180**		**1,029.8259**	**1,029.8259**	**0.0157**		**1,030.2172**

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					2.7150	0.0000	2.7150	1.4904	0.0000	1.4904			0.0000			0.0000
Off-Road	1.4209	14.7629	8.5583	0.0147		0.7560	0.7560		0.6955	0.6955	0.0000	1,429.1523	1,429.1523	0.4622		1,440.7078
Total	**1.4209**	**14.7629**	**8.5583**	**0.0147**	**2.7150**	**0.7560**	**3.4710**	**1.4904**	**0.6955**	**2.1859**	**0.0000**	**1,429.1523**	**1,429.1523**	**0.4622**		**1,440.7078**

3.3 Site Preparation - 2021

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	0.0775	2.9037	0.8437	7.6900e-003	0.1631	0.0115	0.1746	0.0445	0.0110	0.0556		804.3609	804.3609	9.2700e-003		804.5927
Vendor	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
Worker	0.1258	0.0645	0.8658	2.2600e-003	0.2299	1.6100e-003	0.2315	0.0610	1.4800e-003	0.0625		225.4650	225.4650	6.3800e-003		225.6246
Total	**0.2033**	**2.9682**	**1.7095**	**9.9500e-003**	**0.3930**	**0.0131**	**0.4061**	**0.1055**	**0.0125**	**0.1180**		**1,029.8259**	**1,029.8259**	**0.0157**		**1,030.2172**

3.4 Grading - 2021

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					3.5413	0.0000	3.5413	1.7124	0.0000	1.7124			0.0000			0.0000
Off-Road	1.1452	12.3683	7.9287	0.0148		0.5800	0.5800		0.5336	0.5336		1,435.9643	1,435.9643	0.4644		1,447.5748
Total	**1.1452**	**12.3683**	**7.9287**	**0.0148**	**3.5413**	**0.5800**	**4.1213**	**1.7124**	**0.5336**	**2.2459**		**1,435.9643**	**1,435.9643**	**0.4644**		**1,447.5748**

3.4 Grading - 2021

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	1.4900e-003	0.0558	0.0162	1.5000e-004	3.1400e-003	2.2000e-004	3.3600e-003	8.6000e-004	2.1000e-004	1.0700e-003		15.4685	15.4685	1.8000e-004		15.4729
Vendor	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
Worker	0.1048	0.0538	0.7215	1.8900e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		187.8875	187.8875	5.3200e-003		188.0205
Total	**0.1063**	**0.1096**	**0.7377**	**2.0400e-003**	**0.1947**	**1.5600e-003**	**0.1963**	**0.0517**	**1.4500e-003**	**0.0531**		**203.3559**	**203.3559**	**5.5000e-003**		**203.4934**

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					1.5936	0.0000	1.5936	0.7706	0.0000	0.7706			0.0000			0.0000
Off-Road	1.1452	12.3683	7.9287	0.0148		0.5800	0.5800		0.5336	0.5336	0.0000	1,435.9643	1,435.9643	0.4644		1,447.5748
Total	**1.1452**	**12.3683**	**7.9287**	**0.0148**	**1.5936**	**0.5800**	**2.1735**	**0.7706**	**0.5336**	**1.3041**	**0.0000**	**1,435.9643**	**1,435.9643**	**0.4644**		**1,447.5748**

3.4 Grading - 2021

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	1.4900e-003	0.0558	0.0162	1.5000e-004	3.1400e-003	2.2000e-004	3.3600e-003	8.6000e-004	2.1000e-004	1.0700e-003		15.4685	15.4685	1.8000e-004		15.4729
Vendor	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
Worker	0.1048	0.0538	0.7215	1.8900e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		187.8875	187.8875	5.3200e-003		188.0205
Total	**0.1063**	**0.1096**	**0.7377**	**2.0400e-003**	**0.1947**	**1.5600e-003**	**0.1963**	**0.0517**	**1.4500e-003**	**0.0531**		**203.3559**	**203.3559**	**5.5000e-003**		**203.4934**

3.5 Paving - 2021

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					
Off-Road	0.6278	6.4596	7.3266	0.0114		0.3389	0.3389		0.3118	0.3118		1,103.6054	1,103.6054	0.3569		1,112.5286
Paving	0.0574					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6852**	**6.4596**	**7.3266**	**0.0114**		**0.3389**	**0.3389**		**0.3118**	**0.3118**		**1,103.6054**	**1,103.6054**	**0.3569**		**1,112.5286**

3.5 Paving - 2021

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	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
Vendor	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
Worker	0.1048	0.0538	0.7215	1.8900e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		187.8875	187.8875	5.3200e-003		188.0205
Total	**0.1048**	**0.0538**	**0.7215**	**1.8900e-003**	**0.1916**	**1.3400e-003**	**0.1929**	**0.0508**	**1.2400e-003**	**0.0521**		**187.8875**	**187.8875**	**5.3200e-003**		**188.0205**

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					
Off-Road	0.6278	6.4596	7.3266	0.0114		0.3389	0.3389		0.3118	0.3118	0.0000	1,103.6054	1,103.6054	0.3569		1,112.5286
Paving	0.0574					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6852**	**6.4596**	**7.3266**	**0.0114**		**0.3389**	**0.3389**		**0.3118**	**0.3118**	**0.0000**	**1,103.6054**	**1,103.6054**	**0.3569**		**1,112.5286**

3.5 Paving - 2021

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	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
Vendor	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
Worker	0.1048	0.0538	0.7215	1.8900e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		187.8875	187.8875	5.3200e-003		188.0205
Total	**0.1048**	**0.0538**	**0.7215**	**1.8900e-003**	**0.1916**	**1.3400e-003**	**0.1929**	**0.0508**	**1.2400e-003**	**0.0521**		**187.8875**	**187.8875**	**5.3200e-003**		**188.0205**

3.6 Building Renovation - 2021

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					
Off-Road	0.1583	1.5375	1.7140	2.3200e-003		0.0977	0.0977		0.0899	0.0899		224.4655	224.4655	0.0726		226.2804
Total	**0.1583**	**1.5375**	**1.7140**	**2.3200e-003**		**0.0977**	**0.0977**		**0.0899**	**0.0899**		**224.4655**	**224.4655**	**0.0726**		**226.2804**

3.6 Building Renovation - 2021

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	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
Vendor	0.0193	0.6456	0.2036	1.4800e-003	0.0365	1.8800e-003	0.0384	0.0105	1.8000e-003	0.0123		154.7255	154.7255	2.7900e-003		154.7953
Worker	0.1398	0.0717	0.9620	2.5200e-003	0.2555	1.7900e-003	0.2573	0.0678	1.6500e-003	0.0694		250.5166	250.5166	7.0900e-003		250.6940
Total	**0.1591**	**0.7173**	**1.1656**	**4.0000e-003**	**0.2920**	**3.6700e-003**	**0.2956**	**0.0783**	**3.4500e-003**	**0.0817**		**405.2421**	**405.2421**	**9.8800e-003**		**405.4892**

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					
Off-Road	0.1583	1.5375	1.7140	2.3200e-003		0.0977	0.0977		0.0899	0.0899	0.0000	224.4655	224.4655	0.0726		226.2804
Total	**0.1583**	**1.5375**	**1.7140**	**2.3200e-003**		**0.0977**	**0.0977**		**0.0899**	**0.0899**	**0.0000**	**224.4655**	**224.4655**	**0.0726**		**226.2804**

3.6 Building Renovation - 2021

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	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
Vendor	0.0193	0.6456	0.2036	1.4800e-003	0.0365	1.8800e-003	0.0384	0.0105	1.8000e-003	0.0123		154.7255	154.7255	2.7900e-003		154.7953
Worker	0.1398	0.0717	0.9620	2.5200e-003	0.2555	1.7900e-003	0.2573	0.0678	1.6500e-003	0.0694		250.5166	250.5166	7.0900e-003		250.6940
Total	**0.1591**	**0.7173**	**1.1656**	**4.0000e-003**	**0.2920**	**3.6700e-003**	**0.2956**	**0.0783**	**3.4500e-003**	**0.0817**		**405.2421**	**405.2421**	**9.8800e-003**		**405.4892**

3.7 Architectural Coating - 2021

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					
Archit. Coating	6.1321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**6.3510**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	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
Vendor	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
Worker	0.1677	0.0860	1.1544	3.0200e-003	0.3066	2.1500e-003	0.3087	0.0813	1.9800e-003	0.0833		300.6199	300.6199	8.5100e-003		300.8327
Total	**0.1677**	**0.0860**	**1.1544**	**3.0200e-003**	**0.3066**	**2.1500e-003**	**0.3087**	**0.0813**	**1.9800e-003**	**0.0833**		**300.6199**	**300.6199**	**8.5100e-003**		**300.8327**

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					
Archit. Coating	6.1321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**6.3510**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	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
Vendor	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
Worker	0.1677	0.0860	1.1544	3.0200e-003	0.3066	2.1500e-003	0.3087	0.0813	1.9800e-003	0.0833		300.6199	300.6199	8.5100e-003		300.8327
Total	**0.1677**	**0.0860**	**1.1544**	**3.0200e-003**	**0.3066**	**2.1500e-003**	**0.3087**	**0.0813**	**1.9800e-003**	**0.0833**		**300.6199**	**300.6199**	**8.5100e-003**		**300.8327**

3.8 Landscaping - 2021

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					
Off-Road	0.3413	3.2769	3.7653	5.5200e-003		0.1956	0.1956		0.1833	0.1833		530.6741	530.6741	0.1292		533.9042
Total	**0.3413**	**3.2769**	**3.7653**	**5.5200e-003**		**0.1956**	**0.1956**		**0.1833**	**0.1833**		**530.6741**	**530.6741**	**0.1292**		**533.9042**

3.8 Landscaping - 2021

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	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
Vendor	0.0193	0.6456	0.2036	1.4800e-003	0.0365	1.8800e-003	0.0384	0.0105	1.8000e-003	0.0123		154.7255	154.7255	2.7900e-003		154.7953
Worker	0.1398	0.0717	0.9620	2.5200e-003	0.2555	1.7900e-003	0.2573	0.0678	1.6500e-003	0.0694		250.5166	250.5166	7.0900e-003		250.6940
Total	**0.1591**	**0.7173**	**1.1656**	**4.0000e-003**	**0.2920**	**3.6700e-003**	**0.2956**	**0.0783**	**3.4500e-003**	**0.0817**		**405.2421**	**405.2421**	**9.8800e-003**		**405.4892**

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					
Off-Road	0.3413	3.2769	3.7653	5.5200e-003		0.1956	0.1956		0.1833	0.1833	0.0000	530.6741	530.6741	0.1292		533.9042
Total	**0.3413**	**3.2769**	**3.7653**	**5.5200e-003**		**0.1956**	**0.1956**		**0.1833**	**0.1833**	**0.0000**	**530.6741**	**530.6741**	**0.1292**		**533.9042**

3.8 Landscaping - 2021

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	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
Vendor	0.0193	0.6456	0.2036	1.4800e-003	0.0365	1.8800e-003	0.0384	0.0105	1.8000e-003	0.0123		154.7255	154.7255	2.7900e-003		154.7953
Worker	0.1398	0.0717	0.9620	2.5200e-003	0.2555	1.7900e-003	0.2573	0.0678	1.6500e-003	0.0694		250.5166	250.5166	7.0900e-003		250.6940
Total	**0.1591**	**0.7173**	**1.1656**	**4.0000e-003**	**0.2920**	**3.6700e-003**	**0.2956**	**0.0783**	**3.4500e-003**	**0.0817**		**405.2421**	**405.2421**	**9.8800e-003**		**405.4892**

3.8 Landscaping - 2022

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					
Off-Road	0.3040	2.9352	3.7338	5.5200e-003		0.1618	0.1618		0.1518	0.1518		531.0130	531.0130	0.1288		534.2321
Total	**0.3040**	**2.9352**	**3.7338**	**5.5200e-003**		**0.1618**	**0.1618**		**0.1518**	**0.1518**		**531.0130**	**531.0130**	**0.1288**		**534.2321**

3.8 Landscaping - 2022

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	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
Vendor	0.0181	0.6131	0.1916	1.4700e-003	0.0365	1.6700e-003	0.0382	0.0105	1.6000e-003	0.0121		153.6160	153.6160	2.5700e-003		153.6802
Worker	0.1321	0.0646	0.8844	2.4300e-003	0.2555	1.7300e-003	0.2572	0.0678	1.5900e-003	0.0693		241.6154	241.6154	6.3700e-003		241.7746
Total	**0.1502**	**0.6777**	**1.0760**	**3.9000e-003**	**0.2920**	**3.4000e-003**	**0.2954**	**0.0783**	**3.1900e-003**	**0.0814**		**395.2314**	**395.2314**	**8.9400e-003**		**395.4548**

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					
Off-Road	0.3040	2.9352	3.7338	5.5200e-003		0.1618	0.1618		0.1518	0.1518	0.0000	531.0130	531.0130	0.1288		534.2321
Total	**0.3040**	**2.9352**	**3.7338**	**5.5200e-003**		**0.1618**	**0.1618**		**0.1518**	**0.1518**	**0.0000**	**531.0130**	**531.0130**	**0.1288**		**534.2321**

3.8 Landscaping - 2022

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	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
Vendor	0.0181	0.6131	0.1916	1.4700e-003	0.0365	1.6700e-003	0.0382	0.0105	1.6000e-003	0.0121		153.6160	153.6160	2.5700e-003		153.6802
Worker	0.1321	0.0646	0.8844	2.4300e-003	0.2555	1.7300e-003	0.2572	0.0678	1.5900e-003	0.0693		241.6154	241.6154	6.3700e-003		241.7746
Total	**0.1502**	**0.6777**	**1.0760**	**3.9000e-003**	**0.2920**	**3.4000e-003**	**0.2954**	**0.0783**	**3.1900e-003**	**0.0814**		**395.2314**	**395.2314**	**8.9400e-003**		**395.4548**

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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	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
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	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
City Park	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342
Other Asphalt Surfaces	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342
Parking Lot	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342

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					
City Park	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
Other Asphalt Surfaces	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
Parking Lot	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**

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					
City Park	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
Other Asphalt Surfaces	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
Parking Lot	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	0.0977	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
Unmitigated	0.0977	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003

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	0.0974					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
Total	**0.0977**	**2.0000e-005**	**2.6600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7100e-003**	**5.7100e-003**	**1.0000e-005**		**6.0900e-003**

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	0.0974					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
Total	**0.0977**	**2.0000e-005**	**2.6600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7100e-003**	**5.7100e-003**	**1.0000e-005**		**6.0900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

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

GDR-02 Greenwood Park

El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.00	Acre	5.54	261,360.00	0
Parking Lot	7.75	1000sqft	0.18	7,750.00	0
Other Asphalt Surfaces	12.35	1000sqft	0.28	12,350.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

GDR-02 Greenwood Park - El Dorado-Mountain County County, Winter

Project Characteristics - This model is for construction emissions only.

Land Use - Buildings are exsiting, only renovation is required.

Construction Phase - Estimated schedule per landscape architect.

Off-road Equipment - Equipment adusted for extended schedule.

Off-road Equipment - Equipment adjusted for extended schedule.

Off-road Equipment - Equipment/hours adjusted for extenede schedule.

Off-road Equipment - Equipment adjusted for paved area.

Off-road Equipment - Building renovation only, grid power to be used.

Off-road Equipment -

Off-road Equipment - Equipment for park landscape/hardscape installation.

Grading - 1,600 CY soil/vegetation and 60 CY of asphalt removed during site prep.
80 CY soil import during grading.

Demolition - One 2,300 SF building to be demolished.

Trips and VMT - A crew of 10 and 3 vendor deliveries per day assumed for buiding renovation and landscaping.

Architectural Coating - Low VOC (50 g/L or less) interior/exterior paint per architect.

Vehicle Trips - Contruction emissions only this model.

Consumer Products - Contruction emissions only this model.

Area Coating - Contruction emissions only this model.

Landscape Equipment - Contruction emissions only this model.

Energy Use - Contruction emissions only this model.

Water And Wastewater - Contruction emissions only this model.

Solid Waste - Contruction emissions only this model.

Construction Off-road Equipment Mitigation - Dust Mitigation per EDCAQMD Rule 223-1.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	ReapplicationRatePercent	10	0

tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	230.00	262.00
tblConstructionPhase	PhaseEndDate	7/10/2023	11/26/2021
tblConstructionPhase	PhaseEndDate	6/27/2022	11/19/2021
tblConstructionPhase	PhaseEndDate	6/28/2021	7/30/2021
tblConstructionPhase	PhaseEndDate	8/9/2021	9/30/2021
tblConstructionPhase	PhaseEndDate	6/12/2023	10/30/2021
tblConstructionPhase	PhaseEndDate	7/12/2021	6/30/2021
tblConstructionPhase	PhaseEndDate	5/15/2023	12/1/2022
tblConstructionPhase	PhaseStartDate	6/13/2023	11/20/2021
tblConstructionPhase	PhaseStartDate	8/10/2021	11/1/2021
tblConstructionPhase	PhaseStartDate	7/13/2021	8/1/2021
tblConstructionPhase	PhaseStartDate	5/16/2023	10/1/2021
tblConstructionPhase	PhaseStartDate	6/29/2021	6/1/2021
tblConstructionPhase	PhaseStartDate	6/28/2022	12/1/2021
tblEnergyUse	LightingElect	0.35	0.00
tblGrading	AcresOfGrading	11.00	22.00
tblGrading	MaterialExported	0.00	80.00
tblGrading	MaterialExported	0.00	1,660.00
tblLandUse	LotAcreage	6.00	5.54
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

tblSolidWaste	SolidWasteGenerationRate	0.52	0.00
tblTripsAndVMT	VendorTripNumber	46.00	6.00
tblTripsAndVMT	VendorTripNumber	46.00	6.00
tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblTripsAndVMT	WorkerTripNumber	8.00	18.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblTripsAndVMT	WorkerTripNumber	118.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblTripsAndVMT	WorkerTripNumber	118.00	20.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblWater	OutdoorWaterUseRate	7,148,888.10	0.00

2.0 Emissions Summary

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					
2021	6.5308	34.1453	21.8675	0.0462	6.6740	1.5810	8.2550	3.4772	1.4688	4.9460	0.0000	4,537.1801	4,537.1801	0.9466	0.0000	4,560.8449
2022	0.4650	3.6386	4.7403	9.1500e-003	0.2920	0.1653	0.4572	0.0783	0.1550	0.2333	0.0000	899.8320	899.8320	0.1373	0.0000	903.2651
Maximum	**6.5308**	**34.1453**	**21.8675**	**0.0462**	**6.6740**	**1.5810**	**8.2550**	**3.4772**	**1.4688**	**4.9460**	**0.0000**	**4,537.1801**	**4,537.1801**	**0.9466**	**0.0000**	**4,560.8449**

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					
2021	6.5308	34.1453	21.8675	0.0462	3.3270	1.5810	4.9080	1.6513	1.4688	3.1201	0.0000	4,537.1801	4,537.1801	0.9466	0.0000	4,560.8449
2022	0.4650	3.6386	4.7403	9.1500e-003	0.2920	0.1653	0.4572	0.0783	0.1550	0.2333	0.0000	899.8320	899.8320	0.1373	0.0000	903.2651
Maximum	**6.5308**	**34.1453**	**21.8675**	**0.0462**	**3.3270**	**1.5810**	**4.9080**	**1.6513**	**1.4688**	**3.1201**	**0.0000**	**4,537.1801**	**4,537.1801**	**0.9466**	**0.0000**	**4,560.8449**

	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**	**48.05**	**0.00**	**38.42**	**51.36**	**0.00**	**35.25**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.0977	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
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
Total	**0.0977**	**2.0000e-005**	**2.6600e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**5.7100e-003**	**5.7100e-003**	**1.0000e-005**	**0.0000**	**6.0900e-003**

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	0.0977	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
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
Total	**0.0977**	**2.0000e-005**	**2.6600e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**5.7100e-003**	**5.7100e-003**	**1.0000e-005**	**0.0000**	**6.0900e-003**

	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	Demolition	Demolition	6/1/2021	7/30/2021	5	44	
2	Site Preparation	Site Preparation	6/1/2021	6/30/2021	5	22	
3	Grading	Grading	8/1/2021	9/30/2021	5	44	
4	Paving	Paving	10/1/2021	10/30/2021	5	21	
5	Building Renovation	Building Construction	11/1/2021	11/19/2021	5	15	
6	Architectural Coating	Architectural Coating	11/20/2021	11/26/2021	5	5	
7	Landscaping	Building Construction	12/1/2021	12/1/2022	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 0.46

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,400; Non-Residential Outdoor: 1,800; Striped Parking Area: 1,206 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	4.00	158	0.38
Building Renovation	Cranes	0	7.00	231	0.29
Building Renovation	Forklifts	1	4.00	89	0.20
Building Renovation	Generator Sets	0	2.00	84	0.74
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	4.00	247	0.40
Building Renovation	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Grading	Graders	1	4.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Building Renovation	Welders	0	8.00	46	0.45
Landscaping	Cranes	0	7.00	231	0.29
Landscaping	Forklifts	1	4.00	89	0.20
Landscaping	Generator Sets	1	2.00	84	0.74
Landscaping	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Landscaping	Welders	0	8.00	46	0.45

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
Demolition	3	15.00	0.00	10.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	18.00	0.00	208.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	15.00	0.00	8.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Renovation	2	20.00	6.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	4	20.00	6.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					0.0523	0.0000	0.0523	7.9100e-003	0.0000	7.9100e-003			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591		1,920.2088	1,920.2088	0.4638		1,931.8031
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.0523**	**0.8100**	**0.8623**	**7.9100e-003**	**0.7591**	**0.7670**		**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8031**

3.2 Demolition - 2021

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	1.9100e-003	0.0722	0.0212	1.8000e-004	3.9200e-003	2.8000e-004	4.2000e-003	1.0700e-003	2.7000e-004	1.3400e-003		19.1203	19.1203	2.3000e-004		19.1262
Vendor	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
Worker	0.1124	0.0664	0.6471	1.7000e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		169.6795	169.6795	4.8200e-003		169.8001
Total	**0.1143**	**0.1386**	**0.6682**	**1.8800e-003**	**0.1955**	**1.6200e-003**	**0.1971**	**0.0519**	**1.5100e-003**	**0.0534**		**188.7997**	**188.7997**	**5.0500e-003**		**188.9262**

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					0.0235	0.0000	0.0235	3.5600e-003	0.0000	3.5600e-003			0.0000			0.0000
Off-Road	1.6604	16.1626	10.9836	0.0200		0.8100	0.8100		0.7591	0.7591	0.0000	1,920.2088	1,920.2088	0.4638		1,931.8030
Total	**1.6604**	**16.1626**	**10.9836**	**0.0200**	**0.0235**	**0.8100**	**0.8335**	**3.5600e-003**	**0.7591**	**0.7626**	**0.0000**	**1,920.2088**	**1,920.2088**	**0.4638**		**1,931.8030**

3.2 Demolition - 2021

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	1.9100e-003	0.0722	0.0212	1.8000e-004	3.9200e-003	2.8000e-004	4.2000e-003	1.0700e-003	2.7000e-004	1.3400e-003		19.1203	19.1203	2.3000e-004		19.1262
Vendor	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
Worker	0.1124	0.0664	0.6471	1.7000e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		169.6795	169.6795	4.8200e-003		169.8001
Total	**0.1143**	**0.1386**	**0.6682**	**1.8800e-003**	**0.1955**	**1.6200e-003**	**0.1971**	**0.0519**	**1.5100e-003**	**0.0534**		**188.7997**	**188.7997**	**5.0500e-003**		**188.9262**

3.3 Site Preparation - 2021

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					6.0332	0.0000	6.0332	3.3119	0.0000	3.3119			0.0000			0.0000
Off-Road	1.4209	14.7629	8.5583	0.0147		0.7560	0.7560		0.6955	0.6955		1,429.1523	1,429.1523	0.4622		1,440.7078
Total	**1.4209**	**14.7629**	**8.5583**	**0.0147**	**6.0332**	**0.7560**	**6.7892**	**3.3119**	**0.6955**	**4.0074**		**1,429.1523**	**1,429.1523**	**0.4622**		**1,440.7078**

3.3 Site Preparation - 2021

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	0.0794	3.0016	0.8809	7.6100e-003	0.1631	0.0117	0.1748	0.0445	0.0112	0.0557		795.4039	795.4039	9.7500e-003		795.6478
Vendor	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
Worker	0.1349	0.0797	0.7765	2.0400e-003	0.2299	1.6100e-003	0.2315	0.0610	1.4800e-003	0.0625		203.6153	203.6153	5.7900e-003		203.7601
Total	**0.2143**	**3.0812**	**1.6574**	**9.6500e-003**	**0.3930**	**0.0134**	**0.4063**	**0.1055**	**0.0127**	**0.1182**		**999.0192**	**999.0192**	**0.0155**		**999.4078**

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					2.7150	0.0000	2.7150	1.4904	0.0000	1.4904			0.0000			0.0000
Off-Road	1.4209	14.7629	8.5583	0.0147		0.7560	0.7560		0.6955	0.6955	0.0000	1,429.1523	1,429.1523	0.4622		1,440.7078
Total	**1.4209**	**14.7629**	**8.5583**	**0.0147**	**2.7150**	**0.7560**	**3.4710**	**1.4904**	**0.6955**	**2.1859**	**0.0000**	**1,429.1523**	**1,429.1523**	**0.4622**		**1,440.7078**

3.3 Site Preparation - 2021

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	0.0794	3.0016	0.8809	7.6100e-003	0.1631	0.0117	0.1748	0.0445	0.0112	0.0557		795.4039	795.4039	9.7500e-003		795.6478
Vendor	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
Worker	0.1349	0.0797	0.7765	2.0400e-003	0.2299	1.6100e-003	0.2315	0.0610	1.4800e-003	0.0625		203.6153	203.6153	5.7900e-003		203.7601
Total	**0.2143**	**3.0812**	**1.6574**	**9.6500e-003**	**0.3930**	**0.0134**	**0.4063**	**0.1055**	**0.0127**	**0.1182**		**999.0192**	**999.0192**	**0.0155**		**999.4078**

3.4 Grading - 2021

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					3.5413	0.0000	3.5413	1.7124	0.0000	1.7124			0.0000			0.0000
Off-Road	1.1452	12.3683	7.9287	0.0148		0.5800	0.5800		0.5336	0.5336		1,435.9643	1,435.9643	0.4644		1,447.5748
Total	**1.1452**	**12.3683**	**7.9287**	**0.0148**	**3.5413**	**0.5800**	**4.1213**	**1.7124**	**0.5336**	**2.2459**		**1,435.9643**	**1,435.9643**	**0.4644**		**1,447.5748**

3.4 Grading - 2021

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	1.5300e-003	0.0577	0.0169	1.5000e-004	3.1400e-003	2.3000e-004	3.3600e-003	8.6000e-004	2.2000e-004	1.0700e-003		15.2962	15.2962	1.9000e-004		15.3009
Vendor	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
Worker	0.1124	0.0664	0.6471	1.7000e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		169.6795	169.6795	4.8200e-003		169.8001
Total	**0.1139**	**0.1241**	**0.6640**	**1.8500e-003**	**0.1947**	**1.5700e-003**	**0.1963**	**0.0517**	**1.4600e-003**	**0.0531**		**184.9757**	**184.9757**	**5.0100e-003**		**185.1010**

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					1.5936	0.0000	1.5936	0.7706	0.0000	0.7706			0.0000			0.0000
Off-Road	1.1452	12.3683	7.9287	0.0148		0.5800	0.5800		0.5336	0.5336	0.0000	1,435.9643	1,435.9643	0.4644		1,447.5748
Total	**1.1452**	**12.3683**	**7.9287**	**0.0148**	**1.5936**	**0.5800**	**2.1735**	**0.7706**	**0.5336**	**1.3041**	**0.0000**	**1,435.9643**	**1,435.9643**	**0.4644**		**1,447.5748**

3.4 Grading - 2021

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	1.5300e-003	0.0577	0.0169	1.5000e-004	3.1400e-003	2.3000e-004	3.3600e-003	8.6000e-004	2.2000e-004	1.0700e-003		15.2962	15.2962	1.9000e-004		15.3009
Vendor	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
Worker	0.1124	0.0664	0.6471	1.7000e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		169.6795	169.6795	4.8200e-003		169.8001
Total	**0.1139**	**0.1241**	**0.6640**	**1.8500e-003**	**0.1947**	**1.5700e-003**	**0.1963**	**0.0517**	**1.4600e-003**	**0.0531**		**184.9757**	**184.9757**	**5.0100e-003**		**185.1010**

3.5 Paving - 2021

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					
Off-Road	0.6278	6.4596	7.3266	0.0114		0.3389	0.3389		0.3118	0.3118		1,103.6054	1,103.6054	0.3569		1,112.5286
Paving	0.0574					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6852**	**6.4596**	**7.3266**	**0.0114**		**0.3389**	**0.3389**		**0.3118**	**0.3118**		**1,103.6054**	**1,103.6054**	**0.3569**		**1,112.5286**

3.5 Paving - 2021

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	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
Vendor	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
Worker	0.1124	0.0664	0.6471	1.7000e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		169.6795	169.6795	4.8200e-003		169.8001
Total	**0.1124**	**0.0664**	**0.6471**	**1.7000e-003**	**0.1916**	**1.3400e-003**	**0.1929**	**0.0508**	**1.2400e-003**	**0.0521**		**169.6795**	**169.6795**	**4.8200e-003**		**169.8001**

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					
Off-Road	0.6278	6.4596	7.3266	0.0114		0.3389	0.3389		0.3118	0.3118	0.0000	1,103.6054	1,103.6054	0.3569		1,112.5286
Paving	0.0574					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6852**	**6.4596**	**7.3266**	**0.0114**		**0.3389**	**0.3389**		**0.3118**	**0.3118**	**0.0000**	**1,103.6054**	**1,103.6054**	**0.3569**		**1,112.5286**

3.5 Paving - 2021

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	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
Vendor	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
Worker	0.1124	0.0664	0.6471	1.7000e-003	0.1916	1.3400e-003	0.1929	0.0508	1.2400e-003	0.0521		169.6795	169.6795	4.8200e-003		169.8001
Total	**0.1124**	**0.0664**	**0.6471**	**1.7000e-003**	**0.1916**	**1.3400e-003**	**0.1929**	**0.0508**	**1.2400e-003**	**0.0521**		**169.6795**	**169.6795**	**4.8200e-003**		**169.8001**

3.6 Building Renovation - 2021

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					
Off-Road	0.1583	1.5375	1.7140	2.3200e-003		0.0977	0.0977		0.0899	0.0899		224.4655	224.4655	0.0726		226.2804
Total	**0.1583**	**1.5375**	**1.7140**	**2.3200e-003**		**0.0977**	**0.0977**		**0.0899**	**0.0899**		**224.4655**	**224.4655**	**0.0726**		**226.2804**

3.6 Building Renovation - 2021

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	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
Vendor	0.0205	0.6573	0.2321	1.4500e-003	0.0365	1.9500e-003	0.0385	0.0105	1.8700e-003	0.0124		151.7272	151.7272	3.0500e-003		151.8034
Worker	0.1499	0.0885	0.8627	2.2700e-003	0.2555	1.7900e-003	0.2573	0.0678	1.6500e-003	0.0694		226.2393	226.2393	6.4300e-003		226.4001
Total	**0.1703**	**0.7458**	**1.0949**	**3.7200e-003**	**0.2920**	**3.7400e-003**	**0.2957**	**0.0783**	**3.5200e-003**	**0.0818**		**377.9665**	**377.9665**	**9.4800e-003**		**378.2035**

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					
Off-Road	0.1583	1.5375	1.7140	2.3200e-003		0.0977	0.0977		0.0899	0.0899	0.0000	224.4655	224.4655	0.0726		226.2804
Total	**0.1583**	**1.5375**	**1.7140**	**2.3200e-003**		**0.0977**	**0.0977**		**0.0899**	**0.0899**	**0.0000**	**224.4655**	**224.4655**	**0.0726**		**226.2804**

3.6 Building Renovation - 2021

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	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
Vendor	0.0205	0.6573	0.2321	1.4500e-003	0.0365	1.9500e-003	0.0385	0.0105	1.8700e-003	0.0124		151.7272	151.7272	3.0500e-003		151.8034
Worker	0.1499	0.0885	0.8627	2.2700e-003	0.2555	1.7900e-003	0.2573	0.0678	1.6500e-003	0.0694		226.2393	226.2393	6.4300e-003		226.4001
Total	**0.1703**	**0.7458**	**1.0949**	**3.7200e-003**	**0.2920**	**3.7400e-003**	**0.2957**	**0.0783**	**3.5200e-003**	**0.0818**		**377.9665**	**377.9665**	**9.4800e-003**		**378.2035**

3.7 Architectural Coating - 2021

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					
Archit. Coating	6.1321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**6.3510**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	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
Vendor	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
Worker	0.1798	0.1062	1.0353	2.7300e-003	0.3066	2.1500e-003	0.3087	0.0813	1.9800e-003	0.0833		271.4871	271.4871	7.7200e-003		271.6801
Total	**0.1798**	**0.1062**	**1.0353**	**2.7300e-003**	**0.3066**	**2.1500e-003**	**0.3087**	**0.0813**	**1.9800e-003**	**0.0833**		**271.4871**	**271.4871**	**7.7200e-003**		**271.6801**

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					
Archit. Coating	6.1321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**6.3510**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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	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
Vendor	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
Worker	0.1798	0.1062	1.0353	2.7300e-003	0.3066	2.1500e-003	0.3087	0.0813	1.9800e-003	0.0833		271.4871	271.4871	7.7200e-003		271.6801
Total	**0.1798**	**0.1062**	**1.0353**	**2.7300e-003**	**0.3066**	**2.1500e-003**	**0.3087**	**0.0813**	**1.9800e-003**	**0.0833**		**271.4871**	**271.4871**	**7.7200e-003**		**271.6801**

3.8 Landscaping - 2021

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					
Off-Road	0.3413	3.2769	3.7653	5.5200e-003		0.1956	0.1956		0.1833	0.1833		530.6741	530.6741	0.1292		533.9042
Total	**0.3413**	**3.2769**	**3.7653**	**5.5200e-003**		**0.1956**	**0.1956**		**0.1833**	**0.1833**		**530.6741**	**530.6741**	**0.1292**		**533.9042**

3.8 Landscaping - 2021

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	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
Vendor	0.0205	0.6573	0.2321	1.4500e-003	0.0365	1.9500e-003	0.0385	0.0105	1.8700e-003	0.0124		151.7272	151.7272	3.0500e-003		151.8034
Worker	0.1499	0.0885	0.8627	2.2700e-003	0.2555	1.7900e-003	0.2573	0.0678	1.6500e-003	0.0694		226.2393	226.2393	6.4300e-003		226.4001
Total	**0.1703**	**0.7458**	**1.0949**	**3.7200e-003**	**0.2920**	**3.7400e-003**	**0.2957**	**0.0783**	**3.5200e-003**	**0.0818**		**377.9665**	**377.9665**	**9.4800e-003**		**378.2035**

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					
Off-Road	0.3413	3.2769	3.7653	5.5200e-003		0.1956	0.1956		0.1833	0.1833	0.0000	530.6741	530.6741	0.1292		533.9042
Total	**0.3413**	**3.2769**	**3.7653**	**5.5200e-003**		**0.1956**	**0.1956**		**0.1833**	**0.1833**	**0.0000**	**530.6741**	**530.6741**	**0.1292**		**533.9042**

3.8 Landscaping - 2021

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	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
Vendor	0.0205	0.6573	0.2321	1.4500e-003	0.0365	1.9500e-003	0.0385	0.0105	1.8700e-003	0.0124		151.7272	151.7272	3.0500e-003		151.8034
Worker	0.1499	0.0885	0.8627	2.2700e-003	0.2555	1.7900e-003	0.2573	0.0678	1.6500e-003	0.0694		226.2393	226.2393	6.4300e-003		226.4001
Total	**0.1703**	**0.7458**	**1.0949**	**3.7200e-003**	**0.2920**	**3.7400e-003**	**0.2957**	**0.0783**	**3.5200e-003**	**0.0818**		**377.9665**	**377.9665**	**9.4800e-003**		**378.2035**

3.8 Landscaping - 2022

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					
Off-Road	0.3040	2.9352	3.7338	5.5200e-003		0.1618	0.1618		0.1518	0.1518		531.0130	531.0130	0.1288		534.2321
Total	**0.3040**	**2.9352**	**3.7338**	**5.5200e-003**		**0.1618**	**0.1618**		**0.1518**	**0.1518**		**531.0130**	**531.0130**	**0.1288**		**534.2321**

3.8 Landscaping - 2022

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	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
Vendor	0.0191	0.6236	0.2180	1.4400e-003	0.0365	1.7300e-003	0.0383	0.0105	1.6600e-003	0.0122		150.6186	150.6186	2.8000e-003		150.6887
Worker	0.1419	0.0798	0.7885	2.1900e-003	0.2555	1.7300e-003	0.2572	0.0678	1.5900e-003	0.0693		218.2005	218.2005	5.7500e-003		218.3443
Total	**0.1610**	**0.7034**	**1.0065**	**3.6300e-003**	**0.2920**	**3.4600e-003**	**0.2954**	**0.0783**	**3.2500e-003**	**0.0815**		**368.8190**	**368.8190**	**8.5500e-003**		**369.0330**

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					
Off-Road	0.3040	2.9352	3.7338	5.5200e-003		0.1618	0.1618		0.1518	0.1518	0.0000	531.0130	531.0130	0.1288		534.2321
Total	**0.3040**	**2.9352**	**3.7338**	**5.5200e-003**		**0.1618**	**0.1618**		**0.1518**	**0.1518**	**0.0000**	**531.0130**	**531.0130**	**0.1288**		**534.2321**

3.8 Landscaping - 2022

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	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
Vendor	0.0191	0.6236	0.2180	1.4400e-003	0.0365	1.7300e-003	0.0383	0.0105	1.6600e-003	0.0122		150.6186	150.6186	2.8000e-003		150.6887
Worker	0.1419	0.0798	0.7885	2.1900e-003	0.2555	1.7300e-003	0.2572	0.0678	1.5900e-003	0.0693		218.2005	218.2005	5.7500e-003		218.3443
Total	**0.1610**	**0.7034**	**1.0065**	**3.6300e-003**	**0.2920**	**3.4600e-003**	**0.2954**	**0.0783**	**3.2500e-003**	**0.0815**		**368.8190**	**368.8190**	**8.5500e-003**		**369.0330**

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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	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
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	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
City Park	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342
Other Asphalt Surfaces	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342
Parking Lot	0.536606	0.037513	0.225040	0.130667	0.027584	0.005847	0.017105	0.009587	0.001620	0.001093	0.005204	0.000792	0.001342

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					
City Park	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
Other Asphalt Surfaces	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
Parking Lot	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**

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					
City Park	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
Other Asphalt Surfaces	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
Parking Lot	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	0.0977	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
Unmitigated	0.0977	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003

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	0.0974					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
Total	**0.0977**	**2.0000e-005**	**2.6600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7100e-003**	**5.7100e-003**	**1.0000e-005**		**6.0900e-003**

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	0.0974					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.6600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	1.0000e-005		6.0900e-003
Total	**0.0977**	**2.0000e-005**	**2.6600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7100e-003**	**5.7100e-003**	**1.0000e-005**		**6.0900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

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

IS/MND Appendix B

Greenwood Park Biological Resources Assessment

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HELIX
Environmental Planning

Greenwood Park

Biological Resources Assessment

June 2019 | GDR-02

Prepared for:

Georgetown Divide Recreation District
Carl Clark
4401 State Highway 193
Greenwood, CA 95635

Prepared by:

HELIX Environmental Planning, Inc.
590 Menlo Drive, Suite 5
Rocklin, CA 95765

Greenwood Park

Biological Resources Assessment

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June 2019 | GDR-02

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ACRONYMS AND ABBREVIATIONS

BBQ	Barbecue
BRA	Biological Resources Assessment
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CSA	California Special Animals
CWA	Clean Water Act
DBH	diameter at breast height
FESA	Federal Endangered Species Act
HCP	Habitat Conservation Plan
HELIX	Helix Environmental Planning, Inc.
MBTA	Migratory Bird Treaty Act
MSL	mean sea level
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
OHWM	ordinary high-water mark
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SSC	Species of Special Concern
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) biologist Christine Heckler conducted a Biological Resources Assessment (BRA) on June 18, 2019 for the Greenwood Park project (Project) located within the unincorporated community of Greenwood, in El Dorado County, California. The site is located within Township 12N, Range 10E, Sections 7 and 18 of the USGS 7.5-minute series *Greenwood* quadrangle. The approximate location of the Study Area is 38° 53' 52.585" North, 120° 54' 44.257" West (Figure 1).

The purpose of this BRA is to summarize the general biological resources on the site, to assess the suitability of the site to support special-status species and sensitive vegetation communities or habitats, and to provide recommendations for any regulatory permitting or further analysis that may be required prior to development activities occurring on the site.

The ±6.30-acre Study Area is largely developed or previously disturbed. The Study Area contains riparian wetland habitat (approximately 0.10 acre), ruderal habitat (approximately 2.60 acres), and disturbed/developed areas (approximately 3.52 acres). Additional aquatic resources within the Study Area include a perennial drainage (approximately 0.09 acre). Developed portions of the Study Area include a County maintenance yard and two associated buildings, residential housing, and a small playground. Surrounding land uses include rural residential housing, State Route 193 and undeveloped mixed forest habitat.

Known or potential biological constraints in the Study Area include:

- Potential habitat for California red-legged frog;
- Potential habitat for foothill yellow-legged frog;
- Potential habitat for western pond turtle;
- Potential habitat for special-status bats;
- Potential habitat for nesting migratory birds; and
- Riparian wetland habitat and perennial drainage.

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1.0 INTRODUCTION

This report summarizes the findings of a Biological Resources Assessment (BRA) completed by HELIX Environmental Planning, Inc. (HELIX) for the ±6.30-acre Greenwood Park project (Project) located within the unincorporated community of Greenwood, El Dorado County, California. This document addresses the onsite physical features, plant communities present, and the common plant and wildlife species occurring or potentially occurring in the Study Area. Furthermore, the suitability of habitats to support special-status species and sensitive habitats are analyzed, and recommendations are provided for any regulatory permitting or further analysis required prior to development activities occurring on the site.

1.1 PROJECT DESCRIPTION

The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite so that they can be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design.

2.0 REGULATORY FRAMEWORK

Federal, State, and local environmental laws, regulations, and policies relevant to the California Environmental Quality Act (CEQA) review process are summarized below. Applicable CEQA significance criteria are also addressed in this section.

2.1 FEDERAL REGULATIONS

2.1.1 Federal Endangered Species Act

The U.S. Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3) (19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

In the context of the proposed project, FESA consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) would be initiated if development resulted in the potential for take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

2.1.2 Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of State and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior.

2.1.3 The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to "*take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof.*" Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as "*to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.*"

2.2 STATE JURISDICTION

2.2.1 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW), when preparing CEQA documents. The purpose is to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFW on projects or actions that could affect listed species. It also directs CDFW to determine whether jeopardy would occur and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code § 2081).

2.2.2 California Department of Fish and Game Codes

A number of species have been designated "fully protected" species under Sections 5515, 5050, 3511, and 4700 of the Fish and Game Code, but are not listed as endangered (Section 2062) or threatened (Section 2067) species under CESA. Except for take related to scientific research, all take of fully protected species is prohibited. The California Fish and Game Code defines take as "*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.*" Additionally, Section 3503 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants protected under the NPPA. The NPPA prohibits take of endangered or rare native plants, with some exceptions for agricultural and nursery operations and emergencies. Vegetation removal from canals, roads, and other sites, changes in land use, and certain other situations require proper advance notification to CDFW.

2.3 JURISDICTIONAL WATERS

2.3.1 Federal Jurisdiction

The U.S. Army Corps of Engineers (USACE) regulates discharge of dredge or fill material into waters of the U.S. under Section 404 of the Clean Water Act (CWA). "Discharges of fill material" is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)].

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.

- The lateral extent of non-tidal waters is determined by delineating the ordinary high-water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

An aquatic feature is determined to be a water of the U.S. based on nexus with a traditionally navigable water pursuant to the Supreme Court's decision in the consolidated cases Rapanos v. United States and Carabell v. United States (126 S. Ct. 2208) and agency guidance subsequent to this decision. Under these rules, the Corps asserts jurisdiction over wetlands adjacent to traditional navigable waters, relatively permanent non-navigable tributaries (i.e., waters that have a continuous flow at least three months out of the year), and wetlands that abut relatively permanent tributaries. The Corps determines jurisdiction over waters that are non-navigable tributaries that are not relatively permanent, and wetlands adjacent to these tributaries, by making a determination whether such waters "significantly affect the chemical, physical, and biological integrity of other jurisdictional waters more readily understood as "navigable."

Finally, the Corps generally does not consider the following to be "waters of the United States": swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow) and ditches "wholly in and draining only uplands…which do not carry a relatively permanent flow of water." Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation.

2.3.2 State Jurisdiction

Regional Water Quality Control Board

Discharges of fill or waste material to waters of the State are regulated by the State Water Resources Control Board (SWRCB) through its Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (contained in the California Water Code). All waters of the U.S. are also considered waters of the State. In addition, other aquatic features that are not subject to Corps' jurisdiction, such as roadside ditches or isolated wetlands, may be considered waters of the State. This determination will be made by RWQCB staff on a case-by-case basis.

Section 401 of the CWA requires an applicant to obtain "water quality certification" to ensure compliance with State water quality standards before certain federal licenses or permits may be issued. Section 13260(a) of the Porter-Cologne Water Quality Control Act requires any person discharging waste, including dredged or fill material, or proposing to discharge waste, other than to a community sewer system, within any region that could affect the quality of the waters of the State (all surface and subsurface waters) to file a report of waste discharge. The permits subject to Section 401 include CWA Section 404 permits issued by the Corps. Waste discharge requirements under the Porter-Cologne Water Quality Control Act were typically waived for projects that required certification. Discharges to waters of the State that are not subject to a CWA Section 404 permit rely on the report of waste discharge process.

California Department of Fish and Wildlife

The CDFW is a trustee agency that has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "*substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds…except when the department has been notified pursuant to Section 1601.*" Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over 4-inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

2.4 CEQA SIGNIFICANCE

Section 15064.7 of the State CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded

Initial Study Checklist contained in Appendix G of the State CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- 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 CDFW or USFWS;

- 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 CDFW or USFWS;

- 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;

- 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;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and

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

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, State, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

2.4.1 California Native Plant Society

The California Native Plant Society (CNPS) maintains a rank of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California*. Potential impacts to populations of CNPS-ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS ranks:

Rank 1A: Plants presumed Extinct in California
Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
Rank 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
Rank 3: Plants about which we need more information – A Review List
Rank 4: Plants of limited distribution – A Watch List

All plants appearing on CNPS Rank 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA.

2.4.2 California Department of Fish and Wildlife Species of Concern

Some additional fish, amphibian, reptile, bird, and mammal species may receive consideration by CDFW and lead agencies during the CEQA process, in addition to species that are formally listed under FESA and CESA or are fully protected. These species are included on the *Special Animals List*, which is maintained by CDFW. This list tracks species in California whose numbers, reproductive success, or habitat may be in decline. In addition to "Species of Special Concern" (SSC), the *Special Animals List* includes species that are tracked in the California Natural Diversity Database (CNDDB) but warrant no legal protection. These species are identified as "California Special Animals" (CSA).

2.5 EL DORADO COUNTY ADOPTED GENERAL PLAN

In addition to federal and State regulations described above, the *El Dorado County Adopted General Plan* (General Plan) includes goals, objectives, and policies regarding biological resources within the County limits (El Dorado County 2018). Applicable sections of the General Plan are included in Appendix A.

3.0 METHODS

Available information pertaining to the natural resources of the region was reviewed and all references reviewed for this assessment are listed in the Error! Reference source not found. section. The following site-specific published information was reviewed for this BRA:

- California Department of Fish and Wildlife (CDFW). 2019. *California Natural Diversity Data Base* (CNDDB); For: *Greenwood*, *Auburn, Lake Combie, Colfax, Foresthill, Georgetown, Garden Valley, Coloma,* and *Pilot Hill* U.S. Geological Survey (USGS) 7.5-minute series quadrangles, Sacramento, CA. Accessed [June 17, 2019];

- California Native Plant Society (CNPS). 2019. *Inventory of Rare and Endangered Plants* (online edition, v8-03 0.45) For: *Greenwood*, *Auburn, Lake Combie, Colfax, Foresthill, Georgetown, Garden Valley, Coloma,* and *Pilot Hill,* quadrangles. Accessed [June 17, 2019];

- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 1993. *El Dorado County, California*. USDA, NRCS, in cooperation with the Regents of the University of California (Agricultural Experiment Station);

- USDA, NRCS. 2019. *Web Soil Survey*. Available online at: http://websoilsurvey.sc.egov.usda.gov. Accessed [June 17, 2019];

- U.S. Fish and Wildlife Service (USFWS). 2019. *Information for Planning and Conservation* (IPaC) *Greenwood Park, El Dorado County, California.* Accessed [June 17, 2019]; and

- USGS. 2012. *Greenwood, California*. 7.5-minute series topographic quadrangles. United States Department of Interior.

Prior to conducting the field survey, existing information concerning known habitats and special-status species that may occur in the Study Area was reviewed. The results of the records search and five-mile radius CNDDB query for the Study Area are summarized in Tables 1-3 of Appendix B. The field survey was conducted on June 18, 2019, by HELIX biologist Christine Heckler. The weather during the field survey was warm and clear with an average temperature of 70°F. The Study Area was systematically surveyed on foot to ensure total search coverage, with special attention given to portions of the Study Area with the potential to support special-status species and sensitive habitats. Ms. Heckler used binoculars to further extend site coverage and identify species observed. All plant and animal species observed were recorded (Appendix C), and all biological communities occurring onsite were characterized. Resources of interest were mapped with Global Positioning System (GPS)-capable tablet equipped with GPS receivers running ESRI Collector for ArcGIS version 10.3.2 software.

Following the field survey, the potential for each species identified in the records search to occur within the Study Area was determined based on the site survey, soils, habitats present within the survey area, and species-specific information, as shown in Appendix B.

4.0 RESULTS

4.1 SITE LOCATION AND DESCRIPTION

The ±6.30-acre Study Area is located in the unincorporated community of Greenwood, in El Dorado County, California (Figure 1). The Study Area is bordered by Highway 193 to the north, and Main Street and Ricci Road to the east and west. The Study Area is located within Township 12N, Range 10E, Sections 7 and 18 of the USGS 7.5-minute series *Greenwood* quadrangle. The approximate location of the Project is 38° 53’ 52.585” North, 120° 54’ 44.257” West (Figure 1). The Study Area is comprised of a County maintenance yard, residential houses, a historic schoolhouse, and a small playground. Beyond the current development areas, the Study Area is largely undeveloped (Figure 2).

4.2 PHYSICAL FEATURES

4.2.1 Topography and Drainage

The general topography of the Study Area is fairly level, with elevations that range from approximately 1,627 feet (496 meters) above mean sea level (MSL) at the northern portion, to approximately 1,607 feet (490 meters) above MSL on the southern portion of the Study Area. The overall percent slope within the Study Area is approximately three percent.

The Study Area is located in the Bear Creek watershed, USGS Hydrologic Unit Code HUC12-180201290402, within the lower Sierra Nevada foothills in northwestern El Dorado County, California. A perennial drainage (Greenwood Creek) is located in the eastern portion of the Study Area and flows southwest offsite. Greenwood Creek is visible as a “blue-line” feature on USGS maps and Google Earth and is a tributary to the South Fork of the American River. The South Fork of the American River is a tributary to the American River, which connects to the Sacramento River.

4.2.2 Soils

The Natural Resources Conservation Service has mapped three soil units within the Study Area (Figure 3): Mariposa gravelly silt loam, 3 to 30 percent slopes, Mariposa very rocky silt loam, 3 to 50 percent slopes, and Placer diggings. The general characteristics and properties associated with these soil types are described below (USDA 2019, NRCS 1993 and 2019).

Mariposa gravelly silt loam, 3 to 30 percent slopes: This soil unit is derived from residuum weathered from metamorphic rock, schist, or slate. It is well-drained, has a medium runoff class, and no frequency of flooding or ponding. Common vegetation that occurs on this unit includes mixed coniferous forest-shrub, white fir, ponderosa pine, poison oak, and various grasses and forbs. There is no hydric soil rating for this unit.

Mariposa very rocky silt loam, 3 to 50 percent slopes: This soil unit is derived from residuum weathered from metamorphic rock, schist, or slate. It is well-drained, has a high runoff class, and no frequency of flooding or ponding. Common vegetation that occurs on this unit includes Douglas fir, ponderosa pine, sugar pine, white fir, tanoak, and various grasses and forbs. There is no hydric soil rating for this unit.

Placer Diggings: This soil unit is derived from alluvium from mixed sources. It is moderately drained, has a low runoff class, and occasional flooding and ponding. This soil unit commonly occurs along stream channels and is associated with historic hydraulic mining. Common vegetation that occurs on this unit includes ponderosa pine and various shrubs.

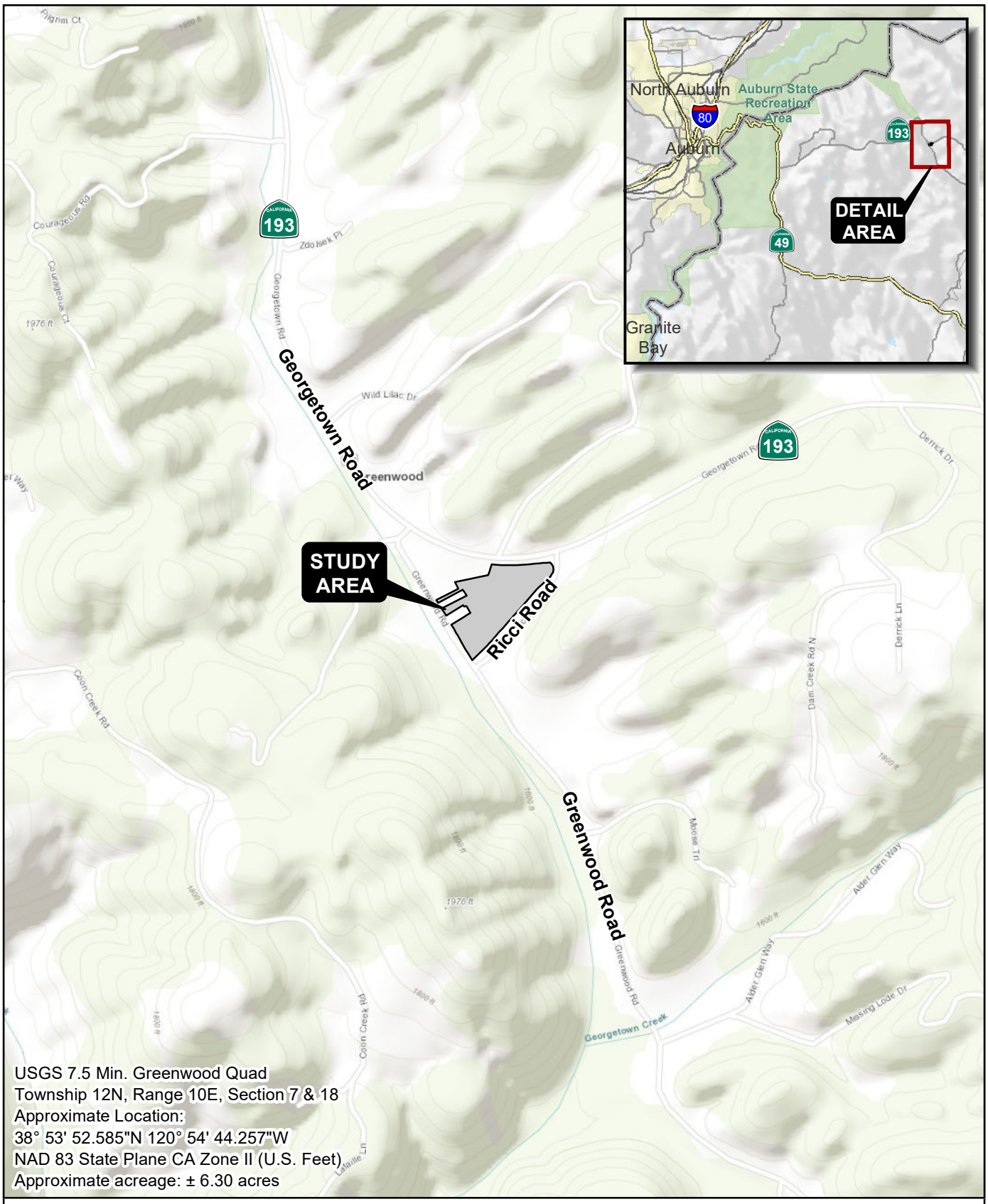
4.3 BIOLOGICAL COMMUNITIES

Three biological communities, riparian wetland, ruderal, and disturbed/developed occur within the Study Area (Figure 4). These communities are described in more detail below. A perennial drainage (Greenwood Creek) also occurs within the Study Area. A comprehensive list of all plant species observed within the Study Area is provided in Appendix C. Representative site photographs are included in Appendix D.

4.3.1 Riparian Wetland

Riparian wetlands are wetlands primarily associated with perennial or intermittent riverine watercourses such as creeks, streams and rivers. Riparian wetlands are distributed throughout California from sea level to the subalpine zone. Vegetation communities occurring in riparian wetlands are composed of predominantly hydrophytic plant species that have adapted to withstand long periods of inundation, saturation and/or substantive seasonal fluctuations in water availability. Approximately 0.10 acre of riparian wetland habitat occurs within the Study Area (Figure 4).

Plant species observed within the riparian wetland habitat in the Study Area include the following: Himalayan blackberry (*Rubus armeniacus*), red willow (*Salix laevigata*), valley oak (*Quercus lobata*), rough cocklebur (*Xanthium strumarium*), common rush (*Juncus patens*), willow dock (*Rumex transitorius*), nutsedge (*Cyperus* cf. *eragrostis*), and yellow monkey flower (*Erythranthe guttata*).



USGS 7.5 Min. Greenwood Quad
Township 12N, Range 10E, Section 7 & 18
Approximate Location:
38° 53' 52.585"N 120° 54' 44.257"W
NAD 83 State Plane CA Zone II (U.S. Feet)
Approximate acreage: ± 6.30 acres

Document Path: O:\N_Cal\G_Projects\GDRD_Greenwood_Access\GIS\GIS_Project_Files\GDRD_Greenwood_SnV_20190611.mxd

SITE AND VICINITY

HELIX Environmental Planning © 2019

N

0 500 1000
Feet
1 in = 1,000 feet

Drawn By: JCD
QA/QC: CTG
Date: 06/11/2019

FIGURE 1

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0 150 Feet

Source: Base Map Layers (ESRI; DigitalGlobe, 2018)

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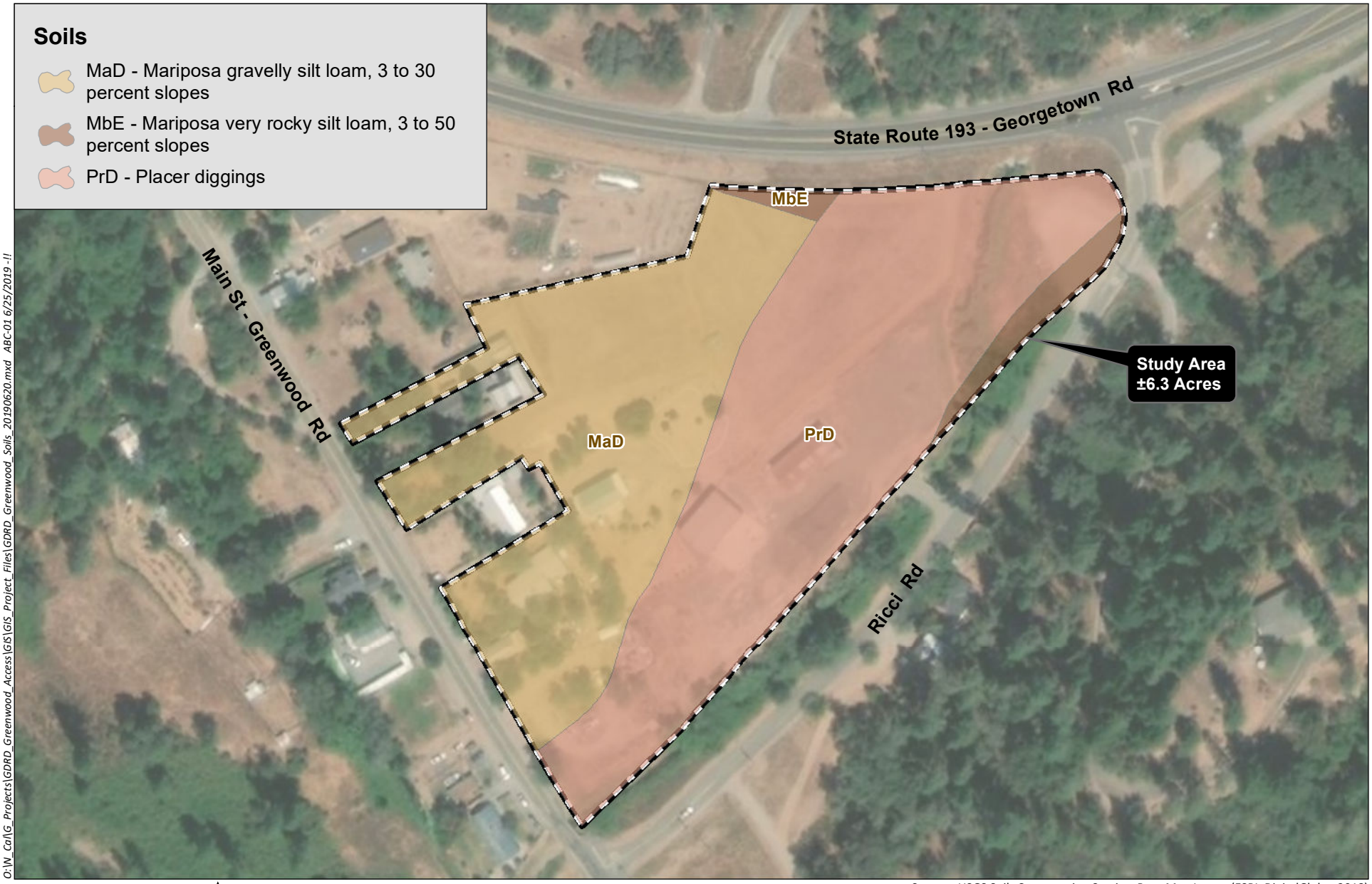
Project Site

Figure 2



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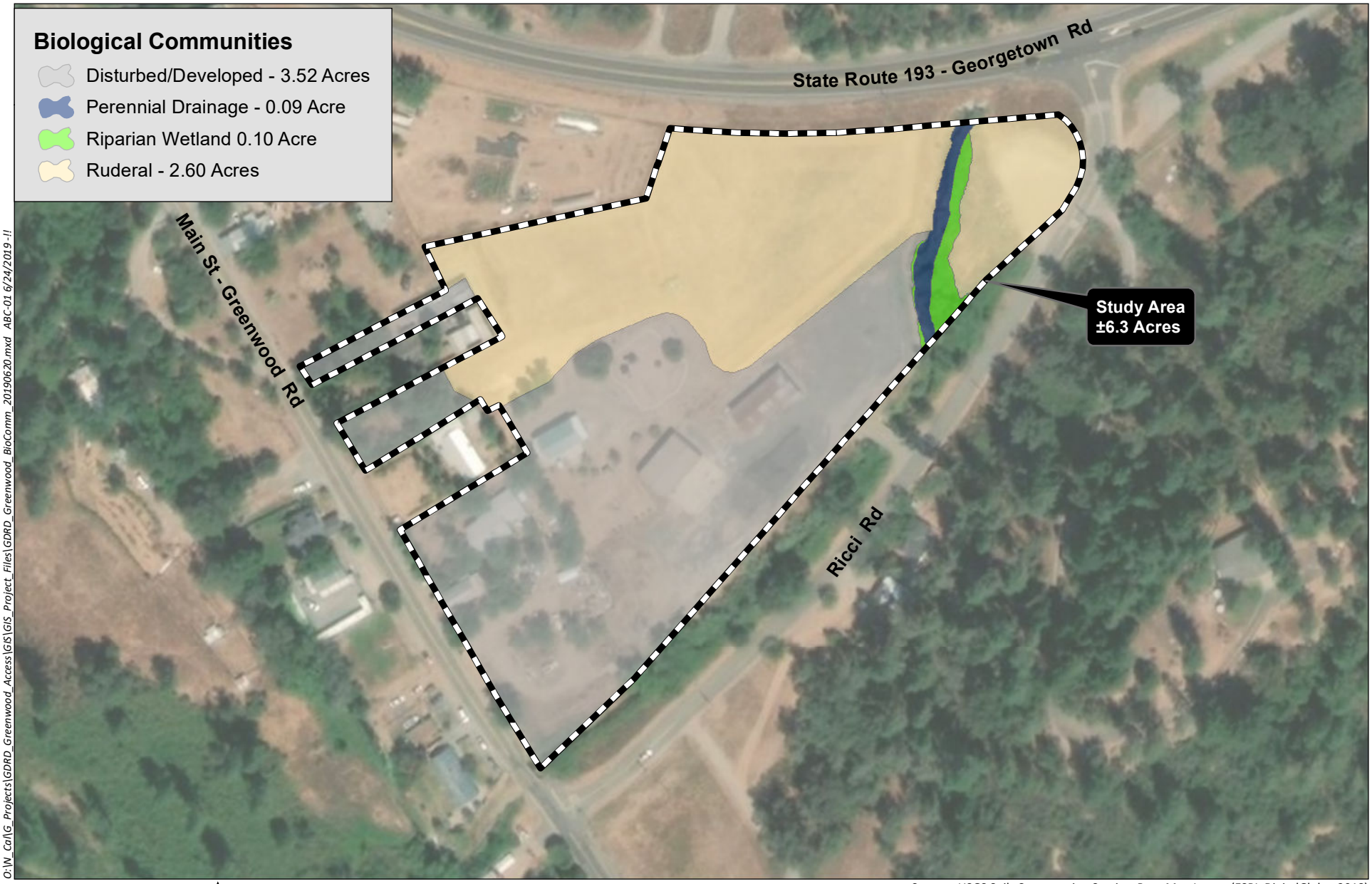
Source: USGS Soils Conservation Service; Base Map Layers (ESRI; DigitalGlobe, 2018)

HELIX Environmental Planning

Soils

Figure 3



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Source: USGS Soils Conservation Service; Base Map Layers (ESRI; DigitalGlobe, 2018)

HELIX Environmental Planning

Biological Communities

Figure 4

4.3.2 Ruderal

Ruderal habitat is characterized by plant species that are among one of the first to colonize disturbed areas (either naturally disturbed as by fire or artificially disturbed as by construction, grading, etc.). Abandoned agricultural fields, construction sites, vacant lots, and road shoulders are just a few of the settings that can create favorable conditions for ruderal plant species. Ruderal habitat is typically associated with invasive and noxious weeds. Approximately 2.60 acres of ruderal habitat occurs within the Study Area (Figure 4).

The dominant plant within the Study Area and within this community type is yellow star thistle (*Centaurea solstitialis*). Other plant species within the ruderal community in the Study Area include medusa head (*Elymus caput-medusae*), Canada horseweed (*Erigeron canadensis*), prickly lettuce (*Lactuca serriola*), black mustard (*Brassica nigra*), red stemmed filaree (*Erodium cicutarium*), and soft brome (*Bromus hordeaceus*).

4.3.3 Disturbed/Developed

Disturbed/developed habitat differs from ruderal habitat by generally have little to no vegetation and containing built structures or maintained surfaces. Vegetation that does occur within this community type is often ornamental, rather than invasive or noxious weeds such as in ruderal habitat. Approximately 3.52 acres of disturbed/developed habitat occurs within the Study Area (Figure 4).

Plant species that do occur in the Study Area within this community type include black locust (*Robinia pseudoacacia*), greater periwinkle (*Vinca major*), and daffodil (*Narcissus pseudonarcissus*).

4.4 AQUATIC RESOURCES

One riparian wetland and one perennial drainage were identified and previously delineated (Foothill Associates 2018) within the Study Area. These features are depicted on Figure 4. The boundaries of the features were additionally confirmed during the field survey on June 18, 2019.

4.4.1 Riparian Wetland

A total of 0.10 acre of riparian wetland was delineated within the Study Area (Figure 4). Riparian wetlands are characterized by relatively dense vegetation cover often comprised of riparian tree shrub and herbaceous species. This wetland type typically occurs adjacent to perennial, flowing features such as creeks and streams, as in the Study Area. The dominant plant species within the riparian wetland in the Study Area are Himalayan blackberry and red willow. Various additional herbaceous plant species also occur within the riparian wetland as discussed in Section 4.3.1.

4.4.2 Perennial Drainage

A total of 0.09 acre of perennial drainage (Greenwood Creek) was delineated within the Study Area (Figure 4). Greenwood Creek enters the Study Area in the northeast portion of the Study Area and flows southward offsite. It is conveyed under Highway 193 via a pair of culverts, both approximately six feet high and ten feet wide. Perennial drainages are features that may not meet the USACE three-parameter criteria for vegetation, hydrology, and soils but do convey water and exhibit an “ordinary high-water mark”. Perennial drainages generally convey unidirectional water flows throughout the entire year and

are often bordered by wetland vegetation communities of various composition and cover depending on flow rates, duration of flows, and soil types. The perennial drainage within the Study Area consists of a channel, bed, and bank, and is nearly devoid of vegetation due to the scouring effect of flowing water. Though the perennial drainage within the Study Area is nearly unvegetated some (mostly aquatic) plants do occur within portions of the channel such as nutsedge, watercress (*Nasturtium officinale*), and American brooklime (*Veronica* cf. *americana*).

4.5 SPECIAL-STATUS SPECIES

Special-status species are plant and wildlife species that have been afforded special recognition by federal, State, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under CESA or FESA;
- Protected under other regulations (e.g., Migratory Bird Treaty Act);
- Included on the CDFW Special Animals List;
- Identified as Rank 1 to 4 by CNPS; or
- Receive consideration during environmental review under CEQA.

Special-status species considered for this analysis are based on queries of the CNDDB, the USFWS, and CNPS ranked species (online versions) for the *Greenwood* USGS quadrangle and eight surrounding quadrangles. Appendix B includes the common name and scientific name for each species, regulatory status (federal, State, local, CNPS), habitat descriptions, and potential for occurrence within the Study Area. The following set of criteria has been used to determine each species' potential for occurrence within the Study Area:

- **Present**: Species known to occur within the Study Area based on CNDDB records and/or observed within the Study Area during the biological survey.

- **High**: Species known to occur on or in the vicinity of the Study Area (based on CNDDB records within five miles and/or based on professional expertise specific to the Study Area or species) and there is suitable habitat within the Study Area.

- **Low**: Species known to occur in the vicinity of the Study Area and there is marginal habitat within the Study Area **-OR-** Species is not known to occur in the vicinity of the Study Area, however, there is suitable habitat on the Study Area.

- **None**: Species is not known to occur on or in the vicinity of the Study Area and there is no suitable habitat within the Study Area -**OR-** Species was surveyed for during the appropriate season with negative results **-OR-** The Study Area occurs outside of the known elevation or geographic ranges.

Only those species that are known to be *present* or have a *high* or *low* potential for occurrence are discussed further in the following sections.

4.5.1 Listed and Special-Status Plants

According to the records search, 17 listed and special-status plants have the potential to occur onsite or in the vicinity of the Study Area (CDFW 2019). Based on field observations, published information, and literature review, no listed and special-status plants have the potential to occur within the Study Area.

The Study Area does not contain suitable habitat to support special-status species and exhibits signs of regular disturbance (mowing, grading, human activity etc.). Suitable soils types, such as serpentine, that support special-status plants documented within 5 miles of the Study Area are also absent.

4.5.2 Listed and Special-Status Wildlife

According to the records search, 31 listed and special-status wildlife species have the potential to occur onsite or in the vicinity of the Study Area (CDFW 2019). Based on field observations, published information, and literature review, 7 listed and special-status wildlife species have the potential to occur within the Study Area. In addition to these special-status species, migratory birds and raptors also have potential to occur within the Study Area. Foothill yellow-legged frog (*Rana boylii*) has a high potential to occur, and California red-legged frog (*Rana draytonii*), western pond turtle (*Emys marmorata*), pallid bat (*Antrozous pallidus*), silver-haired bat (*Lasionycteris noctivagans*), Townsend's big-eared bat (*Corynorhinus townsendii*), and Yuma myotis (*Myotis yumanensis*) have a low potential to occur. These species are discussed in more detail below.

Special-Status Wildlife with a High Potential for Occurrence

Foothill yellow-legged frog

The foothill yellow-legged frog is listed as a Candidate Threatened species by CDFW and it is also considered a Species of Special Concern. They occur in rocky streams and rivers in valley-foothill and lower montane woodland habitats, forest, chaparral, and wet meadows up to ±6,400 feet (1950 meters) above MSL. Habitats that contain areas with sunny, open banks and riffles are preferred. This species is highly aquatic and is rarely found far from permanent water. Breeding and egg laying typically occurs in March-June, and eggs are attached to gravel or rocks in moving water. Tadpoles require permanent water for at least four months to complete development and typically transform from July through October (Zeiner et al. 1988-1990; Nafis 2019).

The perennial drainage within the Study Area provides suitable habitat for foothill yellow-legged frog. Seven occurrences are documented in the CNDDB within 5 miles of the Study Area (CDFW 2019). Although this species was not observed during the field survey on June 18, 2019, the perennial drainage is comprised of rocky bottoms and has open sunny banks that would be suitable for and preferred by foothill yellow-legged frog. Based upon the number of occurrences within 5 miles of the Study Area and suitable habitat present, this species has a high potential to occur within the Study Area.

Special-Status Wildlife with a Low Potential for Occurrence

California red-legged frog

The California red-legged frog is listed as a Threatened species by the USFWS and it is also considered a Species of Special Concern by CDFW. They occur within streams, marshes, and ponds; typically, within humid forests, woodlands, grasslands, and foothills below ±3,900 feet (1,200 meters) MSL. Abundant

vegetation along aquatic habitat is required for this species and animal burrows or other moist refuges are used for estivation when aquatic habitat is dry. This species is commonly found in upland areas near aquatic habitat and has been documented up to 2 miles from aquatic breeding habitat (USFWS 2011). Breeding occurs in permanent pools typically between late November-April, and eggs are attached to plants near the water surface. Tadpoles generally metamorphose within 4-7 months but may also overwinter within breeding ponds (Nafis 2019).

The perennial drainage and riparian wetland within the Study Area provide minimally suitable habitat for California red-legged frog. The perennial drainage is fairly small and shallow, and no pools occur within the Study Area therefore breeding is unlikely to occur. The Study Area is also within an area that is lacking preferred habitat types, such as humid forest or woodland, and it does not contain suitable estivation sites. However, California red-legged frog may utilize the perennial drainage as a movement corridor to more suitable habitat outside of the Study Area. Two occurrences are documented within 5 miles of the Study Area (CDFW 2019). Although this species was not observed during the field survey on June 18, 2019, minimally suitable habitat is present within the Study Area and California red-legged frog may periodically occur within the perennial drainage or riparian wetland habitat.

Western Pond Turtle

The western pond turtle is designated as a Species of Special Concern by CDFW. This species occurs in a variety of aquatic habitats such as ponds, creeks, ditches, lakes, and marshes. Areas with abundant vegetation and rocky or muddy substrate are preferred; and exposed banks or other basking areas, such as logs or cattail mats, are required. Western pond turtles prefer to overwinter in areas with moderate woody vegetation and leaf litter and are unlikely to use annual grasslands (Reese and Hartwell 1997, Pilliod et al. 2013, and Rathbun et al. 2002). Eggs are laid between May and August and hatch in approximately 80 days. Hatchlings often stay in or around the nest through the winter. Nests are generally found within 100 feet (30 meters) of water in areas with little vegetative cover and good sun exposure (Rathbun et al. 2002). Little is known about dispersal patterns of western pond turtles, but genetic analysis shows most movement is along drainages (Riensche et al. 2013).

The perennial drainage and riparian wetland provide minimally suitable habitat for western pond turtle. The perennial drainage within the Study Area does not contain pools and is likely too small and shallow to support a permanent population of western pond turtle. The Study Area is also lacking woody vegetation and leaf litter suitable for overwintering. However, western pond turtle may utilize the perennial drainage as a movement corridor to other more suitable habitat. One occurrence is documented within 5 miles of the Study Area (CDFW 2019). Although this species was not observed during the field survey on June 18, 2019, minimally suitable habitat is present within the Study Area and western pond turtle may periodically occur within the perennial drainage or riparian wetland habitat.

Special-Status Bats

Townsend's big-eared bat is designated as a Species of Special Concern by CDFW, and silver-haired bat, pallid bat, and Yuma myotis are all included on the CDFW Special Animals List. These species occur in a variety of habitats, usually woodland, grassland and forest; up to ±9,000 feet (2,750 meters) above MSL. These species typically roost in rocky crevices, caves, hollow trees, tree foliage, and buildings or other man-made structures.

The Study Area provides minimally suitable roosting habitat for these species within the various existing buildings, structures, and trees onsite. Although some potential roost sites are present, the current level

of human disturbance from adjacent roads and houses may limit the likelihood of roosting occurring within the Study Area. No signs of roosting (guano, stains, noise) were observed during the field survey on June 18, 2019.

Migratory Birds and Raptors

Migratory birds are protected under the MBTA of 1918 (16 U.S.C 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10; this also includes feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). All raptors, including common species not considered special-status, are protected under the California Fish and Wildlife Code (Section 3503.5). Removal or destruction of an active raptor nest is considered a violation of this Fish and Wildlife Code.

Migratory birds and raptors have the potential to nest in or adjacent to the Study Area. Suitable nest locations may include but are not limited to trees and shrubs, bare ground, buildings and structures, and grasses and weeds.

4.6 SENSITIVE HABITATS

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA; Section 1600 of the California Fish and Game Code, which include riparian areas; and/or Sections 401 and 404 of the Clean Water Act, which include wetlands and other waters of the U.S. Sensitive habitats found with the Study Area are described in more detail below.

4.6.1 Riparian Wetland

As discussed in Section 4.4, approximately 0.10 acre of riparian wetland has been delineated within the Study Area. (Figure 4). This habitat type is considered sensitive by federal and State agencies. The extent of jurisdictional wetlands, including riparian wetland, within the Study Area have not been verified by the USACE as of the date of this report. Currently, all riparian wetland is expected to be avoided by the Project (Figure 5). Should the Project result in impacts to any regulated aquatic features, a Section 404 Authorization would be required by the USACE and a 401 Water Quality Certification by the RWQCB would also be required. Riparian wetlands are also regulated by the CDFW and impacts to this community would require the preparation of a Streambed Alteration Notification for review and approval by the CDFW.

4.6.2 Perennial Drainage

As discussed in Section 4.4, approximately 0.09 acre of perennial drainage has been delineated within the Study Area. (Figure 4). The extent of jurisdictional waters, including the perennial drainage, within the Study Area have not been verified by the USACE as of the date of this report. Currently, the perennial drainage is expected to be avoided by the Project (Figure 5). Should the Project result in impacts to any waters of the U.S., a Section 404 Authorization would be required by the USACE and a 401 Water Quality Certification by the RWQCB would also be required. The perennial drainage is also regulated by the CDFW and impacts to this aquatic feature would require the preparation of a Streambed Alteration Notification for review and approval by the CDFW.

4.6.3 Wildlife Migration Corridors

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by development creates isolated "islands" of wildlife habitat. Fragmentation can also occur when a portion of one or more habitats is converted into another habitat; for instance, when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or grading activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

Although some wildlife species may utilize portions of the Study Area for foraging, breeding, or other functions, the Study Area itself does not link two significant natural areas and is not considered a wildlife migration corridor. The Study Area is bordered by residential properties and Highway 193, which likely limit the potential of any significant wildlife movement or travel through the Study Area. If wildlife were to travel through the Study Area, it would most likely occur along the perennial drainage.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The Study Area contains approximately 2.60 acres of ruderal habitat, 3.52 acres of developed/disturbed habitat, 0.10 acre of riparian wetland, and 0.09 acre of perennial drainage. Table 1 summarizes the biological communities and expected impacts that would result from the proposed development plan on a habitat level. Proposed Project impacts are also illustrated in Figure 5.

Table 1
IMPACTS TO BIOLOGICAL COMMUNITIES

Biological Communities	Impacted Acreage	Avoided Acreage	Total Acreage*
Ruderal	2.20	0.40	2.60
Developed/Disturbed	2.76	0.76	3.52
Riparian Wetland	0	0.10	0.10
Perennial Drainage	0	0.09	0.09

*Total acreage is rounded to two decimal places

No special-status plants or special-status wildlife were observed within the Study Area during the field survey on June 18, 2019. However, suitable habitat is present for several wildlife species and there is potential that special-status wildlife species may occur within the Study Area. Recommendations, including avoidance and minimization measures to limit or avoid impacts to special-status wildlife species that may occur are included in Section 5.1.

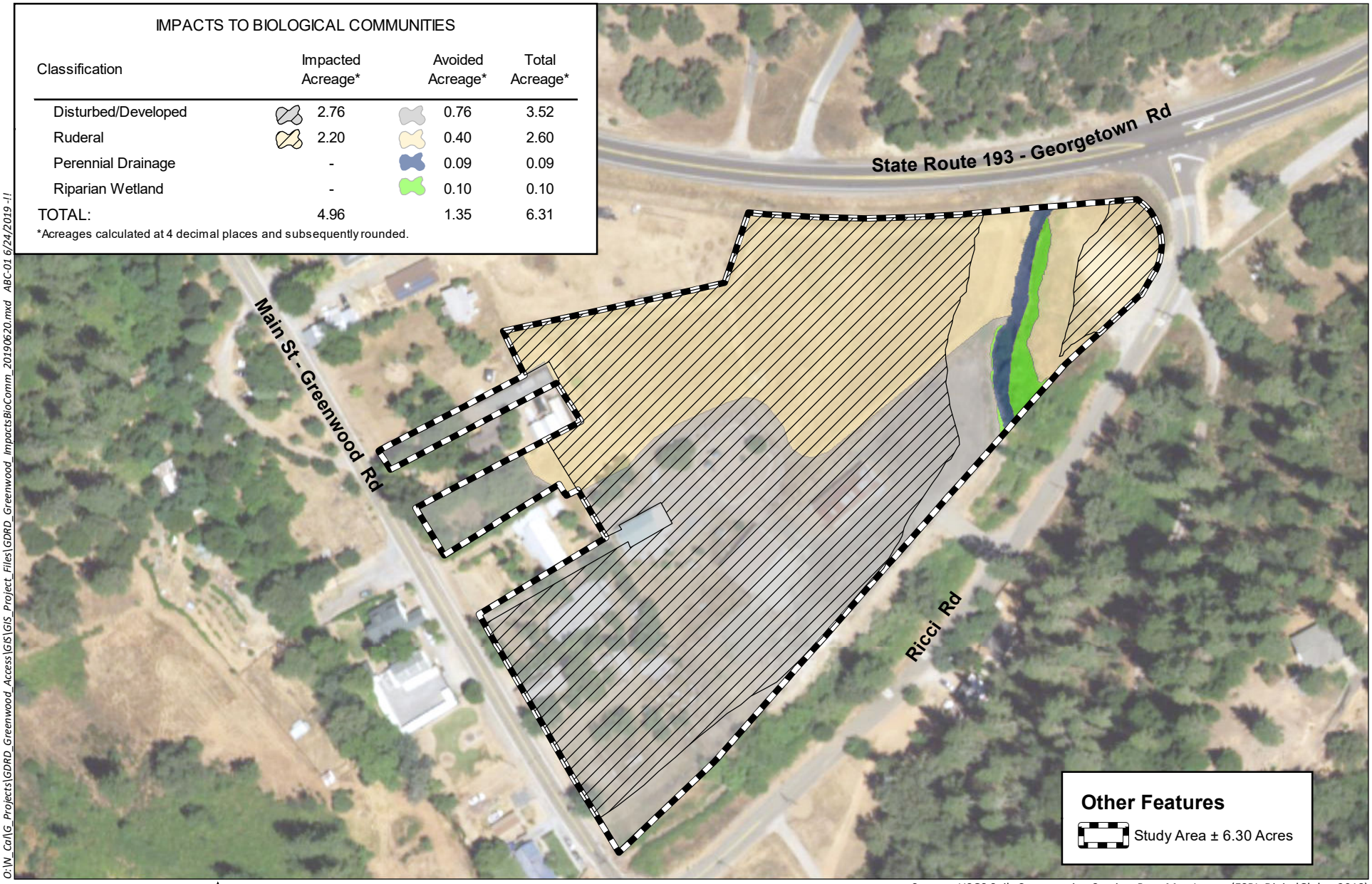
Known or potential biological constraints in the Study Area include the following:

- Potential habitat for California red-legged frog;
- Potential habitat for foothill yellow-legged frog;

IMPACTS TO BIOLOGICAL COMMUNITIES

Classification	Impacted Acreage*	Avoided Acreage*	Total Acreage*
Disturbed/Developed	2.76	0.76	3.52
Ruderal	2.20	0.40	2.60
Perennial Drainage	-	0.09	0.09
Riparian Wetland	-	0.10	0.10
TOTAL:	4.96	1.35	6.31

*Acreages calculated at 4 decimal places and subsequently rounded.



Source: USGS Soils Conservation Service; Base Map Layers (ESRI; DigitalGlobe, 2018)

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Impacts to Biological Communities

Figure 5

- Potential habitat for western pond turtle;
- Potential habitat for special-status bats;
- Potential habitat for nesting migratory birds; and
- Wetland riparian habitat and perennial drainage.

5.1 RECOMMENDATIONS

5.1.1 Special-Status Amphibians

California red-legged frog, a federally Threatened and State Species of Special Concern, and foothill yellow-legged frog, a State Candidate Threatened Species and State Species of Special Concern, have the potential to occur within the perennial drainage and riparian wetland within the Study Area. A qualified biologist should conduct a pre-construction survey for these species within 14 days prior to development or ground disturbing activities including grading, vegetation clearing, tree removal, or construction. Additionally, a second clearance survey should be conducted no more than 24 hours before the initial start of construction or ground disturbing activities. If no special-status amphibians are observed, a letter report should be prepared to document the results of the survey and provided to El Dorado County, and no additional measures are recommended. If development does not commence within 24 hours of the pre-construction survey, or halts for more than 7 days, an additional survey is required prior to resuming or starting work.

If special-status amphibians are present in the Study Area, agency consultation may be required to determine appropriate buffers and additional measures to reduce impacts to these species. In addition, a qualified biologist should conduct an environmental awareness training to all construction personnel prior to the initiation of work. The training should include identification of special-status amphibian species, required practices before the start of construction, general measures that are being implemented to conserve the species as they relate to the Project, penalties for non-compliance, and boundaries of the permitted disturbance zones. Upon completion of the training, all construction personnel should sign a form stating that they have attended the training and understand all the measures. Proof of this instruction should be kept on file with the project proponent.

5.1.2 Western Pond Turtle

The western pond turtle, a State Species of Special Concern, has the potential to occur within the perennial drainage and riparian wetland within the Study Area. A qualified biologist should conduct a pre-construction survey for western pond turtle within 14 days prior to development or ground disturbing activities including grading, vegetation clearing, tree removal, or construction. If western pond turtle is not observed, a letter report should be prepared to document the results of the survey and provided to El Dorado County, and no additional measures are recommended. If development does not commence within 14 days of the pre-construction survey, or halts for more than 7 days, an additional survey is required prior to resuming or starting work.

If western pond turtle is observed within the Study Area, a qualified biologist should establish an appropriate no disturbance buffer around the area observed (likely the perennial drainage) and wildlife exclusion fencing shall be installed. This fencing should be comprised of silt fencing and will be installed in an area recommended by the designated biologist. The fencing should remain in place the duration of construction and should be removed upon the completion of construction.

The qualified biologist should also conduct an environmental awareness training to all construction personnel prior to the initiation of work. This training shall follow the same guideless as for special-status amphibians. As applicable, the pre-construction survey and environmental training may be combined with other recommended surveys and trainings.

5.1.3 Special-Status Bats

Townsend's big-eared bat, a State Species of Special Concern, silver-haired bat, pallid bat, and Yuma myotis (all included on the CDFW Special Animals List) have the potential to occur within the Study Area. A qualified biologist should conduct a pre-construction survey for special-status bat species within 14 days prior to development or ground disturbing activities including grading, vegetation clearing, tree removal, or construction. If no bats are observed, a letter report should be prepared to document the survey and provided to El Dorado County, and no additional measures are recommended. If development does not commence within 14 days of the pre-construction survey, or halts for more than 7 days, an additional survey is required prior to resuming or starting work.

If special-status bats are present and roosting in the Study Area or the surrounding 100 feet of the Study Area, the qualified biologist should establish an appropriate no disturbance buffer around the roost site prior to the commencement of ground disturbing activities or development. At a minimum, no trees should be removed until the biologist has determined that a roost site is no longer active, and no bats are present. In addition, a qualified biologist should conduct an environmental awareness training to all construction personnel prior to the initiation of work. This training shall follow the same guidelines as for special-status amphibians. As applicable, the pre-construction survey and environmental training may be combined with other recommended surveys and trainings.

Additional mitigation measures for bat species, such as installation of bat boxes or alternate roost structures, would be recommended only if special-status bat species are found to be roosting within the Study Area.

5.1.4 Protected and Migratory Birds and Raptors

Migratory birds and raptors have potential to occur and nest within the Study Area. No active nests were observed at the time of the field survey, but the Study Area has the potential to support nesting birds within various trees and shrubs, bare ground, grasses and weeds, and existing buildings and structures.

Active nests and nesting birds are protected by the California Fish and Wildlife Code Section 3503.5 and the MBTA. Ground-disturbing and other development activities including grading, vegetation clearing, tree removal, and construction could impact nesting birds if these activities occur during the nesting season (generally February 1 to August 31). To avoid impacts to nesting birds, all vegetation removal should be completed between September 1 and January 31, if feasible.

If development activities occur during the nesting season, a qualified biologist should conduct a nesting bird survey to determine the presence of any active nests within the Study Area. Additionally, the surrounding 500 feet of the Study Area should be surveyed for active raptor nests, where accessible, and with binoculars as necessary. The nesting bird survey should be conducted within 14 days prior to commencement of ground-disturbing or other development activities. If the nesting bird survey shows that there is no evidence of active nests, a letter report should be prepared to document the survey and

provided to El Dorado County, and no additional measures are recommended. If development does not commence within 14 days of the nesting bird survey, or halts for more than 7 days, an additional survey is required prior to starting or resuming work.

If active nests are found, the qualified biologist should establish species-specific buffer zones to prohibit development activities and minimize nest disturbance until the young have successfully fledged or the biologist determines that a nest is no longer active. Buffer distances may range from 20 feet for some songbirds up to 250 to 500 feet for most raptors. Nest monitoring may also be warranted during certain phases of development to ensure nesting birds are not adversely impacted by adjacent construction. If active nests are found within any trees slated for removal, an appropriate buffer should be established around the tree and all trees within the buffer should not be removed until a qualified biologist determines that the nest has successfully fledged and is no longer active.

In addition, a qualified biologist should conduct an environmental awareness training for all construction personnel for the potential of nesting birds to occur onsite prior to the initiation of work. This training shall follow the same guideless as for special-status amphibians. As applicable, the pre-construction survey and environmental training may be combined with other recommended surveys and trainings.

If construction occurs outside of the nesting bird season (September 1 to January 31) a nesting bird survey and environmental training are not required.

5.1.5 Riparian and Aquatic Resources

Approximately 0.10 acre of riparian wetland and 0.09 acre of perennial drainage were delineated within the Study Area (Foothill Associates 2018). Although the results of the delineation report have not been verified by the USACE, the riparian wetland and perennial drainage are likely to be classified as waters of the U.S. and/or waters of the State. The Project is currently expected to avoid these aquatic features (Figure 5). Should it be determined that the Project would result in impacts to any regulated aquatic features, a Section 404 Authorization would be required by the USACE and a 401 Water Quality Certification by the RWQCB would also be required. If aquatic features are determined not to be subject to federal jurisdiction under the Clean Water Act, these features may still be subject to waste discharge requirements under the Porter-Cologne Water Quality Control Act should the Project result in impacts to these features. Section 13260(a) of the Porter-Cologne Water Quality Control Act (contained in the California Water Code) requires any person discharging waste or proposing to discharge waste, other than to a community sewer system, within any region that could affect the quality of the waters of the State (all surface and subsurface waters) to file a report of waste discharge. The discharge of dredged or fill material may constitute a discharge of waste that could affect the quality of waters of the State. A report of waste discharge will be filed for impacts to non-federal waters, if required. These features are also regulated by CDFW and impacts would require the preparation of a Streambed Alteration Notification.

To avoid impacting these features, construction fencing should be installed a minimum of 50 feet from all aquatic resources or at the limits of construction. The buffer area or limits of construction should be designated by standard silt fencing with straw wattles and general orange construction fencing (optional for visibility). The fencing should remain in place the duration of construction and shall be removed upon the completion of construction. All construction activities and personnel shall be prohibited within this buffer area. Hazardous materials such as fuels, oils, solvents, etc., to be stored onsite should be stored in sealable containers in a designated location that is at least 200 feet from aquatic resources. All

fueling and maintenance of vehicles and other equipment, and staging areas will occur at least 200 feet from any aquatic habitat.

5.2 SUMMARY OF AVOIDANCE AND MINIMIZATION MEASURES

- Pre-construction surveys should be conducted for California red-legged frog, foothill yellow-legged frog, western pond turtle, special-status bats and nesting migratory birds and raptors (during the nesting season) 14 days prior to the initiation of construction or ground disturbing activities. If construction or ground disturbing activities do not commence within 14 days, or halt for more than 7 days, additional surveys are required prior to resuming or starting work. A follow-up survey for California red-legged frog and foothill yellow-legged frog should be conducted no more than 24 hours prior to the start of construction;

- Worker environmental awareness trainings should be conducted for all construction personnel prior to the initiation of work for California red-legged frog, foothill yellow-legged frog, western pond turtle, special-status bats and nesting migratory birds and raptors;

- If California red-legged frog and/or foothill yellow-legged frog are observed within the Study Area, agency consultation may be required to determine appropriate buffers and additional measures to reduce impacts to these species during construction;

- If western pond turtle is observed within the Study Area, wildlife exclusion fencing should be installed in an area identified by a designated biologist. This fencing shall be comprised of general silt fencing, will remain in place the duration of construction, and will be removed upon the completion of construction;

- If the Project will result in impacts to regulated aquatic features, the Applicant would be required to obtain a Section 404 permit under the CWA for any impacts to wetlands or other waters subject to USACE jurisdiction. Impacts would also require a 401 Water Quality Certification from the RWQCB under Section 401 of the CWA. The 404 and 401 permits will include terms and conditions to minimize impacts and to fully mitigate for any permanent impacts to wetlands and other waters. Impacts to aquatic features on the site will also require preparation of a Streambed Alteration Notification for submittal to the CDFW;

- Construction fencing should be installed a minimum of 50 feet from all aquatic resources or at the limits of construction. The buffer area or limits of construction should be designated by standard silt fencing with straw wattles and general orange construction fencing (optional for visibility). The fencing should remain in place the duration of construction and shall be removed upon the completion of construction;

- Hazardous materials such as fuels, oils, solvents, etc., should be stored in sealable containers in a designated location that is at least 200 feet from aquatic resources; and

- All fueling and maintenance of vehicles and other equipment, and staging areas should occur at least 200 feet from any aquatic habitat.

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Appendix A

Applicable Sections of El Dorado County Adopted General Plan

Appendix A
Applicable Sections of El Dorado County Adopted General Plan

Conservation and Open Space Element

CONSERVATION AND PROTECTION OF WATER RESOURCES
GOAL 7.3: WATER QUALITY AND QUANTITY
Conserve, enhance, and manage water resources and protect their quality from degradation.

OBJECTIVE 7.3.1: WATER RESOURCE PROTECTION
Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.

Policy 7.3.1.1 Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.

Policy 7.3.1.2 Establish water conservation programs that include both drought tolerant landscaping and efficient building design requirements as well as incentives for the conservation and wise use of water.

Policy 7.3.1.3 The County shall develop the criteria and draft an ordinance to allow and encourage the use of domestic gray water for landscape irrigation purposes. (See Title 22 of the State Water Code and the Graywater Regulations of the Uniform Plumbing Code).

OBJECTIVE 7.3.2: WATER QUALITY
Maintenance of and, where possible, improvement of the quality of underground and surface water.

Policy 7.3.2.1 Stream and lake embankments shall be protected from erosion, and streams and lakes shall be protected from excessive turbidity.

Policy 7.3.2.2 Projects requiring a grading permit shall have an erosion control program approved, where necessary. El Dorado County General Plan Conservation and Open Space Element July 2004 (Amended October 2017) Page 145.

Policy 7.3.2.3 Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).

Policy 7.3.2.4 The County should evaluate feasible alternatives to the use of salt for ice control on County roads.

Policy 7.3.2.5 As a means to improve the water quality affecting the County's recreational waters, enhanced and increased detailed analytical water quality studies and monitoring should be implemented to identify and reduce point and non-point pollutants and contaminants. Where such studies or monitoring reports have identified sources of pollution, the County shall propose means to prevent, control, or treat identified pollutants and contaminants.

OBJECTIVE 7.3.3: WETLANDS

Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1 For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual

Policy 7.3.3.3 The County shall develop a database of important surface water features, including lake, river, stream, pond, and wetland resources.

Policy 7.3.3.4 The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas.

Exceptions to riparian and wetland buffer and setback requirements shall be provided to permit necessary road and bridge repair and construction, trail construction, and other recreational access structures such as docks and piers, or where such buffers deny reasonable use of the property, but only when appropriate mitigation measures and Best Management Practices are incorporated into the project. Exceptions shall also be provided for horticultural and grazing activities on agriculturally zoned Conservation and Open Space Element El Dorado County General Plan Page 146 (Amended October 2017) July 2004 lands that utilize "best management practices (BMPs)" as recommended by the County Agricultural Commission and adopted by the Board of Supervisors. Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the review for a specific project demonstrates that a different setback is necessary or would be sufficient to protect the particular riparian area at issue.

For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.

Policy 7.3.3.5 Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

OBJECTIVE 7.3.4: DRAINAGE

Protection and utilization of natural drainage patterns.

Policy 7.3.4.1 Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.

Policy 7.3.4.2 Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

CONSERVATION OF BIOLOGICAL RESOURCES

GOAL 7.4: WILDLIFE AND VEGETATION RESOURCES

Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

OBJECTIVE 7.4.2: IDENTIFY AND PROTECT RESOURCES

Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

Policy 7.4.2.1 The County will coordinate wildlife and vegetation protection programs with appropriate Federal and State agencies.

Policy 7.4.2.2 The County shall continue to support the Noxious Weed Management Group in its efforts to reduce and eliminate noxious weed infestations to protect native habitats and to reduce fire hazards.

Policy 7.4.2.3 Consistent with Policy 9.1.3.1 of the Parks and Recreation Element, low impact uses such as trails and linear parks may be provided within river and stream buffers if all applicable mitigation measures are incorporated into the design.

Policy 7.4.2.4 Protect and preserve wildlife habitat corridors within public parks and natural resource protection areas to allow for wildlife use. Recreational uses within these areas shall be limited to those activities that do not require grading or vegetation removal.

Policy 7.4.2.5 Setbacks from all rivers, streams, and lakes shall be included in the Zoning Ordinance for all ministerial and discretionary development projects.

Policy 7.4.2.8 Conserve contiguous blocks of important habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the County through a Biological Resource Mitigation Program (Program). The Program will result in the conservation of:

1. Habitats that support special status species;
2. Aquatic environments including streams, rivers, and lakes;
3. Wetland and riparian habitat;
4. Important habitat for migratory deer herds; and
5. Large expanses of native vegetation.

Appendix B

Regionally Occurring Listed and Special-Status Species

Appendix B
Regionally Occurring Listed and Special-Status Species

Table 1 — Legally Protected Species

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
El Dorado bedstraw *Galium californicum* ssp. *sierrae*	FE; CR; --; 1B.2	Perennial herb found on gabbroic soils within chaparral, cismontane woodland, and lower coniferous forest from 100 to 585 meters. Known from approximately 16 occurrences in El Dorado County.	May – June.	**None.** The Study Area does not contain gabbroic soils, chaparral, cismontane woodland, or coniferous forest; suitable habitat is absent.
Layne's ragwort *Packera layneae*	FT; CR; --; 1B.2	Perennial herb found on serpentinite or gabbroic, rocky soils in cismontane woodland and chaparral from 200 to 1,085 meters. Known from approximately 52 occurrences in Butte, El Dorado, Placer, Tuolumne, and Yuba counties.	April – August	**None.** The Study Area does not contain suitable soils, chaparral, or cismontane woodland; suitable habitat is absent. One documented occurrence within 5 miles of the Study Area (CDFW 2019).
Pine Hill ceanothus *Ceanothus roderickii*	FE; CR; --; 1B.1	Perennial matted or mound-like evergreen shrub found on serpentinite or gabbroic soils in chaparral or cismontane woodland from 245 to 1,090 meters. Known from approximately eight occurrences in El Dorado County.	April – June	**None.** The Study Area does not contain suitable soils, chaparral, or cismontane woodland; suitable habitat is absent.
Stebbins' morning glory *Calystegia stebbinsii*	FE; CE; --; 1B.1	Perennial rhizomatous herb found in chaparral openings and cismontane woodland on gabbroic or serpentinite soils from 185 to 1,090 meters. Known from 15 occurrences in El Dorado and Nevada counties.	April – July	**None.** The Study Area does not contain suitable soils, chaparral, or cismontane woodland; suitable habitat is absent.
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT; --; --; --	Found solely among elderberry shrubs (*Sambucus* sp.) often within riparian habitats. Presence can be indicated by bore-holes in stems of elderberries.	March – June (Adults) Year – round (Larvae)	**None.** Elderberry shrubs are absent from the Study Area.
Fish				
Delta smelt *Hypomesus transpacificus*	FT; CE; --; --	Found in open waters of bays, tidal rivers, channels, and sloughs.	Year – Round	**None.** The Study Area does not contain suitable habitat for this species. The Study Area is also outside of the Designated Critical Habitat for this species.
Steelhead - Central Valley DPS *Oncorhynchus mykiss irideus pop. 11*	FT; --; --; --	Found in the ocean, rivers, creeks, and large inland lakes. This distinct population only occurs in the Sacramento and San Joaquin Rivers and their tributaries.	Year – Round	**None.** The Study Area does not contain suitable habitat for this species.
Amphibians/ Reptiles				
California red-legged frog *Rana draytonii*	FT; CSC; --; --	Found near quiet, permanent pools of streams, marshes, and ponds with extensive vegetation below 1200 meters. Typically occurs in humid forests, woodlands, grassland, and foothill habitats. Adults may disperse considerable distances between pools during rain events. Breeds in permanent pools from January through July.	Year – Round	**Low.** The Study Area contains minimally suitable habitat for this species within the perennial drainage. No pools occur within the drainage so breeding is unlikely, but this species may utilize the drainage/Study Area as a movement corridor between more suitable habitat patches offsite. Two documented occurrences within 5 miles of the Study Area (CDFW 2019). The Study Area is outside of the Designated Critical Habitat for this species.
Birds				
American peregrine falcon *Falco peregrinus anatum*	FD; CD; CFP; -- Nesting	Often found in woodland, forest, and coastal habitats near riparian areas and wetlands. May also occur in urban environments. Nests on cliffs, ledges, and human-made structures.	February – October	**None.** No cliffs, ledges or adequate human-made structures occur within the Study Area; suitable nest locations are absent. If American peregrine falcon were to occur, it would likely be in passing. One documented occurrence within 5 miles of the Study Area (CDFW 2019).
Bald eagle *Haliaeetus leucocephalus*	FD; CE; CFP; -- Nesting and Wintering	Occurs in a variety of habitats near aquatic resources. Nests in large trees or snags, often in remote mixed stands adjacent to water. Typically nests in the largest tree in a stand.	Year – Round	**None.** The Study Area does not contain suitable nest trees or foraging habitat for this species. If bald eagle were to occur, it would likely be in passing.

Appendix B
Regionally Occurring Listed and Special-Status Species

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
ank swallow *Riparia riparia*	--; CT; --; -- Nesting	Found primarily in open riparian areas, grassland, brushland, wetlands, and cropland habitats. Nests in colonies within tunnels dug into sandy banks or cliffs near water.	February – October	**None.** No cliffs or banks occur within the Study Area; suitable habitat is absent.
Mammals				
Sierra Nevada red fox *Vulpes vulpes necator*	FC; CT; --; --	Found in montane forest interspersed with meadows and fell-fields, especially along edges. Den sites include rock outcrops, hollow logs and stumps, and burrows in deep, loose soil. Very elusive and avoids areas with human activity.	Year – Round	**None.** The Study Area does not contain suitable forest habitat or den sites and is also located in an area with moderate to high human activity.

Table 1 includes federal threatened or endangered species and eagles, and State threatened, endangered, or fully protected species.

Appendix B
Regionally Occurring Listed and Special-Status Species

Table 2 — Species Subject to CEQA Review

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
Big scale balsamroot *Balsamorhiza macrolepis*	--; --; --; 1B.2	Perennial herb found in chaparral, cismontane woodland, valley and foothill grassland, sometimes on serpentinite, from 45 to 1,555 meters. Known from approximately 50 occurrences in Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties.	March – June	**None.** The Study Area does not contain chaparral, cismontane woodland, grassland, or serpentine soils; suitable habitat is absent.
Brownish beaked-rush *Rhynchospora capitellata*	--; --; --; 2B.2	Perennial herb found on mesic sites within lower montane coniferous forest; meadows, seeps, marshes, swamps; and upper montane coniferous forest from 45 to 2,000 meters. Known from approximately 19 occurrences in Butte, El Dorado, Mariposa, Nevada, Plumas, Sonoma, Tehama, Trinity and Yuba counties.	July – August	**None.** The Study Area does not contain forest, meadow, marsh, or seep habitats; suitable habitat is absent. One documented occurrence within 5 miles of the Study Area (CDFW 2019).
El Dorado mule ears *Wyethia reticulata*	--; --; --; 1B.2	Perennial herb found on clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 185 to 630 meters. Known from approximately 25 occurrences in El Dorado and Yuba counties.	April – August	**None.** The Study Area does not contain suitable soils, chaparral, cismontane woodland, or forest habitat; suitable habitat is absent.
Jepson's onion *Allium jepsonii*	--; --; --; 1B.2	Perennial bulbiferous herb found on serpentine or volcanic soils in chaparral, lower montane coniferous forest, and cismontane woodland from 300 to 1,320 meters. Known from approximately 27 occurrences in Butte, El Dorado, Placer and Tuolumne counties.	April – August	**None.** The Study Area does not contain suitable soils, chaparral, cismontane woodland, or forest habitat; suitable habitat is absent.
Oval-leaved viburnum *Viburnum ellipticum*	--; --; --; 2B.3	Perennial deciduous shrub found in chaparral, cismontane woodland and lower montane coniferous forest from 215 to 1,400 meters. Known from approximately 38 occurrences in Alameda, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Lake, Mendocino, Mariposa, Napa, Placer, Shasta, Solano, Sonoma and Tehama counties in California, Oregon and Washington.	May – June	**None.** The Study Area does not contain chaparral, cismontane woodland or forest habitats; suitable habitat is absent.
Parry's horkelia *Horkelia parryi*	--; --; --; 1B.2	Perennial herb found on Ione formation and other soils in chaparral and cismontane woodland from 80 to 1,070 meters. Known from approximately 44 occurrences in Amador, Calaveras, El Dorado, Mariposa and Tuolumne counties.	April – September	**None.** The Study Area does not contain suitable soils, chaparral or cismontane woodland habitat; suitable habitat is absent.
Red Hills soaproot *Chlorogalum grandiflorum*	--; --; --; 1B.2	Perennial bulbiferous herb found on gabbro, serpentinite and other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 245 to 1,690 meters. Known from approximately 127 occurrences in Amador, Butte, Calaveras, El Dorado, Placer, and Tuolumne counties.	May – June	**None.** The Study Area does not contain suitable soils, chaparral, cismontane woodland, or forest habitat; suitable habitat is absent. Two documented occurrences within 5 miles of the Study Area (CDFW 2019).
Sierra arching sedge *Carex cyrtostachya*	--; --; --; 1B.2	Perennial herb found in lower montane coniferous forest, meadows and seeps, marshes and swamps, and riparian forest from 610 to 1360 meters. Known from 13 occurrences in Butte, El Dorado, and Yuba counties.	May – August	**None**. The Study Area does not contain forest, meadow, seep, marsh, swamp, or riparian forest habitat; suitable habitat is absent.
Sierra blue grass *Poa sierrae*	--; --; --; 1B.3	Perennial rhizomatous herb found in openings of lower montane coniferous forest from 365 to 1500 meters. Known from 35 occurrences in Butte, El Dorado, Madera, Nevada, Placer, Plumas, and Shasta counties.	April – July	**None.** The Study Area does not contain forest habitat; suitable habitat is absent.

Appendix B
Regionally Occurring Listed and Special-Status Species

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Van Zuuk's morning-glory *Calystegia vanzuukiae*	--; --; --; 1B.3	Perennial rhizomatous herb found on gabbro and serpentinite soils in chaparral and cismontane woodland from 500 to 1180 meters. Known from 9 occurrences in El Dorado and Placer counties.	May – August	**None**. The Study Area does not contain suitable soils, chaparral, or woodland habitat; suitable habitat is absent.
Amphibians/ Reptiles				
Coast horned lizard *Phrynosoma blainvillii*	--; CSC; --; --	Found in open areas of valley-foothill woodland and grassland habitats up to 1800 meters. Occurs within areas containing loose or sandy soil, often with low vegetation. Feeds primarily on ants and typically occurs near ant hills.	Spring – Fall	**None.** Open areas, low vegetation, and sandy or loose soil do not occur within the Study Area; suitable habitat is absent.
Foothill yellow-legged frog *Rana boylii*	--; CCT; SSC; --	Occurs in rocky streams in valley-foothill and lower montane woodland, chaparral, and wet meadows up to 1950 meters. Breeding in occurs in slow-moving water and eggs are laid on rocks, pebbles, or sometimes submerged vegetation.	Spring – Fall	**High.** The Study Area contains suitable habitat for this species within the perennial drainage and riparian habitat. Seven documented occurrences within 5 miles of the Study Area (CDFW 2019).
Western pond turtle *Emys marmorata*	--; CSC; --; --	Found in or within 100 meters of permanent water in a wide variety of habitats up to 1450 meters. Nests in sandy banks and soil at least four inches deep.	Year – Round	**Low.** The Study Area contains minimally suitable habitat for this species within the perennial drainage and riparian habitat. Deeper pools are absent from the drainage and it is likely too small and shallow to support a permanent population. Western pond turtle may however use the drainage/Study Area as a movement corridor between more suitable habitat patches offsite. One documented occurrence within 5 miles of the Study Area (CDFW 2019).
Birds				
Black swift *Cypseloides niger*	FSC; CSC; --; -- Nesting	Typically occurs near coastal bluffs and mountains; forages over a wide variety of habitats. Constructs nests from mud and plant material along cliffs, rocky crevices, and on ledges.	February – October	**None.** No cliffs, ledges, or other suitable nest locations occur within the Study Area; suitable habitat is absent.
Northern goshawk *Accipiter gentilis*	--; CSC; --; -- Nesting	Found in dense, mature, conifer and deciduous forests interspersed with meadows and riparian areas. Most often nests on north slopes in the densest parts of stands.	Year – Round	**None.** Dense forest habitat does not occur within or near the Study Area; suitable habitat is absent.
Tricolored blackbird *Agelaius tricolor*	FSC; CCE; --; -- Nesting Colony	Nests in colonies near fresh water, usually within emergent wetland habitat with tall, dense cattails, tule, willow, blackberry, wild rose, and other marshy vegetation. Forages in open grassland, wetland, and agricultural habitats.	Year – Round	**None.** The Study Area does not contain wetland habitat and suitable stands of dense vegetation do not occur within the Study Area. Although some blackberries and willows occur within the riparian habitat, they are too small and dispersed to likely support a colony of nesting tricolor blackbirds. Suitable foraging habitat is also absent from the Study Area and its surroundings.
Mammals				
Fisher - West Coast DPS *Pekania pennanti*	--; CCT; --; --	Found in large, mature, dense forest stands with snags and greater than 50% canopy closure. Dens in a variety of protected cavities such as hollow logs, trees, and snags. Typically avoids areas with human activity.	Year – Round	**None.** The Study Area does not contain dense forest habitat and is located in an area with moderate levels of human activity; suitable habitat is absent.
North American porcupine *Erethizon dorsatum*	--; CSA; --; --	Found in montane conifer forests with good understory of herbs, grasses, shrubs, and wet meadow habitats. Dens in caves, rock crevices, hollow logs, snags, abandoned burrows, and dense foliage.	Year – Round	**None.** Forest habitat does not occur within the Study Area. Suitable den sites are also absent from the Study Area. One documented occurrence within 5 miles of the Study Area (CDFW 2019).

Appendix B
Regionally Occurring Listed and Special-Status Species

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Pallid bat *Antrozous pallidus*	--; CSA; --; --	Found in grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forest habitats. Roosts in colonies usually in rock crevices, caves, mines, hollow trees, and buildings.	March – October	**Low.** Minimally suitable habitat is present in the Study Area. Roost locations may occur within the various buildings and structures in the Study Area. However, the current levels of human activity may limit the likelihood of occurrence.
Silver-haired bat *Lasionycteris noctivagans*	--; CSA; --; --	Found in coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodland, and valley foothill and montane riparian habitats below 2750 meters. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark.	(Feb.) March – October	**Low.** Minimally suitable habitat is present in the Study Area. Roost locations may occur within the trees and various buildings and structures in the Study Area. However, the current levels of human activity may limit the likelihood of occurrence.
Townsend's big-eared bat *Corynorhinus townsendii*	--; CSC; --; --	Found in a variety of habitats, usually mesic, featuring brush, trees, and habitat edges. Roosts in small colonies in caves, tunnels, mines, and buildings.	(Mar.) April – October	**Low.** Minimally suitable habitat is present in the Study Area. Roost locations may occur within the various buildings and structures in the Study Area. However, the current levels of human activity may limit the likelihood of occurrence.
Yuma myotis *Myotis yumanensis*	--; CSA; --; --	Found in open forests and woodlands with sources of water over which to feed usually not above 2560 meters. Roosts in large colonies in buildings, caves, mines, and under bridges.	March – October	**Low.** Minimally suitable habitat is present in the Study Area. Roost locations may occur within the various buildings and structures in the Study Area. However, the current levels of human activity may limit the likelihood of occurrence.

Table 2 includes state and federal species of concern and Rank 1 and 2 CNPS species.

Appendix B
Regionally Occurring Listed and Special-Status Species

Table 3 — Other Species of Interest

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
Brandegee's clarkia *Clarkia biloba* ssp. *brandegeeae*	--; --; --; 4.2	Annual herb often found on roadcuts within chaparral, cismontane woodland, and lower montane coniferous forest from 75 to 915 meters. Known from approximately 89 occurrences in Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba counties.	May – July	**None.** Chaparral, cismontane woodland, and forest habitats are absent from the Study Area and no road cuts occur; suitable habitat is absent. One documented occurrence within 5 miles of the Study Area (CDFW 2019).
Butte County fritillary *Fritillaria eastwoodiae*	--; --; --; 3.2	Perennial bulbiferous herb with a partial affinity for serpentinite occurring within chaparral, cismontane woodland, and lower montane coniferous forest openings from 50 to 1,500 meters. Known from approximately 235 occurrences in Butte, El Dorado, Nevada, Placer, Shasta, Tehama and Yuba counties.	March – June	**None.** Serpentine soil, chaparral, cismontane woodland, and forest habitats are absent from the Study Area; suitable habitat is absent. One documented occurrence within 5 miles of the Study Area (CDFW 2019).
Dubious pea *Lathyrus sulphureus* var. *argillaceus*	--; --; --; 3	Perennial herb occurring in cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest from 150 to 930 meters. Known from 7 occurrences in Calaveras, El Dorado, Nevada, Placer, Shasta, and Tehama counties.	April – May	**None.** Cismontane woodland and forest habitats do not occur within the Study Area; suitable habitat is absent.
Invertebrates				
Alabaster Cave harvestman *Banksula californica*	--; CSA; --; --	Cave harvestman found in Alabaster Cave in El Dorado county.	Year – Round	**None.** Suitable habitat does not occur within the Study Area.
An andrenid bee *Andrena subapasta*	--; CSA; --; --	Ground-nesting solitary bee found in grasslands near vernal pools.	Spring – Fall	**None.** Grasslands and vernal pools do not occur within the Study Area; suitable habitat is absent.
Cosumnes stripetail *Cosumnoperla hypocrena*	--; CSA; --; --	Uncommon stonefly found in freshwater habitats.	Spring – Fall	**Low.** The perennial stream may provide suitable habitat for this species.
Galile's cave harvestman *Banksula galilei*	--; CSA; --; --	Cave harvestman found in Robber's Cave complex in Placer county.	Year – Round	**None.** Suitable habitat does not occur within the Study Area.
Gold rush hanging scorpionfly *Orobittacus obscurus*	--; CSA; --; --	Hanging scorpionfly found in sheltered areas along forested stream banks.	Spring – Fall	**None.** The Study Area does not contain forested stream banks; suitable habitat is absent.
Gailes cave harvestman *Banksula grubbsi*	--; CSA; --; --	Cave harvestman found in caves.	Year – Round	**None.** Suitable habitat does not occur within the Study Area.
Morrison bumble bee *Bombus morrisoni*	--; CSA; --; --	Ground-nesting solitary bumble bee found in a variety of open habitats. Friable soil and abundant food sources such as wildflowers are necessary.	Spring – Fall	**None.** The Study Area does not contain loose, friable soil, and few suitable food sources for this species occur.
Obscure bumble bee *Bombus caliginosus*	--; CSA; --; --	Ground-nesting solitary bumble bee found in a variety of open habitats. Friable soil and abundant food sources such as wildflowers are necessary.	Spring – Fall	**None.** The Study Area does not contain loose, friable soil, and few suitable food sources for this species occur.
Spiny rhyacophilan caddisfly *Rhyacophila spinata*	--; CSA; --; --	Caddisfly found along vegetated banks of rapidly flowing water.	Spring – Fall	**None.** Although the perennial stream in the Study Area consists of vegetated banks, the water is not fast flowing.
Tight coin (=Yates' snail) *Ammonitella yatesii*	--; CSA; --; --	Land snail found in limestone caves and outcroppings.	Year – Round	**None.** Suitable habitat does not occur within the Study Area.
Western pearlshell *Margaritifera falcata*	--; CSA; --; --	Freshwater mussel found in cold clean creeks and rivers with sand, gravel, and cobble substrates that support salmonid populations.	Year – Round	**None**. The perennial stream within the Study Area does not contain suitable substrate for this species.

Table 3 includes Rank 3 and 4 CNPS species and non-listed invertebrates, which may not be subject to CEQA review.

Appendix C

Plant and Wildlife Species Observed in the Study Area

Appendix C
Plant Species Observed in the Study Area

Family	Scientific Name*,†	Common Name	Habitat[1]
Amaryllidaceae	*Narcissus pseudonarcissus**	Daffodil	UPL
Apiaceae	*Daucus carota**	Wild carrot	UPL, WET
Apocynaceae	*Vinca major**	Bigleaf periwinkle	UPL
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	Coyote brush	FH, MTN, CSS
Asteraceae	*Erigeron canadensis**	Canada horseweed	UPL
Asteraceae	*Centaurea solstitialis**	Yellow star thistle	UPL
Asteraceae	*Lactuca serriola*	Prickly lettuce	UPL
Asteraceae	*Taraxacum officinale**	Common dandelion	UPL
Asteraceae	*Chondrilla juncea**	Rush skeletonweed	UPL
Asteraceae	*Xanthium strumarium*	Rough cocklebur	WET, FH, UPL
Brassicaceae	*Brassica* cf. *nigra**	Black mustard	UPL
Brassicaceae	*Nasturtium officinale*	Watercress	WET, WR
Cupressaceae	*Calocedrus decurrens*	Incense cedar	FH, MTN, UPL
Cyperaceae	*Cyperus* cf. *eragrostis*	Nutsedge	WET, WR
Fabaceae	*Acmispon glaber*	Deerweed	CHP, CSS
Fagaceae	*Quercus lobata*	Valley oak	FH, MTN, UPL
Fagaceae	*Robinia pseudoacacia**	Black locust	UPL
Geraniaceae	*Erodium botrys**	Big heron bill	UPL
Geraniaceae	*Erodium cicutarium**	Red stemmed filaree	UPL
Geraniaceae	*Geranium mole**	Crane's bill geranium	UPL
Juncaceae	*Juncus* patens	Common rush	WET
Onagraceae	*Epilobium brachycarpum*	Annual fireweed	UPL, FH, MTN
Phrymaceae	*Erythranthe guttata*	Yellow monkey flower	WET, WR
Poaceae	*Bromus hordeaceus**	Soft brome	UPL
Poaceae	*Cynodon dactylon**	Bermuda grass	UPL
Poaceae	*Elymus caput-medusae**	Medusa head	UPL
Poaceae	*Elymus glaucus*	Beardless wild rye	UPL, FH, MTN
Polygonaceae	*Rumex transitorius*	Willow dock	WET, WR
Rosaceae	*Rubus armeniacus**	Himalayan blackberry	UPL, WET
Salicaceae	*Salix laevigata*	Red willow	WET, WR

* Non-native

† Sensitive

1 FH: Foothills, MTN: Montane, UPL: Uplands, WET: wetlands, WR: wetland riparian

Appendix C
Wildlife Species Observed in the Study Area

Scientific Name	Common Name
Aphelocoma californica	California scrub jay
Callipepla californica	California quail
Cathartes aura	turkey vulture
Corvus brachyrhynchos	American crow
Haemorhous mexicanus	house finch
Melozone crissalis	California towhee
Sayornis nigricans	black phoebe
Sturnus vulgaris	European starling
Turdus migratorius	American robin
Tyrannus verticalis	western kingbird
Zenaida macroura	mourning dove

Appendix D

Representative Site Photos

Photo 1. Facing southwest from Highway 193 and Ricci Road corner.

Photo 2. Perennial drainage and riparian wetland; facing south.

Photo 3. Typical view of Study Area; facing southwest.

Photo 4. Typical view of Study Area; facing northeast.

Photo 5. Current structures within Study Area; facing southwest.

Photo 6. Current disturbed/developed area; facing south.

Photo 7. Current disturbed/developed area; facing north.

Photo 8. Current disturbed/developed area near residential houses; facing northeast.

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IS/MND Appendix C

Greenwood Park Cultural Resources Assessment

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Greenwood Park Project

Cultural Resource Assessment

August 2019 | GRD-02

Prepared for:

Georgetown Divide Recreation District
4401 CA-193
Greenwood CA 95635

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

Greenwood Park Project

Cultural Resource Assessment

Prepared for:

Georgetown Divide Recreation District
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August 2019 | GRD-02

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SUMMARY

On behalf of Georgetown Divide Recreation District (GDRD), HELIX Environmental Planning, Inc. (HELIX) has prepared this Cultural Resource Assessment (Assessment) for an approximately 6.30-acre parcel within Greenwood, an unincorporated area of El Dorado County, California (Figure 1).

The GDRD proposes to expand the existing Greenwood Park from one acre (in current recreational use) to approximately six acres and construct two youth sports fields (one multi-use field and one combined youth soccer/softball/baseball field) for day-time use. Other proposed improvements would include a restroom building, parcourse exercise station, picnic tables, bicycle parking, and parking lot. The proposed park expansion of the existing Greenwood Park would provide enhanced recreational opportunities to the local community. The existing Greenwood School House building and adjacent playground would be retained for continued use by the community.

The tasks for this Assessment included a record search at the North Central Information Center (NCIC), a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, a field survey of the proposed project area, and a paleontological study was conducted. In addition, an evaluation of the Greenwood School House for eligibility for listing on the California Register of Historical Resources (CRHR) was conducted.

The purpose of this report is to document the presence or absence of any potentially significant pre-contact or historic age cultural resources located within the project area, and, if resources would be impacted by the proposed project, to propose recommendations to mitigate the impacts. Completion of this investigation fulfills the protocols associated with the California Environmental Quality Act (CEQA). The regulatory framework has been compiled as Appendix B.

A records search including the project area and a 0.25-mile radius was conducted by HELIX at the North Central Information Center, Sacramento, on June 16, 2019. Results from the search indicate that 12 historic age resources have been recorded within the 0.25-mile radius. One of the resources was recorded in 2009 within the project area (P-9-5268) and consists of foundations/structure pads, landscaping and remnants of an orchard. In addition, seven studies have been conducted with the 0.25-mile search radius. A search of the Historic Properties Database File for El Dorado County was negative for National Register eligible or listed historic properties within the 0.25-mile search radius.

On June 18, 2019, HELIX sent a letter to the Native American Heritage Commission (NAHC) to determine if any sacred sites are listed on its Sacred Lands File (SLF) for the project area. A response was received on July 24, 2019 indicating that no sacred sites were identified within the project area. Attached to the response was a list of eight Native American representatives who might have additional information about the project. Information request letters were sent on July 26, 2019. On August 27, 2019 a response was received from Gene Whitehouse, Chairman of the United Auburn Indian Community of the Auburn Rancheria. The letter stated that their records did not show any known cultural resources within the project area, but the area has been identified as potentially sensitive for cultural resources/ tribal cultural resources. Mr. Whitehouse requested a copy of the completed archaeological report for the project. HELIX sent Mr. Whitehouse a copy of this report on September 3, 2019. NAHC correspondence is presented in Appendix C.

HELIX Senior Archaeologist, Carrie D. Wills, surveyed the project area on June 25, 2019. The project area is slightly elevated in some areas and had fair to non-existent ground surface visibility due to tall weedy

vegetation. Some areas within the project area were unable to be surveyed due to access restrictions.

Resource P-9-5268, consisted of foundations/structure pads and landscaping/orchard remnants when it was recorded in 2009. The concrete slab adjacent to Main Street was found during the survey and appears unchanged but the other components were not evident due to overgrowth by weeds, bushes and grasses. Since P-9-5268 has been previously recorded and does not appear to meet any of the eligibility criteria for listing on the CRHR, no additional study or mitigation is required. Although there are five standing structures within the project area, the two residences and the two non-descript storage structures do not meet the minimum age requirement (over 45 years old) for listing on the CRHR.

The fifth structure is the Greenwood School House which was evaluated by HELIX Architectural Historian for listing on the CRHR and is considered eligible for listing. The school and associated playground will be incorporated into the park and will not be physically altered or changed by project development.

No pre-contact resources were discovered during the field survey.

Recommendations

The one historic resource previously recorded within the project area, P-9-5268, is considered not eligible for listing on the CRHR and therefore requires no further study or mitigation measures. In addition, the two homes and the storage structures do not meet the minimum age requirement for listing on the CRHR and therefore require no further study or mitigation measures. The Greenwood School House was evaluated for listing on the CRHR and is considered eligible; however, it will not be physically altered or impacted by project development.

Both the Greenwood School House and the playground are currently in use within the one acre community park and will be retained and incorporated into the Greenwood Park expansion. No direct impacts or change to their current use are proposed for the Greenwood Park expansion project. However, a new parking lot, driveway and landscape trees will be added south and northeast of the Greenwood School House. Although these additions will modify the viewshed surrounding the Greenwood School House, review of aerials dating back to 1946 indicate that the area around the Greenwood School House has changed dramatically since it was originally built with the addition of new homes, ancillary buildings, nearby storage sheds and the playground constructed ca. 2011. Therefore, although the current viewshed will be modified, there will be no visual impacts to the original view as the current viewshed is not the same as the one that surrounded the school when it was originally built.

The noise/vibration technical study for this project indicates there is a potential for a significant impact to existing structures from construction activities. Potential indirect impacts from vibration-generating construction equipment could result without mitigation. At a distance of 10 feet, a large vibratory roller could produce vibration levels as high as 0.58 in/sec PPV. This would exceed the 0.1 in/sec PPV vibration criteria for potential architectural damage to historical structures and would be a potentially significant impact.

To reduce vibration levels to acceptable levels (0.10 in/sec PPV), the use of vibratory rollers would need to be set back from the Greenwood School House by at least 50 feet or be used in static mode (no vibrations) near the buildings.

Mitigation measure CUL-1 would require vibratory rollers to be used in static mode when operating within 50 feet of any historic structure (including the Greenwood School House) or an occupied residence. With implementation of mitigation measure CUL-1, project construction activities would not result in excessive ground borne vibration or ground borne noise levels that would damage structures on or near the project site or result in vibration-related annoyance to building occupants. Construction vibration impacts would be less than significant following mitigation.

However, if future changes or modifications to the Greenwood School House are needed, depending on the extent and type, the alterations/changes may need to comply with the Secretary of Interior's Standards for Treatment of Historic Properties.

No pre-contact resources have been previously recorded within the project area or a 0.25-mile radius and none were discovered during the field survey. Therefore, it is highly unlikely there would be impacts pre-contact resources from project development and no mitigation is required.

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The Georgetown Divide Recreation District (GDRD) proposes to expand the existing Greenwood Park from one acre (in current recreational use) to approximately six acres and construct two youth sports fields (one multi-use field and one combined youth soccer/softball/baseball field) for day-time use. Other proposed improvements would include a restroom building, parcourse exercise station, picnic tables, bicycle parking, and parking lot. The proposed park expansion of the existing Greenwood Park would provide enhanced recreational opportunities to the local community. The existing Greenwood Old School House building and adjacent playground would be retained for continued use by the community. In addition, numerous shade trees and drought tolerant shrubs would be added to the existing landscape elements.

1.2 PROJECT LOCATION

The project area is in unincorporated El Dorado County, in the community of Greenwood, California (Figure 1). The project area is depicted on the U.S. Geological Survey (USGS) 7.5-minute "Greenwood, CA" quadrangle map in Sections 7 and 18 of Township 12N, Range 10E (Figure 2). The surrounding area is predominantly rural residential (Figure 3). The project area consists of area of undeveloped land, residences, a school house and play yard, and vacant lots with storage buildings. During the survey, the open areas were covered with tall weeds and grasses resulting in fair to poor ground surface visibility. All figures are presented in Appendix A.

1.3 ASSESSMENT TEAM

HELIX Senior Archaeologist Carrie D. Wills, M.A., RPA, conducted the pedestrian survey and authored this report. Ms. Kathy Crawford, M.A., Architectural Historian evaluated the Greenwood School House for listing on the California Register of Historical Resources (CRHR). Resumes for Ms. Wills and Ms. Crawford can be found in Appendix G.

2.0 CULTURAL SETTING

Following is a brief overview of the prehistory, ethnography, and historic background, providing a context in which to understand the background and relevance of sites found in the general project area. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview.

Further details can be found in ethnographic studies, mission records, and major published sources, including Beardsley (1948), Bennyhoff (1950), Fredrickson (1973 and 1974), Kroeber (1925), Chartkoff and Chartkoff (1984), and Moratto (1984).

2.1 PRE-CONTACT BACKGROUND

Early archaeological investigations in central California were conducted at sites located in the Sacramento-San Joaquin Delta region. The first published account documents investigations in the Lodi

and Stockton area (Schenck and Dawson 1929). The initial archaeological reports typically contained descriptive narratives, with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, University of California at Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in recognizing archaeological site patterns based on variations of inter-site assemblages. Research during the 1930s identified temporal periods in central California prehistory and provided an initial chronological sequence (Lillard and Purves 1936; Lillard, et al. 1939). In 1939, Lillard noted that each cultural period led directly to the next and that influences spread from the Delta region to other regions in central California (Lillard, et al. 1939). In the late 1940s and early 1950s, Beardsley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that ultimately became known as the Central California Taxonomic System (CCTS). This system proposed a uniform, linear sequence of cultural succession (Beardsley 1948 and 1954). The CCTS system was challenged by Gerow, whose work looked at radiocarbon dating to show that Early and Middle Horizon sites were not subsequent developments but, at least partially, contemporaneous (1954; 1974; Gerow with Force 1968).

To address some of the flaws in the CCTS system, Fredrickson (1973) introduced a revision that incorporated a system of spatial and cultural integrative units. Fredrickson separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (10000 to 6000 B.C.); Lower, Middle and Upper Archaic (6000 B.C. to A.D. 500), and Emergent (Upper and Lower, A.D. 500 to 1800). The suggested temporal ranges are similar to earlier horizons, which are broad cultural units that can be arranged in a temporal sequence (Moratto 1984). In addition, Fredrickson defined several patterns—a general way of life shared within a specific geographical region. These patterns include:

- Windmiller Pattern or Early Horizon (3000 to 1000 B.C.);
- Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500); and
- Augustine Pattern or Late Horizon (A.D. 500 to historic period).

Brief descriptions of these temporal ranges and their unique characteristics follow.

Windmiller Pattern or Early Horizon (3000 to 1000 B.C.)

Characterized by the Windmiller Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests exploitation of numerous types of terrestrial and aquatic species (Bennyhoff 1950; Ragir 1972). Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicates an extensive trade network that may represent the arrival of Utian populations into central California. Also indicative of this period are rectangular Haliotis and Olivella shell beads, and charmstones that usually were perforated.

Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. Fredrickson (1973) suggests that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, the practice of spreading ground ochre over the burial was common at this time (Lillard, et al. 1939). Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles occasionally were present, which suggest the religious or ceremonial significance of the individual (Hughes 1989). During this period, larger populations are suggested by the number and depth of sites compared with the Windmiller Pattern. According to Fredrickson (1973), the Berkeley Pattern reflects gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.

Augustine Pattern or Late Horizon (A.D. 500 to Historic Period)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of Haliotis ornaments of many elaborate shapes and forms. Burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation (Moratto 1984). Judging from the number and types of grave goods associated with the two types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. Johnson (1976) suggests that the Augustine Pattern represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of prehistoric populations (Dickel et al. 1984). Although debate continues over a single model or sequence for central California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

2.2 NATIVE AMERICAN BACKGROUND

At the time of European contact, the project vicinity was occupied by the Nisenan tribe of California Native Americans, sometimes referred to as the Southern Maidu. The Nisenan occupied the drainages of the Yuba, Bear, and American rivers and the lower drainages of the Feather River, bounded by the west bank of the Sacramento River to the west, the crest of the Sierra Nevada to the east, a few miles south of the American River to the south. The northern boundary is not well established due to the Nisenan's

linguistic similarity with neighboring groups but extended somewhere between the Feather and Yuba rivers. Nisenan territory extended approximately 110 miles east to west and 100 miles north to south. Based primarily on linguistic variation, the Nisenan were the southern linguistic group of the Maidu tribe, and together with the Maidu and Konkow, form a subgroup of the California Penutian linguistic family. Distinction is made between the Northern Hill, Southern Hill and Valley Nisenan (Kroeber 1925; Wilson and Towne 1978).

The Valley Nisenan constructed villages on natural rises along streams and rivers, or on gentle slopes with a southern exposure, ranging in size from three to seven houses to forty or fifty. Their houses were dome-shaped and covered with earth, tule mats, or grasses, and major villages contained a semi-subterranean dance house structure covered by earth, tule, and brush. Other village structures were acorn granaries and sweathouses, and brush shelters were used in the summer when out gathering food resources (Beals 1933; Kroeber 1925; Wilson and Towne 1978). The Hill Nisenan constructed their villages, smaller than the Valley ones, on ridges and large flat areas along major streams, and typically had bedrock mortar sites. Their houses were conical-shaped and covered with bark slabs, brush, and skins. Like the Valley Nisenan, the Hill Nisenan also lived in brush shelters during the summer (Wilson and Towne 1978).

The Nisenan political organization was centered on the tribelet. Each village was governed by a headman who served as an advisor and was assisted by a leader who represented each extended family in the village. Tribelets were autonomous and differed from each other with minor cultural variations. The economic and ceremonial activities of each village were administered by a headman whose position was typically passed on patrilineally, although some chiefs were chosen by the villagers. The headman acted as an advisor, directed ceremonies, administered subsistence ventures such as hunting and gathering expeditions, and supervised resource accumulation and distribution (Beals 1933; Wilson and Towne 1978).

The Nisenan subsistence base varied and included gathering seeds and seasonal plant resources, hunting, and fishing. The Nisenan didn't depend on one staple, as their territory provided abundant year-round sources of different food. Acorns were an important food resource and were stored in granaries, in addition to buckeye nuts, digger and sugar pine nuts, and hazelnuts. Ethnographic reports indicate the Nisenan obtained large game such as deer, antelope, tule elk, wildcats, mountain lions, and black bears, by game drives, snares, decoys, deadfalls, using or shooting with bows and arrows. Rabbits and other small game were hunted with sticks, blunted arrows, traps, snares, nets, fire, and rodent hooks. Fish resources such as salmon, sturgeon, suckers, whitefish, and trout were caught using weirs, nets, harpoons, traps, and gorge hooks, with tule balsas and log canoes used for fishing. In the big rivers, freshwater mussels and clams were collected, and eel were caught at waterfalls. Birds were hunted for food, and their feathers and skins were used for clothing, regalia, and decoration. Insects such as grasshoppers, ants, and other insects were eaten, as well as gathered for medicines and poisons (Wilson 1972; Wilson and Towne 1978).

Very little contact existed for the Nisenan outside of their tribelet area, and outside contact was typically only for ceremonies, trade, and warfare (Beals 1933). Some cultural similarity, as well as an attitude of cooperation and defense existed between the Valley Nisenan, the Valley Patwin, and Northern Maidu. The Hill Nisenan traded black oak acorns, pine nuts, Manzanita berries, skins, bows, and bow wood to the valley groups for fish, roots, grasses, shells, beads, salt, and feathers. The Hill Nisenan traded with the Washo to the east for seed beaters and dried fish, with other materials such as magnesite, steatite, obsidian, and shell coming from the west (Wilson and Towne 1978).

Nisenan disposed of the dead by cremation and then burial, usually on the morning after the person had died. The deceased person's property would be burned, and their house moved or destroyed. After the cremation, the bones and ashes would be gathered and buried in the village cemetery (Beals 1933; Kroeber 1929). When a death occurred away from the person's village, they would be cremated where they had died, and their remains would be returned to their village to be buried (Wilson and Towne 1978).

The first contact between the Nisenan was with the Spanish, who first entered the southern portion of the Nisenan territory in 1776. There is no record that the Nisenan were removed to the Spanish Missions, but the tribe did take in escaped missionized Native Americans, including the nearby Miwok. In 1813 a major battle was fought between the Spanish and the Miwok and Nisenan natives near the mouth of the Cosumnes River. By the late 1820's the Nisenan territory was utilized for trapping and the establishment of hunting camps by the American and Hudson's Bay Company. A deposit of gold was discovered in 1848 by James Marshall, causing the Nisenan to be overrun by miners and settlers within just a few years. The ensuing widespread killing, destruction of villages, and persecution of the Nisenan people by the settlers quickly destroyed them as a viable culture (Wilson and Towne 1978).

2.3 HISTORIC BACKGROUND

El Dorado County is located in the central east portion of the state of California, in the Sierra Nevada Mountain Range, northeast of Sacramento. It is one of the original counties in California. In 1891, gold was discovered in El Dorado County. The county filled with thousands of men seeking their fortune in the hills of the Sierra Nevada mountains. At the start of the Gold Rush, men arrived by sea or by trail. However, the boom of the California population resulted in the construction of the railroad, which reached Folsom by 1856 (El Dorado County Historical Museum). In addition to the Gold Rush, the Pony Express made their final stops within the county. Their route now follows Highway 50. In addition to mining, lumber and agriculture were mainstays of the El Dorado economy. The railroad was already being used to transport large quantities of goods, and the forested areas of the county provided an opportunity for the lumber industry to grow. The climate of El Dorado County made it the perfect place for wineries, and during the Gold Rush wineries blossomed. This was a booming industry until the early 1900's, but Prohibition brought an end to it until a revival in the 1950's. As of 2010, there are 88 wineries in the county (El Dorado County Historical Museum).

2.4 GREENWOOD, CALIFORNIA

The community of Greenwood is an unincorporated community located in El Dorado County. The Greenwood area was originally called "Long Valley", and the first general store opened in 1848. It was then renamed Louisville after the first child born in El Dorado County. In 1849, John Greenwood opened a trading post that was the hub of the area, and the name changed to Greenwood (Durham 1998). The Gold Rush brought economic prosperity to Greenwood, and the town boomed with a theatre, multiple hotels and stores, and a brewery. Around $5 million in gold was mined from the Greenwood District, half of which is said to have come from the Sliger Mine. The year of 1851 was considered to be the height of immigration to Greenwood; accounts of preceding years describe a lack of water making mining impossible. Several gold mines were still in operation during the 1880s (Belli 2005). Mining prosperity continued into the 20th century, as quartz mining also became popular. The community of Greenwood is now registered as a California Historical Landmark.

3.0 RECORD SEARCHES

3.1 NORTH CENTRAL INFORMATION CENTER RECORD SEARCH

On July 10, 2019, a record search was conducted by HELIX at the North Central Information Center (NCIC), located in Sacramento, California. The record search included the project area and a 0.25-mile radius outside the project area boundaries. The record search included current inventories of the National Register of Historic Places (NR), CRHR, California Inventory of Historical Resources, Historic Properties Database File for El Dorado County, California State Historic Landmarks, and the California Points of Historical Interest.

Twelve resources (all historic sites) have been recorded within the 0.25-mile search radius (Table 1). One historic age resource was recorded within the project area in in 2009 and given the NCIC number P-9-5268. The site consists of foundations/structure pads, landscaping and remnants of an orchard. It was not evaluated for listing on the CHRH in 2009. In addition, seven studies have been conducted within the 0.25-mile search radius (Table 2). A search of the Historic Properties Database File for El Dorado County was negative for NR or eligible or listed historic properties within the 0.25-mile search radius. None of the historic sites were considered eligible for listing on the NR.

Table 1
RESOURCES WITHIN 0.25-MILE RADIUS OF THE PROJECT AREA

Resource P-09	Description	Author/ Year Recorded	Within Project Area?
003150	Historic Site (water conveyance system)	McKinstry/2005	No
003153	Historic Site (mines/quarries/tailings)	McKinstry/2005	No
003426	Historic Building and Site (foundations/structure pads, privies/dumps/trash scatters/water conveyance system, roads/trails/railroad grades, mines/quarries/tailings)	Stams/2004	No
003428	Historic Site (mines/quarries/tailings)	McKinstry/2004	No
003429	Historic Site (mines/quarries/tailings)	McKinstry/2004	No
003430	Historic Site (trash dump)	McKinstry/2004	No
003431	Historic Site (dams)	McKinstry/2004	No
003432	Historic Site (mines/quarries/tailings)	McKinstry/2004	No
003433	Historic Site (water conveyance system)	McKinstry/2004	No
003625	Historic Building	Decker/1985	No
005247	Historic Object (monument/mural/gravestone)	Elder/1980; Dixon/1959	No
005268	Historic Site (foundations/structure pads, landscaping/orchard)	Supernowicz/2009	Yes

Table 2
SURVEYS CONDUCTED WITHIN 0.25-MILE RADIUS OF THE PROJECT AREA

Report	Author, Year	Title
001293	Levy, David/ 1979	Archeological and Historical Resources Survey and Impact Assessment for Averbeck Timber Harvest Plan
006342	McKinstry, Steve/2005	An Archaeological Survey report for the Amendment to THP #4-05-02
007006	McKinstry, Steve/2005	An Archaeological Survey Report for the Gold N Greenwood Timber Harvesting Plan El Dorado County, California.
007366	Decker, Dean/ 1985	Black Oak Mine School District/Greenwood Community R&PP
009000	Robert W. Allen/ 2002	Hill THP
009326	Laura Leach-Palm, et al./2008	Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways in Butte, Colusa, El Dorado, Glenn, Nevada, Placer, Sacramento, Sierra, Sutter, Yolo, and Yuba Counties
010307	Historic Resource Associates/2009	Cultural Resources Study of the Proposed Georgetown Kingdom Hall, Assessor's Parcel No. 074-173-03, 06 and 12, State Highway 193 and Ricci Road, Greenwood

Source: NCIC July 10, 2019

3.2 NATIVE AMERICAN HERITAGE COMMISSION SLF SEARCH

A Sacred Lands File (SLF) search request was submitted to the Native American Heritage Commission (NAHC) on June 18, 2019, and a response letter was received from the NAHC on July 24, 2019. The response letter indicated that the search results were negative. In addition, the response included a list of eight Native American representatives who might be able to provide additional information concerning the project area. On July 26, 2019, HELIX sent information request letters to each of the eight tribal members regarding the project. On August 27, 2019 a response was received from Gene Whitehouse, Chairman of the United Auburn Indian Community of the Auburn Rancheria. The letter stated that their records did not show any known cultural resources within the project area, but the area has been identified as potentially sensitive for cultural resources/tribal cultural resources. Mr. Whitehouse requested a copy of the completed archaeological report for the project. HELIX sent Mr. Whitehouse a copy of this report on September 3, 2019. NAHC correspondence is presented in Appendix C.

3.3 PALEONTOLOGICAL REPORT

In June 2019, HELIX conducted a search of the University of California Museum of Paleontology digital records and reviewed relevant academic literature and regulatory reports to determine the presence of previously recorded fossil localities in the Study Area and to assess the likelihood that a unique paleontological resource will be destroyed by the proposed project. Geologic maps and soil reports provided the units anticipated at depth within the Study Area.

Results of the record search concluded that ground disturbance associated with the proposed project will not destroy a unique paleontological resource in the soils present at the surface of the Study Area. The bedrock underlaying the Study Area may contain invertebrate fossils of the Mariposa Formation, but its fauna are well-documented. Bedrock disturbance associated with the proposed project may encounter new or unanticipated paleontological resources. The paleontological study is presented in its entirety in Appendix D.

4.0 PEDESTRIAN SURVEY

HELIX Senior Archaeologist, Carrie D. Wills, surveyed the project area on June 25, 2019. The project area is bounded by Main Street to the west, Ricci Road to the south and east and Hwy 193 to on the north. It is relatively flat, with some elevated areas mainly at the northern end of the project south of Hwy 193. Representative photographs were taken and are compiled in Appendix E.

The open field area south of Hwy 193 had very poor visibility due to star thistle, tall grasses and stands of blackberries. In the southern portion of the project area are two large, metal-sided storage buildings that, according to historic aerials, are not over 45 years old. Forty-five years is the minimum age requirement for a building or structure to be listed on the NR or CRHR and since these do not meet that minimum age, they do not require a formal evaluation to determine if they are significant resources or historic properties. Southeast of the storage buildings is a large (150' x 35') pile of what appears to be ground asphalt. Resource P-9-5268, consisting of foundations/structure pads, and landscape/orchard remnants was recorded in 2009 adjacent to Main Street. The concrete slab adjacent to Main Street was found during the survey and appears unchanged but the other components were not evident due to overgrowth by weeds, bushes and grasses. Since P-9-5268 has been previously recorded (Supernowicz/2009) and does not appear to meet any of the eligibility criteria for listing on the CRHR, no additional study or mitigation is required.

Located on the east side of Main Street near the southeast corner of project area are two residences. Review of El Dorado County Assessor's records indicate the residences were constructed in 1976 and are therefore less than 45 years old and require no evaluation for listing on the CRHR. The area east of the southernmost building are old cars, numerous piles of rusted metal, firewood, logs, a motor home and what appeared to be general debris. Access to this area was not possible due to access restrictions.

4.1 GREENWOOD SCHOOL HOUSE

Northwest of the storage buildings is the Greenwood School House, built 1859 and an associated playground, constructed ca. 2011. The Greenwood School House is a single-story, rectangular shaped, one-room school building located within the community park in Greenwood. The building's foundation rests upon a set of concrete pier footings. The exterior walls of the building are composed of horizontal shiplap siding, painted white. The building has a front gable roof system with metal sheeting on the roof and a narrow eave overhang. A metal stovepipe projects from the roof. A horizontal decorative railing extends across the lower edge of the front gable section on both the front and rear elevations.

The Greenwood School House was evaluated by Kathy Crawford, M.A., HELIX Architectural Historian, for listing on the CRHR. Ms. Crawford's evaluation was completed on Department of Parks and Recreation (DPR) forms and concludes that the School House meets two of the four criteria for listing on the CRHR. The Greenwood School House appears to meet Criterion 1 associated with events that have made a significant contribution to the broad patters of local or regional history, or the cultural heritage of California as it was one of the first schools built in Greenwood and it continues to be an important element in the life of the Greenwood community.

The Greenwood School House also appears to meet Criterion 3 - embodies the distinctive characteristics of a type, period, region or method of construction; or that represent the work of a master; or they possess high artistic values; or that represent a significant and distinguishable entity whose components

may lack individual distinction. The style and type of the School House rises to a level of significance to qualify for the CRHR as it is a good example of a rural, locally built with local materials, one-room School House. The building has also retained a sufficient amount of integrity for historic significance. The full historic evaluation is presented in Appendix F.

5.0 RECOMMENDATIONS

5.1 SUMMARY

In accordance with CEQA regulations, HELIX assessed the Greenwood Project area for impacts to cultural resources. A records search including the project area and a 0.25-mile radius was conducted by HELIX at the North Central Information Center, Sacramento, on June 16, 2019. Results from the search indicate that 12 historic age resources have been recorded within the 0.25-mile radius. In addition, seven studies have been conducted with the 0.25-mile search radius. A search of the Historic Properties Database File for El Dorado County was negative for National Register or eligible or listed historic properties within the 0.25-mile search radius.

On June 18, 2019, HELIX sent a letter to the NAHC to determine if any sacred sites are listed on its SLF for the project area. A negative response was received on July 24, 2019 that included a list of eight Native American representatives who might have additional information about the project. Information request letters were sent on July 26, 2019. One letter was received from Gene Whitehouse, Chairman at UAIC requesting a copy of this report; a copy was sent to Mr. Whitehouse on September 3, 2019.

HELIX Senior Archaeologist, Carrie D. Wills, surveyed the project area on June 25, 2019. The project area is slightly elevated in some areas and had fair to non-existent ground surface visibility due to tall weedy vegetation. Some areas within the project area were unable to be surveyed due to access restrictions. The concrete slab adjacent to Main Street (P-9-5268) was found and appears unchanged but the other components were not evident due to overgrowth by weeds, bushes and grasses. Since P-9-5268 appears not eligible for the CRHR, no additional study or mitigation is required. Although there are five standing structures within the project area, the two residences and the two non-descript storage structures do not meet the minimum age requirement (over 45 years old) for listing on the CRHR.

The fifth structure is the Greenwood School House which was evaluated by a HELIX Architectural Historian for listing on the CRHR and is considered eligible for listing. The Greenwood School House and associated playground are currently used within the community park. In addition, no direct physical alterations or changes in use are proposed for the Greenwood School House or the playground.

5.2 RECOMMENDATIONS

The one historic resource previously recorded within the project area, the two homes, and the two storage structures do not meet the minimum age requirement for listing on the CRHR and therefore require no further study or mitigation measures.

Both the Greenwood School House and the ca. 2011 playground are currently in use within the one acre community park and will be retained and incorporated into the Greenwood Park expansion. No direct impacts or change to their current use are proposed for the Greenwood Park expansion project. However, a new parking lot, driveway and landscape trees will be added south and northeast of the

Greenwood School House. Although these additions will modify the viewshed surrounding the Greenwood School House, review of aerials dating back to 1946 indicate that the area around the school has changed dramatically since it was originally built with the addition of new homes, ancillary buildings, nearby storage sheds and the playground constructed ca. 2011. Therefore, although the current viewshed will be modified, no significant visual viewshed impacts would occur as the current surrounding viewshed has been significantly altered since the school was constructed in 1859.

The noise/vibration technical study for this project indicates there is a potential for a significant impact to existing structures from construction activities. Potential indirect impacts from vibration-generating construction equipment could result without mitigation. At a distance of 10 feet, a large vibratory roller could produce vibration levels as high as 0.58 in/sec PPV. This would exceed the 0.1 in/sec PPV vibration criteria for potential architectural damage to historical structures and would be a potentially significant impact.

To reduce vibration levels to acceptable levels (0.10 in/sec PPV), the use of vibratory rollers would need to be set back from the Greenwood School House by at least 50 feet or be used in static mode (no vibrations) near the buildings. With implementation of mitigation, project construction activities would not result in excessive ground borne vibration or ground borne noise levels that would damage structures on or near the project site or result in vibration-related annoyance to building occupants. Construction vibration impacts would be less than significant following mitigation.

If future physical changes or modifications to the Greenwood School House are needed, depending on the extent and type, the alterations/changes may need to comply with the Secretary of Interior's Standards for Treatment of Historic Properties.

No pre-contact resources have been previously recorded within the project area or a 0.25-mile radius and none were discovered during the field survey. Therefore, it is highly unlikely there would be impacts to historic or precontact resources from project development and no additional cultural resource studies or mitigation is recommended.

Although it is highly unlikely that there would be an impact to cultural resources from project development and no additional studies or mitigation is recommended, there is always the possibility that ground-disturbing activities during construction may uncover previously unknown buried human remains or cultural resources. Therefore, Inadvertent Discovery Procedures are provided.

6.0 INADVERTENT DISCOVERY PROCEDURES

6.1 ACCIDENTAL DISCOVERY OF HUMAN REMAINS

In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall

contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or

2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:

    - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
    - The descendent identified fails to make a recommendation; or
    - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

6.2 ACCIDENTAL DISCOVERY OF CULTURAL RESOURCES

As mandated by Section 106 of the NHPA, federal agencies must consider the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate adverse effects on such properties [36 CFR 800.1(a)]. Likewise, CEQA regulations state, "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC Section 21084.1). "Substantial adverse change" means "demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired" [PRC Section 5020.1(q)].

If an archaeological site qualifies for listing on the NRHP or CR, the provisions in Section 106 and CEQA mandate that the lead agencies further determine whether the proposed undertaking will have an "effect" and "adverse effect" upon the site [36 CFR 800.4(d)(1)]. According to federal regulations, "Effect means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register" [36 CFR 800.16(i)]. The criteria of adverse effect are:

> An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative [36 CFR 800.5(a)(1)].

In accordance with PRC Section 21082 and Section 15064.5 of the CEQA Guidelines and [36 CFR 800] of Section 106 of the NHPA, if buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to

determine whether the resource requires further study. The archaeologist shall make recommendations to the lead agency concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds, consistent with Section 15064.5 of the CEQA Guidelines and 36 CFR 800. Cultural resources could consist of but are not limited to stone, bone, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. In accordance with PRC Section 21082 and Section 15064.5 of the CEQA Guidelines, no further grading or construction activity shall occur within 50 feet of the discovery until the lead agency approves the measures to protect these resources.

In addition, reasonable efforts to avoid, minimize, or mitigate adverse effects to the property will be taken and the State Historic Preservation Officer (SHPO) and Indian tribes with concerns about the property, and the Advisory Council on Historic Preservation (Council) will be notified within 48 hours in compliance with 36 CFR 800.13 (b)(3).

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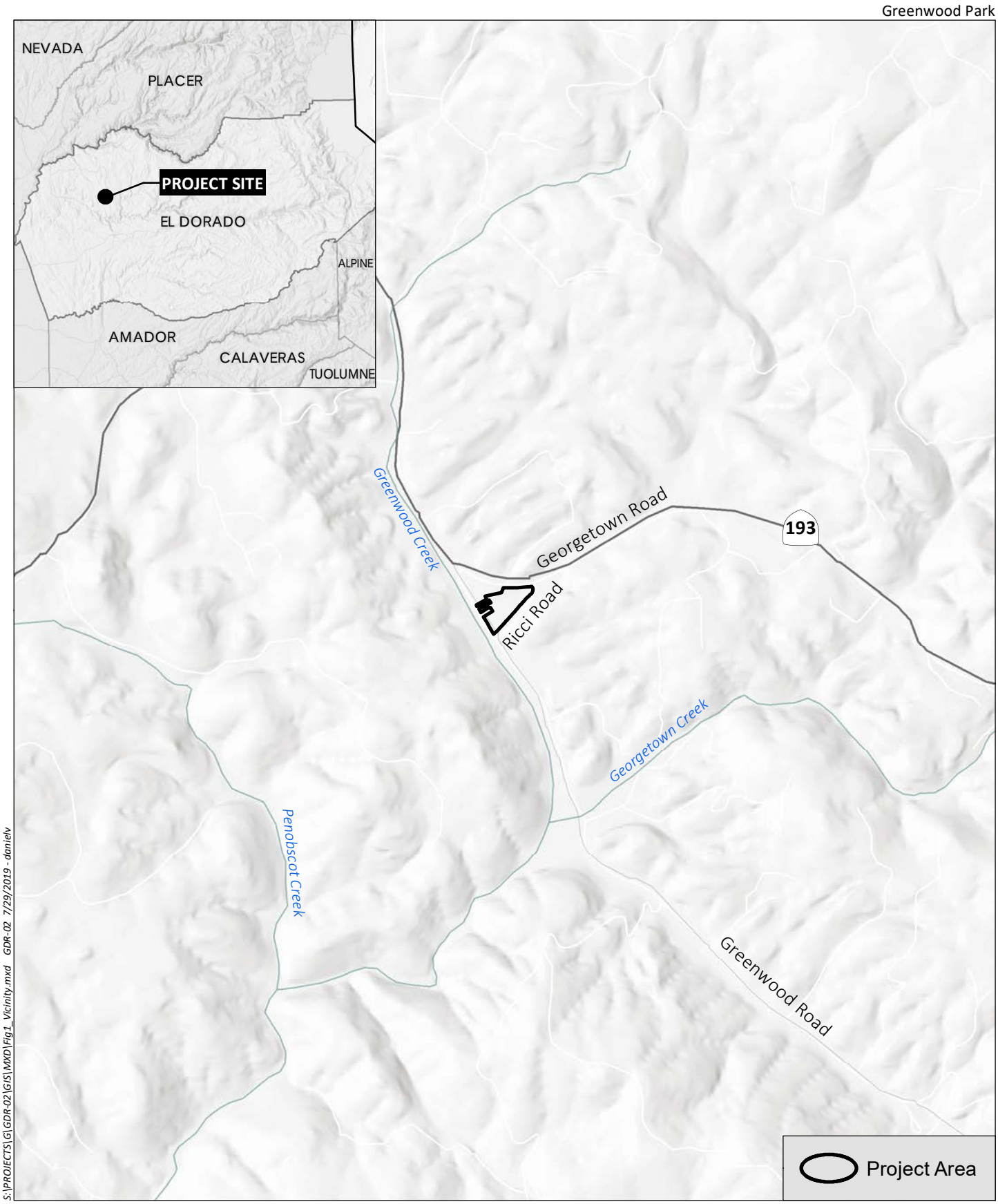
Appendix A

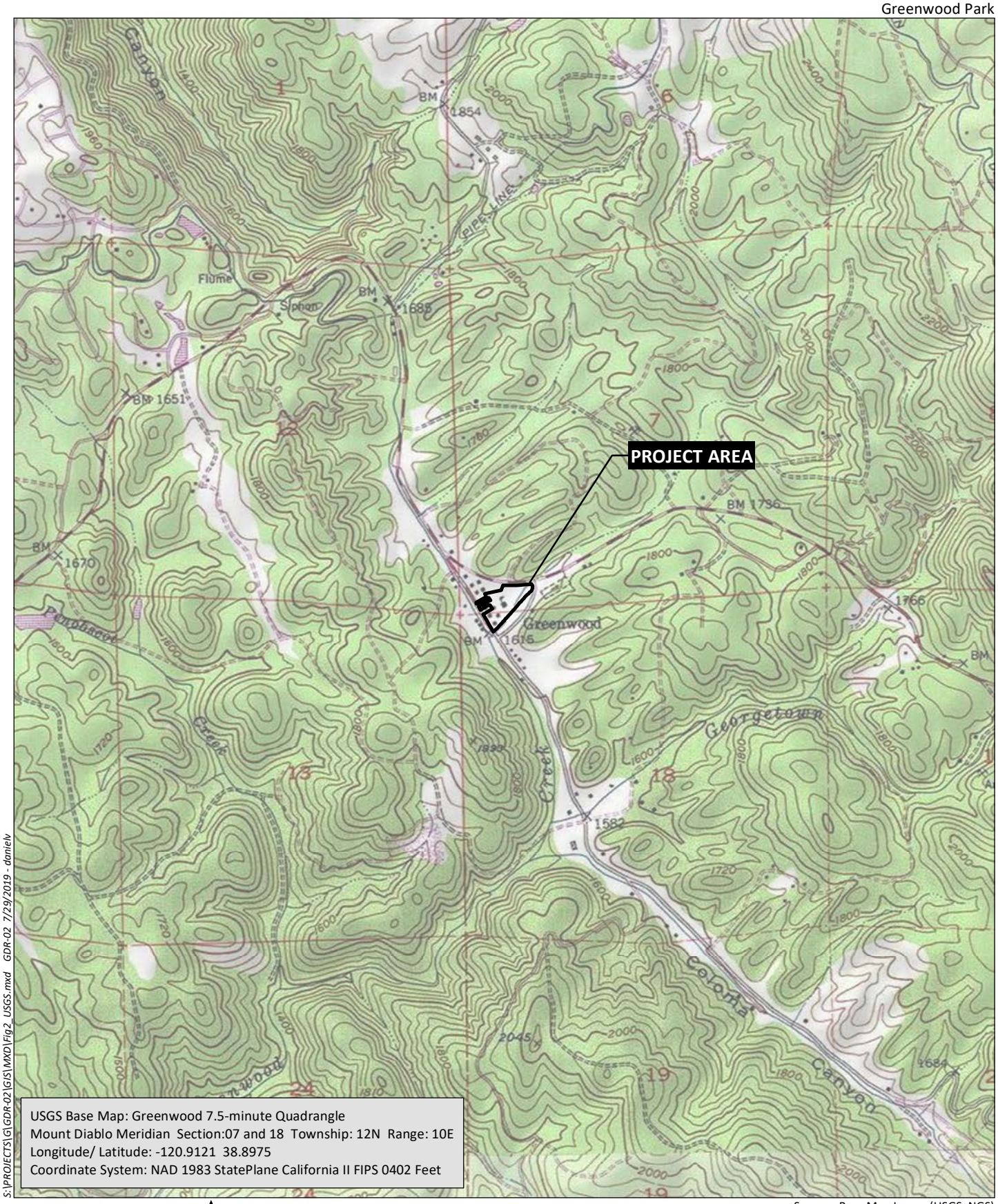
Figures



HELIX Environmental Planning

Vicinity Map

Figure 1



USGS Base Map: Greenwood 7.5-minute Quadrangle
Mount Diablo Meridian Section:07 and 18 Township: 12N Range: 10E
Longitude/ Latitude: -120.9121 38.8975
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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Source: Base Map Layers (USGS, NGS)

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HELIX Environmental Planning

USGS 7.5-minute Quadrangle Map

Figure 2

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Source: Base Map Layers (ESRI; DigitalGlobe, 2018)

HELIX Environmental Planning

Aerial

Figure 3

Appendix B

Regulatory Framework

REGULATORY FRAMEWORK

Government agencies, including federal, state, and local agencies, have developed laws and regulations designed to protect significant cultural resources that may be affected by projects regulated, funded, or undertaken by the agency. Federal and state laws that govern the preservation of historic and archaeological resources of national, state, regional, and local significance include the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and the California Environmental Quality Act (CEQA). In addition, laws specific to work conducted on federal lands includes the Archaeological Resources Protection Act (ARPA), the American Antiquities Act, and the Native American Graves Protection and Repatriation Act (NAGPRA).

The following CEQA criteria were used to evaluate the significance of potential impacts on cultural resources for the proposed project. An impact would be considered significant if it would affect a resource eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), or if it is identified as a unique archaeological resource.

State-Level CEQA Evaluation Processes

An archaeological site may be considered an historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California per PRC §5020.1(j) or if it meets the criteria for listing on the CR per California Code of Regulations (CCR) at Title 14 CCR §4850.

The most recent amendments to the CEQA guidelines direct lead agencies to first evaluate an archeological site to determine if it meets the criteria for listing in the CR. If an archeological site is an historical resource, in that it is listed or eligible for listing in the CR, potential adverse impacts to it must be considered as stated in PRC §§21084.1 and 21083.2(l). If an archeological site is considered not to be an historical resource but meets the definition of a "unique archeological resource" as defined in PRC
§21083.2, then it would be treated in accordance with the provisions of that section.

With reference to PRC §21083.2, each site found within an APE will be evaluated to determine if it is a unique archaeological resource. A unique archaeological resource is described as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3. Is directly associated with a scientifically recognized important pre-contact or historic event or person.

As used in this report, "non-unique archaeological resource" means an archaeological artifact, object, or site that does not meet the criteria for eligibility for listing on the CR, as noted in subdivision (g) of PRC §21083.2. A non-unique archaeological resource requires no further consideration, other than

simple recording of its components and features. Isolated artifacts are typically considered non-unique archaeological resources. Historic structures that have had their superstructures demolished or removed can be considered historic archaeological sites and are evaluated following the processes used for pre-contact sites. Finally, OHP recognizes an age threshold of 45 years. Cultural resources built less than 45 years ago may qualify for consideration, but only under the most extraordinary circumstances.

Title 14, CCR, Chapter 3 §15064.5 is associated with determining the significance of impacts to archeological and historical resources. Here, the term historical resource includes the following:

1. A resource listed in, or determined eligible by the State Historical Resources Commission, for listing in the CR (PRC §5024.1; Title 14 CCR, §4850 et seq.).

2. A resource included in a local register of historical resources, as defined in PRC §5020.1(k) or identified as significant in an historical resource survey meeting the PRC §5024.1(g) requirements, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. 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, educational, social, political, military, or cultural annals of California may be considered a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (PRC §5024.1; Title 14 CCR §4852) including the following:

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

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

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

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

Typically, archaeological sites exhibiting significant features qualify for the CR under Criterion D because such features have information important to the prehistory of California. A lead agency may determine that a resource may be a historical resource as defined in PRC §§5020.1(j) or 5024.1 even if it is:
Not listed in or determined to be eligible for listing in the CR.

Not included in a local register of historical resources pursuant to PRC §5020.1(k).

Identified in an historical resources survey per PRC §5024.1(g).

Threshold of Significance

If a project will have a significant impact on a cultural resource, several steps must be taken to determine if the cultural resource is a "unique archaeological resource" under CEQA. If analysis and/or testing determine that the resource is a unique archaeological resource and therefore

subject to mitigation prior to development, a threshold of significance should be developed. The threshold of significance is a point where the qualities of significance are defined and the resource is determined to be unique under CEQA. A significant impact is regarded as the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource will be reduced to a point that it no longer meets the significance criteria. Should analysis indicate that project development will destroy the unique elements of a resource; the resource must be mitigated for under CEQA regulations. The preferred form of mitigation is to preserve the resource in-place, in an undisturbed state. However, as that is not always possible or feasible, appropriate mitigation measures may include, but are not limited to:

1. Planning construction to avoid the resource.

2. Deeding conservation easements.

3. Capping the site prior to construction.

If a resource is determined to be a "non-unique archaeological resource," no further consideration of the resource by the lead agency is necessary.

Assembly Bill 52 and Related Public Resources Code Sections

AB 52 was approved by California State Governor Edmund Gerry "Jerry" Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015.

The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a Lead Agency shall, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for the tribal cultural resources update to Appendix G of the CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a Lead Agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the Lead Agency shall: provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project and who have requested in writing to be informed by the Lead Agency.Tribes interested in consultation must respond in writing within 30 days from receipt of the Lead Agency's formal written notification and the Lead Agency must begin consultation within 30 days of receiving the tribe's request for consultation.20

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a

tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.21

If a California Native American Tribe has requested consultation pursuant to PRC Section 21080.3.1 and has failed to provide comments to the Lead Agency, or otherwise failed to engage in the consultation process, or if the Lead Agency has complied with Section 21080.3.1(d) and the California Native American Tribe has failed to request consultation within 30 days, the Lead Agency may certify an EIR or adopt an MND.22

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American Tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the Lead Agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the Lead Agency publishes any information submitted by a California Native American Tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Appendix C

NAHC Correspondence

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: GDR-02 Greenwood Park Project

County: El Dorado

USGS Quadrangle Name: Greenwood, CA 7.5'

Township: 12N **Range:** 10E **Section(s):** 7, 18

Company/Firm/Agency: HELIX Environmental Planning, Inc.

Street Address: 11 Natoma Street

City: Folsom, CA **Zip:** 95630

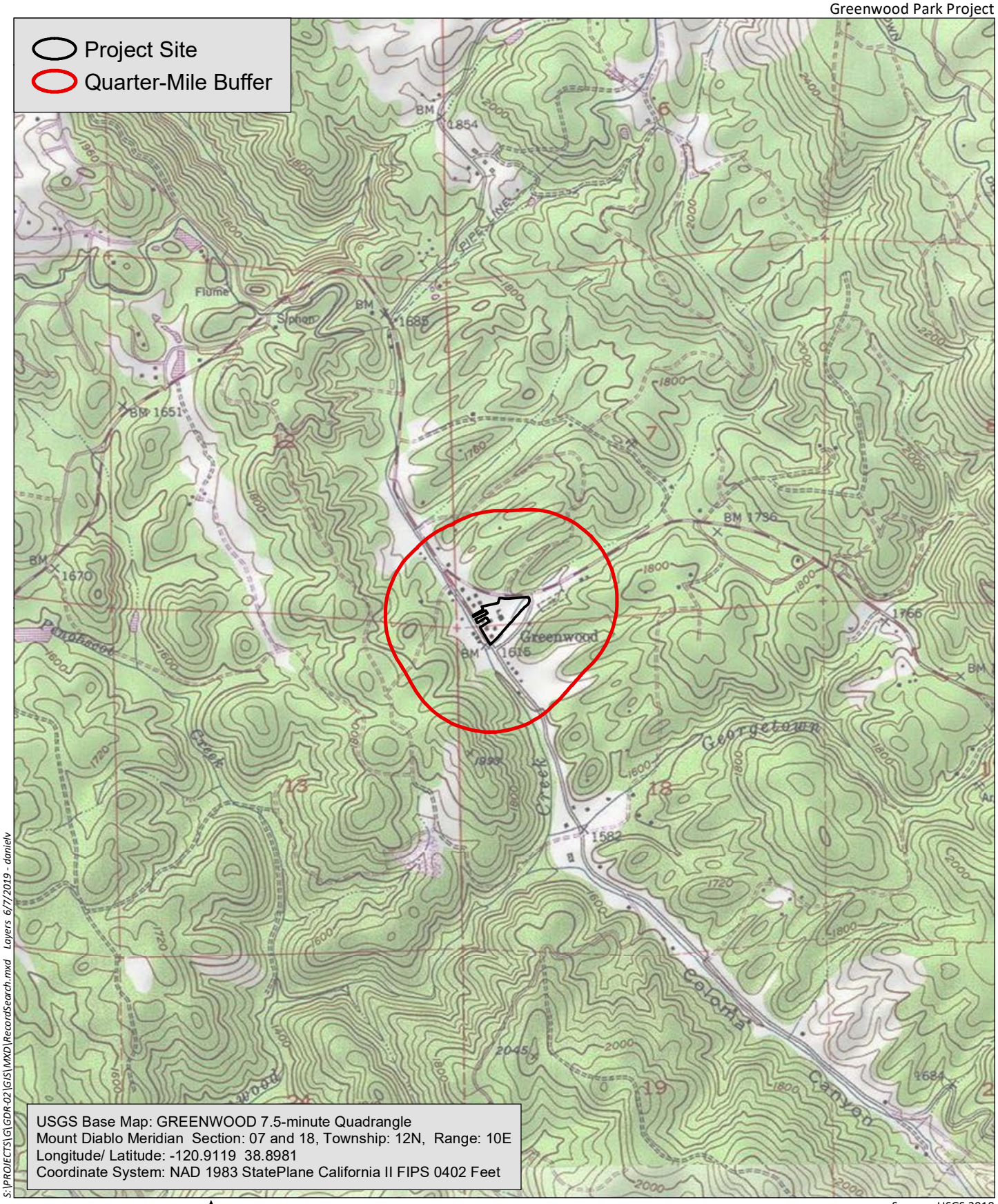
Phone: 916-365-8700

Fax: 619-462-1515

Email: clarusb@helixepi.com

Project Description:

The Georgetown Divide Recreation District (GDRD) proposes to expand the existing Greenwood Park from the current acreage of 3.1 acres (1 acre in current recreational use) to approximately 6 acres and construct youth sports fields (one multi-use field and one combined youth soccer/softball/baseball field) for day-time use. Other proposed improvements would include a restroom building, parcourse exercise station, picnic tables, bicycle parking, and parking lot. The proposed park expansion of the existing Greenwood Park would facilitate enhanced recreational opportunities to the local community. The existing Greenwood Old School House building and adjacent playground would be retained for continued use by the community. GDRD is proposing to acquire additional parcels (APN 074-173-09, APN 074-173-10, and APN 074-173-11) bordering the south and southwest sides of the project site. The proposed acquisition of these parcels would add 3.2 acres to 3.1 acres currently owned by GDRD. The project would also include demolition of an existing 2,300 square-foot El Dorado County Maintenance Facility building. Another existing 2,400 square-foot El Dorado County Maintenance facility building would be retained by GDRD for storage. Two existing houses facing Main Street within the project site would be renovated for use by GDRD for offices and community meeting rooms.



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Source: USGS 2018

HELIX Environmental Planning

Quarter-mile Record Search Map

Exhibit A

STATE OF CALIFORNIA — Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

July 24, 2019

Clarus Backes
HELIX Environmental Planning, Inc.

VIA Email to:ClarusB@helixepi.com

RE: GDR-02 Greenwood Park Project, El Dorado County

Dear Mr. Backes:

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

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

If you receive notification of change of addresses and phone numbers from tribes, please notify 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: Katy.Sanchez@nahc.ca.gov.

Sincerely,

for

Katy Sanchez
Associate Environmental Planner

Attachment

Native American Heritage Commission
Native American Contacts List
7/24/2019

Colfax-Todds Valley Consolidated Tribe
Pamela Cubbler, Treasurer
P.O. Box 4884 Miwok
Auburn ,CA 95604 Maidu
PCubbler@colfaxrancheria.com
(530) 320-3943

Colfax-Todds Valley Consolidated Tribe
Clyde Prout, Chairman
P.O. Box 4884 Miwok
Auburn ,CA 95604 Maidu
miwokmaidu@yahoo.com
(916) 577-3558

Ione Band of Miwok Indians
Sara Dutschke Setchwaelo, Chairperson
P.O. Box 699 Miwok
Plymouth ,CA 95669
sara@ionemiwok.org
(209) 245-5800 Office
(209) 245-6377 Fax

Nashville Enterprise Miwok-Maidu-Nishinam Tribe
Cosme A. Valdez, Chairperson
P.O. Box 580986 Miwok
Elk Grove ,CA 95758-001
valdezcome@comcast.net
(916) 429-8047 Voice/Fax
(916) 396-1173 Cell

Shingle Springs Band of Miwok Indians
Regina Cuellar, Chairperson
P.O. Box 1340 Miwok
Shingle Springs ,CA 95682 Maidu
rcuellar@ssband.org
(530) 387-4970
(530) 387-8067 Fax

Tsi Akim Maidu
Grayson Coney, Cultural Director
P.O. Box 510 Maidu
Browns Valley ,CA 95918
tsi-akim-maidu@att.net
(530) 274-7497

Tsi Akim Maidu
Don Ryberg, Chairperson
P.O. Box 510 Maidu
Browns Valley ,CA 95918
tsi-akim-maidu@att.net
(530) 383-7234

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road Maidu
Auburn ,CA 95603 Miwok
bguth@auburnrancheria.com
(530) 883-2390 Office
(530) 883-2380 Fax

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

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

This list is only applicable for contacting local Native Americans Tribes for the proposed: GDR-02 Greenwood Park Project, El Dorado County.

HELIX Environmental Planning, Inc.
11 Natoma Street
Suite 155
Folsom, CA 9530
925.788.9097 **cell**
www.**helixepi.com**

July 24, 2019

Grayson Coney, Cultural Director
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918

Subject: Greenwood Project

Dear Mr. Coney:

HELIX Environmental Planning Inc. (HELIX) is conducting a Cultural Resource Assessment for a project within the unincorporated area of Greenwood, El Dorado County, California. The proposed Greenwood Development Project (Project) area totals approximately 6 acres and is bounded to the south and east by Ricci Road, to the north by an open field south of Highway 193 and to the west by Main Street. The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite to be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design.

The project area was surveyed on June 25, 2019 and there were no pre-contact resources, sites or features identified.

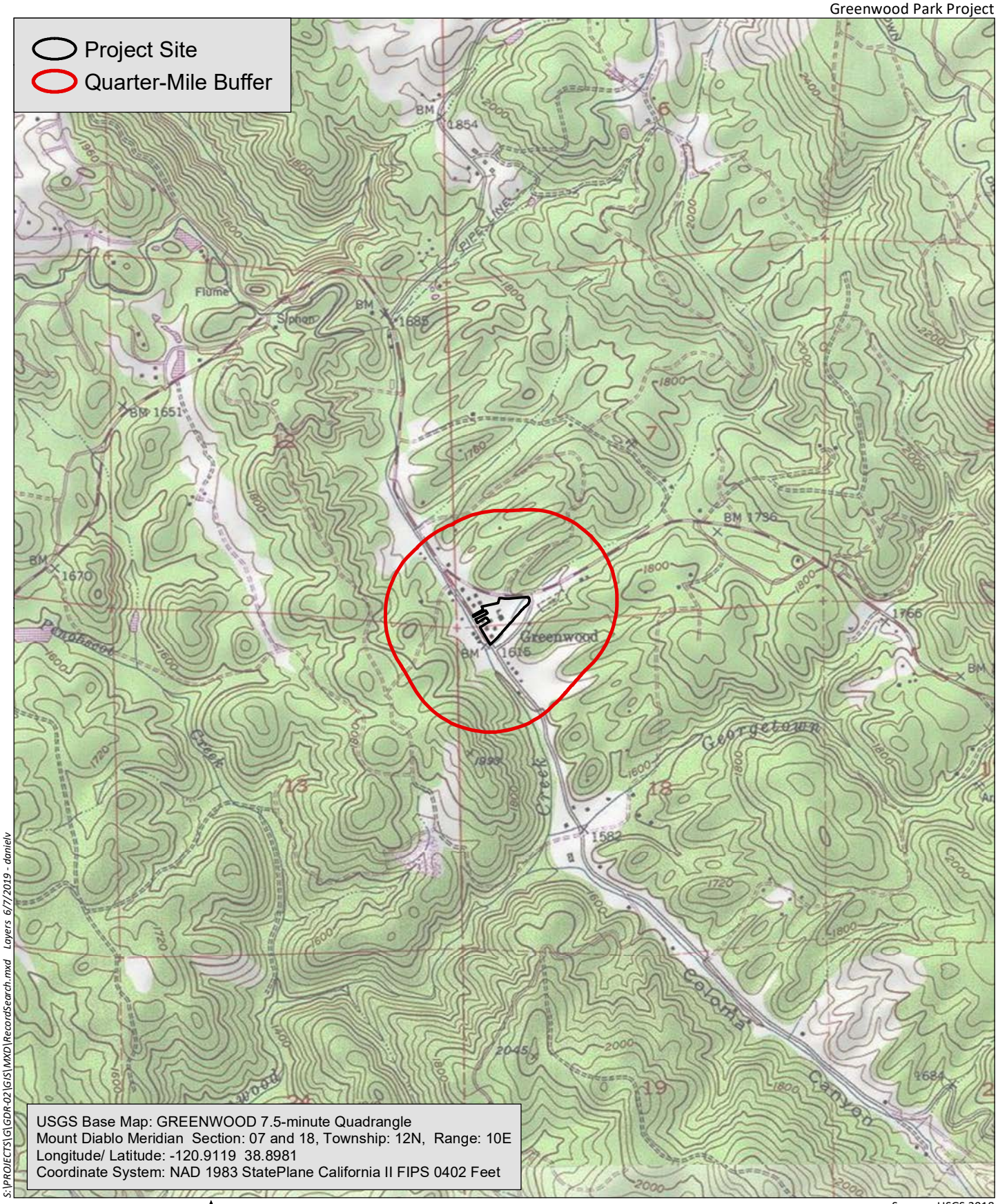
Information Request
The NAHC response letter indicated that although the Sacred Lands File search was negative, there may be additional information to be gained from individual tribal members and/or tribal organizations. HELIX is sending this letter to give you the opportunity to provide any additional information you may have about the project area. We are soliciting your input for *informational purposes only*, not as part of the AB52 or SB18 processes.

Please feel free to contact me at 925.788.9097 or via email at carriew@helixepi.com if you have any questions or would like to discuss the project in more detail.

Sincerely,
Carrie D. Wills

Carrie D. Wills
Senior Archaeologist
HELIX Environmental Planning
11 Natoma Street Ste. 155
Folsom CA 95630

Attachment: Project Area Map



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Source: USGS 2018

HELIX Environmental Planning

Quarter-mile Record Search Map

Exhibit A

HELIX Environmental Planning, Inc.
11 Natoma Street
Suite 155
Folsom, CA 9530
925.788.9097 **cell**
www.**helixepi.com**

July 24, 2019

Pam Cubbler, Treasurer
Colfax-Todds Valley Consolidated Tribe
P.O Box 4884
Auburn, CA 95604

Subject: Greenwood Project

Dear Ms. Cubbler:

HELIX Environmental Planning Inc. (HELIX) is conducting a Cultural Resource Assessment for a project within the unincorporated area of Greenwood, El Dorado County, California. The proposed Greenwood Development Project (Project) area totals approximately 6 acres and is bounded to the south and east by Ricci Road, to the north by an open field south of Highway 193 and to the west by Main Street. The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite to be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design.

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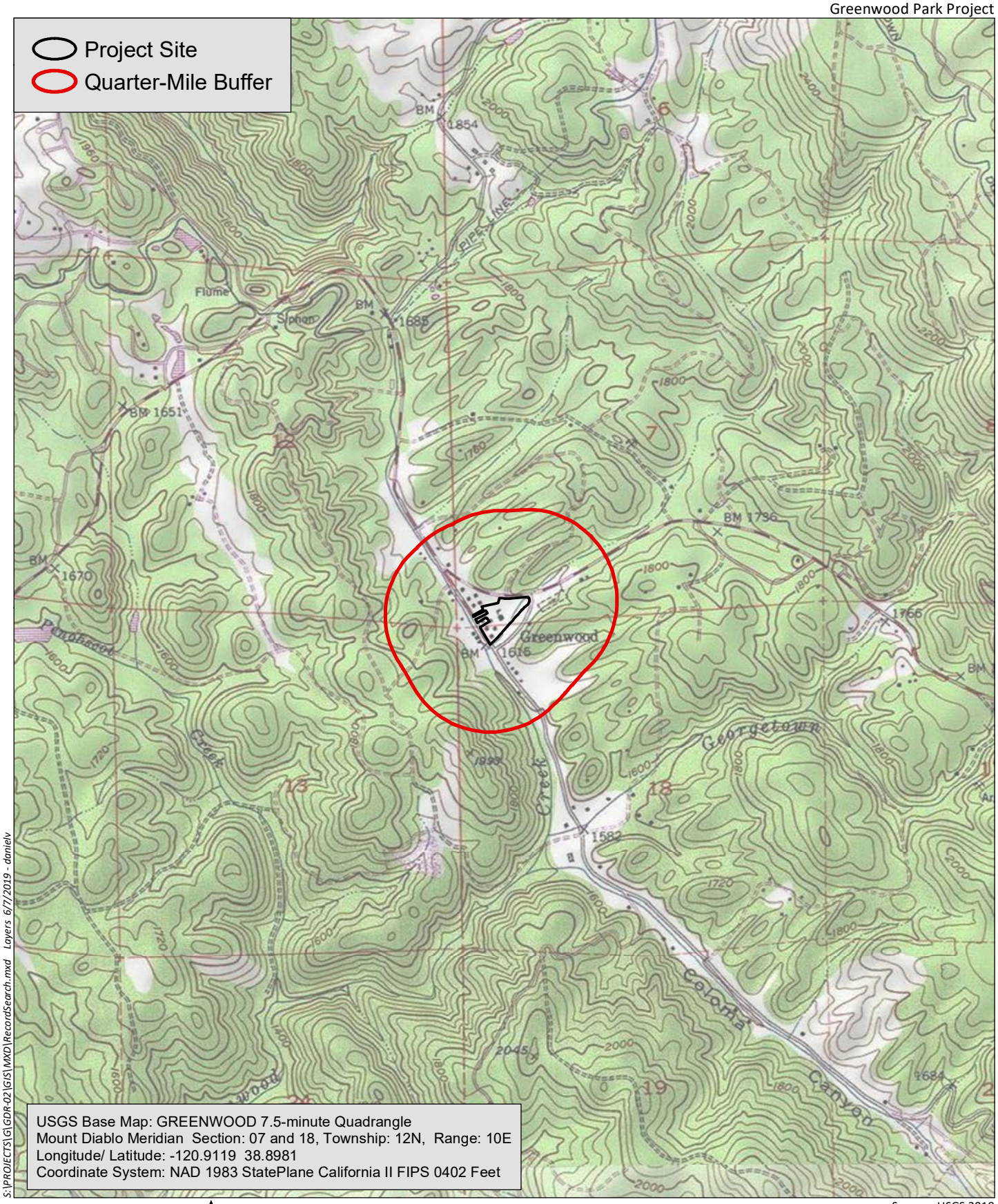

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July 24, 2019

Regina Cuellar, Chairperson
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

Subject: Greenwood Project

Dear Ms. Cuellar:

HELIX Environmental Planning Inc. (HELIX) is conducting a Cultural Resource Assessment for a project within the unincorporated area of Greenwood, El Dorado County, California. The proposed Greenwood Development Project (Project) area totals approximately 6 acres and is bounded to the south and east by Ricci Road, to the north by an open field south of Highway 193 and to the west by Main Street. The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite to be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design.

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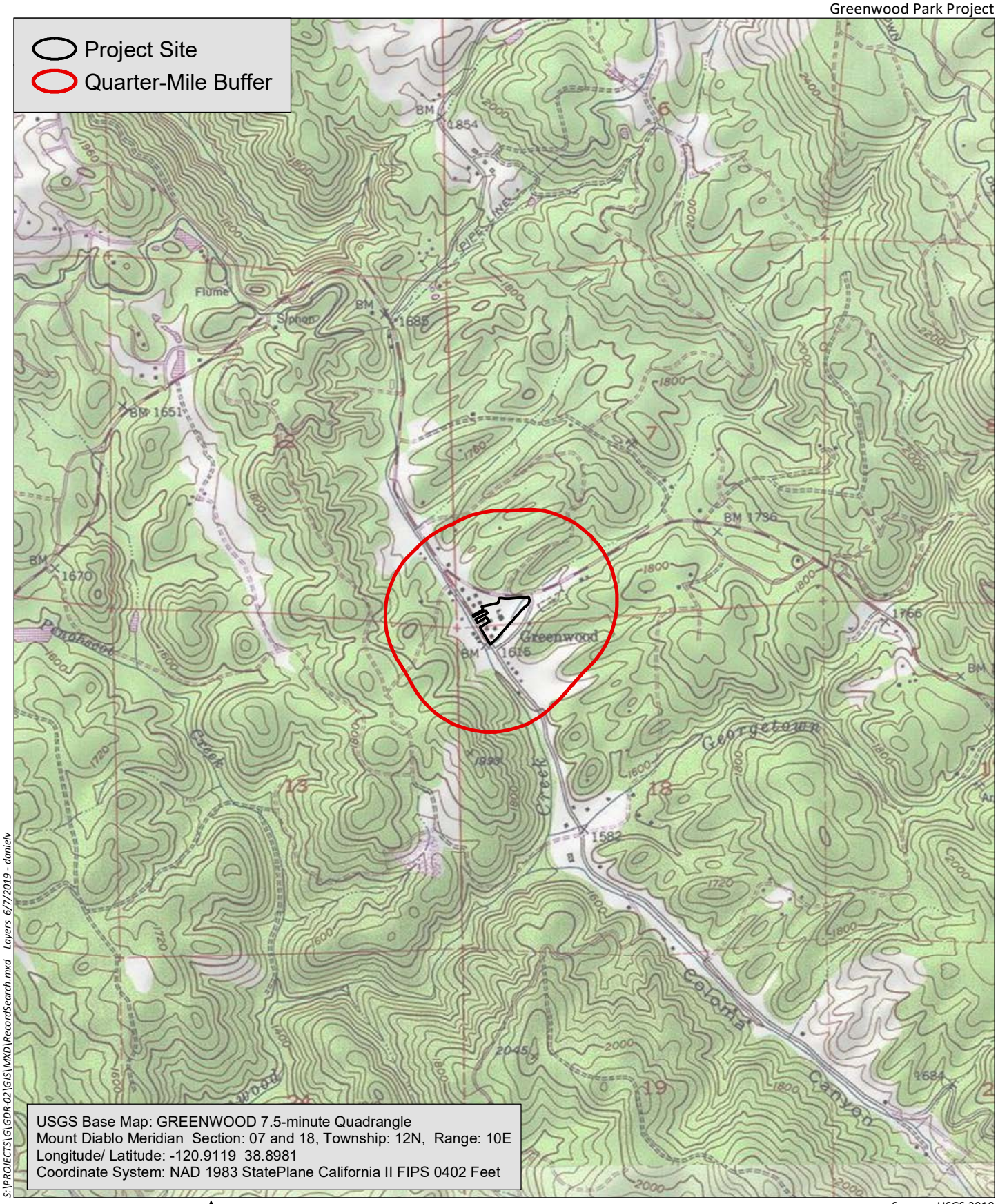

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Suite 155
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www.**helixepi.com**

July 24, 2019

Don Ryberg, Chairperson
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918

Subject: Greenwood Project

Dear Mr. Ryberg:

HELIX Environmental Planning Inc. (HELIX) is conducting a Cultural Resource Assessment for a project within the unincorporated area of Greenwood, El Dorado County, California. The proposed Greenwood Development Project (Project) area totals approximately 6 acres and is bounded to the south and east by Ricci Road, to the north by an open field south of Highway 193 and to the west by Main Street. The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite to be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design.

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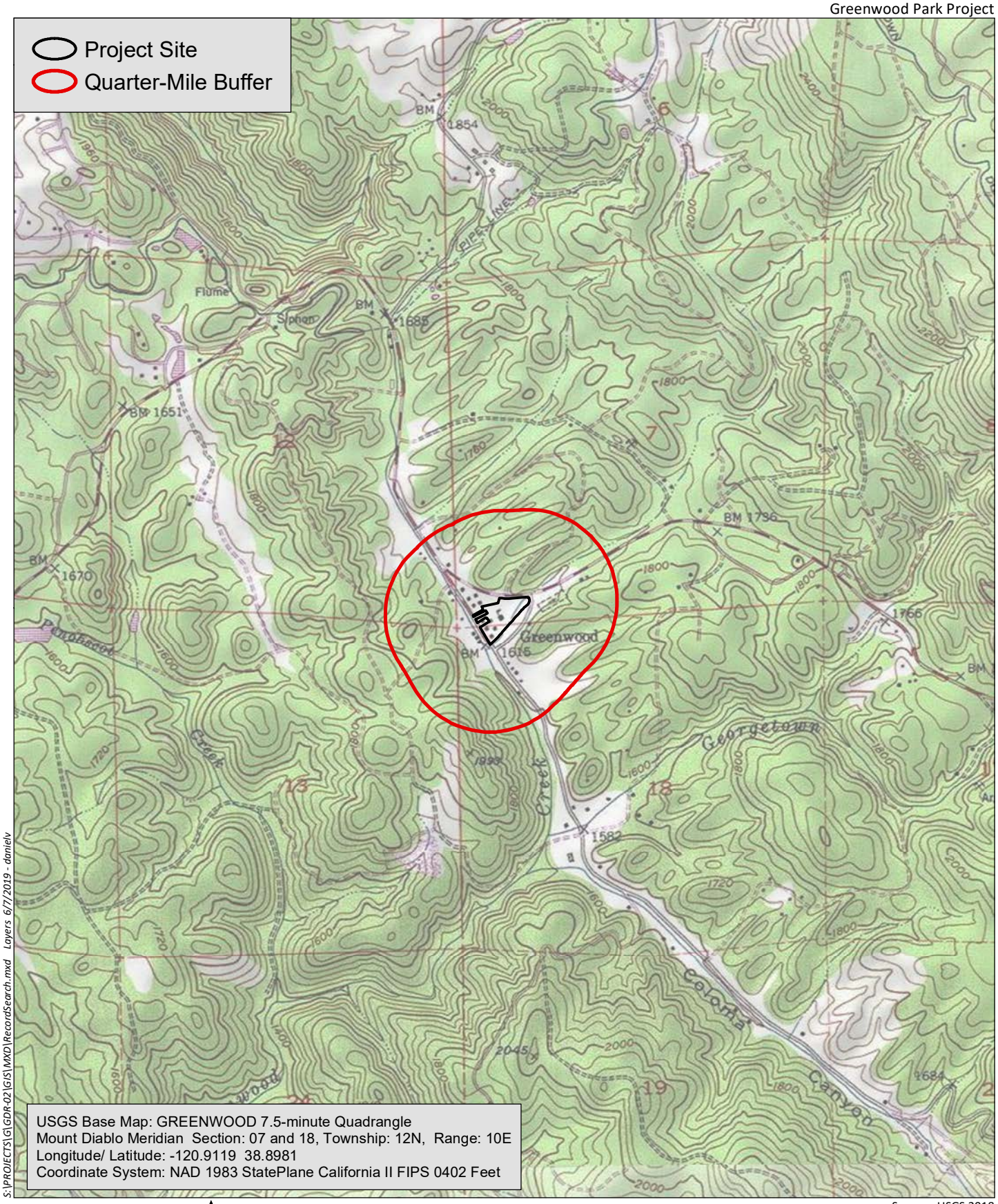

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925.788.9097 **cell**
www.**helixepi.com**

July 24, 2019

Sara Dutschke Setchwaelo, Chairperson
Ione Band of Miwok Indians
P.O Box 669
Plymouth, CA 95669

Subject: Greenwood Project

Dear Ms. Setchwaelo:

HELIX Environmental Planning Inc. (HELIX) is conducting a Cultural Resource Assessment for a project within the unincorporated area of Greenwood, El Dorado County, California. The proposed Greenwood Development Project (Project) area totals approximately 6 acres and is bounded to the south and east by Ricci Road, to the north by an open field south of Highway 193 and to the west by Main Street. The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite to be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design.

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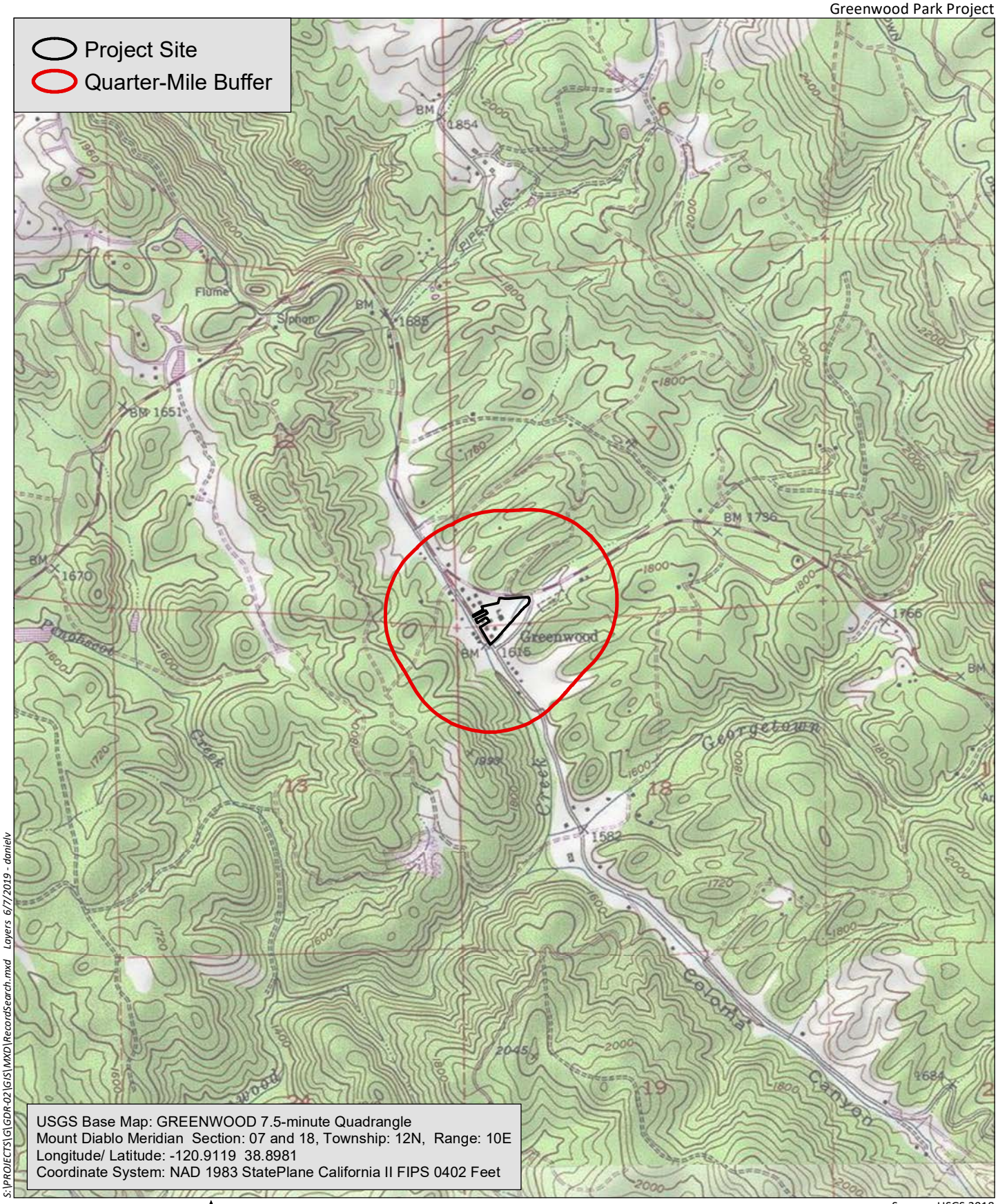

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11 Natoma Street
Suite 155
Folsom, CA 9530
925.788.9097 **cell**
www.**helixepi.com**

July 24, 2019

Cosme A. Valdez, Chairperson
Nashville Enterprise Miwok-Maidu-Nishinam Tribe
P.O Box 580986
Elk Grove, CA 95758-001

Subject: Greenwood Project

Dear Mr. Valdez:

HELIX Environmental Planning Inc. (HELIX) is conducting a Cultural Resource Assessment for a project within the unincorporated area of Greenwood, El Dorado County, California. The proposed Greenwood Development Project (Project) area totals approximately 6 acres and is bounded to the south and east by Ricci Road, to the north by an open field south of Highway 193 and to the west by Main Street. The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite to be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design. The project area was surveyed on June 25, 2019 and there were no pre-contact resources, sites or features identified.

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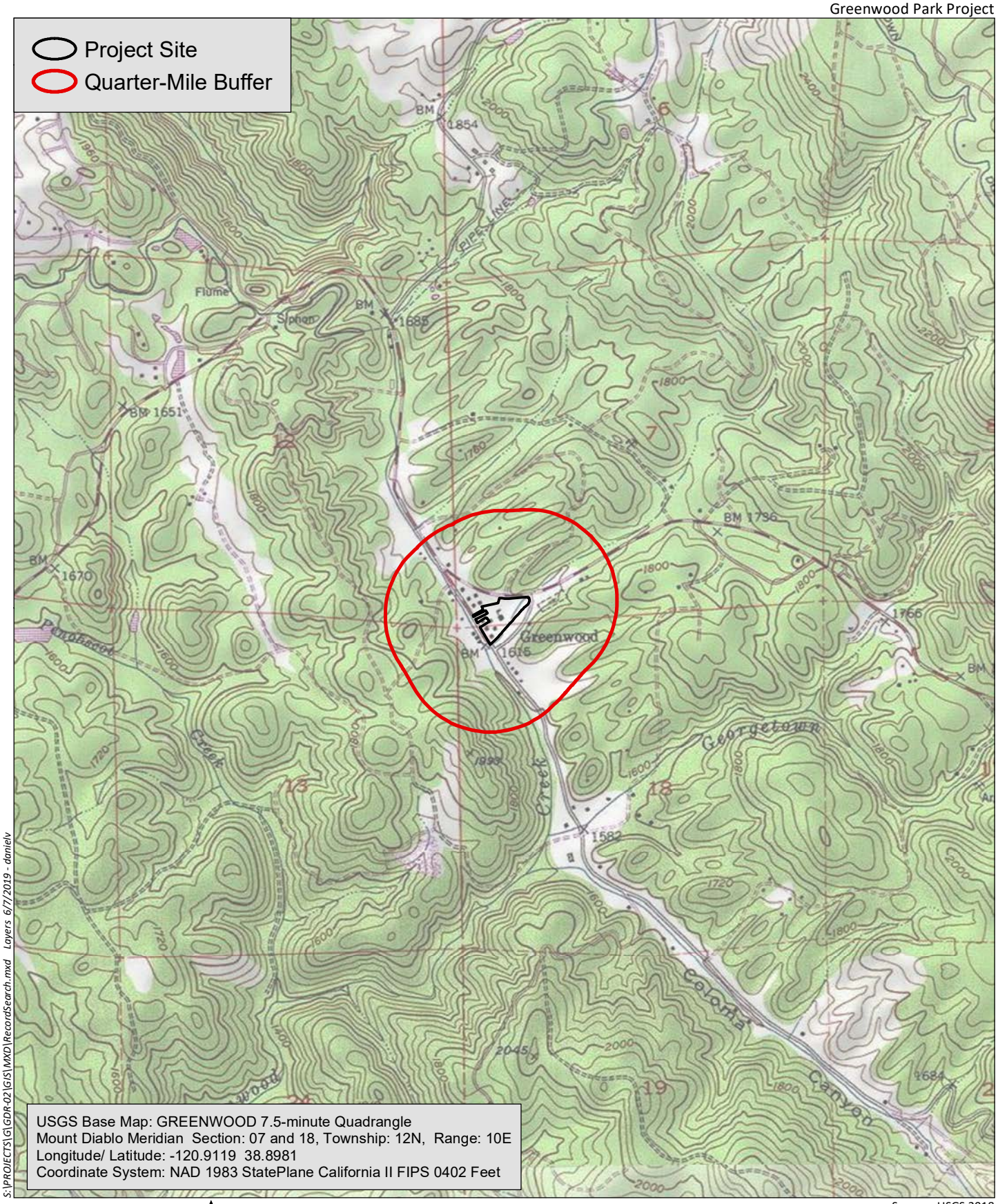

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11 Natoma Street
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July 24, 2019

Gene Whitehouse, Chairperson
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

Subject: Greenwood Project

Dear Mr. Whitehouse:

HELIX Environmental Planning Inc. (HELIX) is conducting a Cultural Resource Assessment for a project within the unincorporated area of Greenwood, El Dorado County, California. The proposed Greenwood Development Project (Project) area totals approximately 6 acres and is bounded to the south and east by Ricci Road, to the north by an open field south of Highway 193 and to the west by Main Street. The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite to be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design.

The project area was surveyed on June 25, 2019 and there were no pre-contact resources, sites or features identified.

Information Request
The NAHC response letter indicated that although the Sacred Lands File search was negative, there may be additional information to be gained from individual tribal members and/or tribal organizations. HELIX is sending this letter to give you the opportunity to provide any additional information you may have about the project area. We are soliciting your input for *informational purposes only*, not as part of the AB52 or SB18 processes.

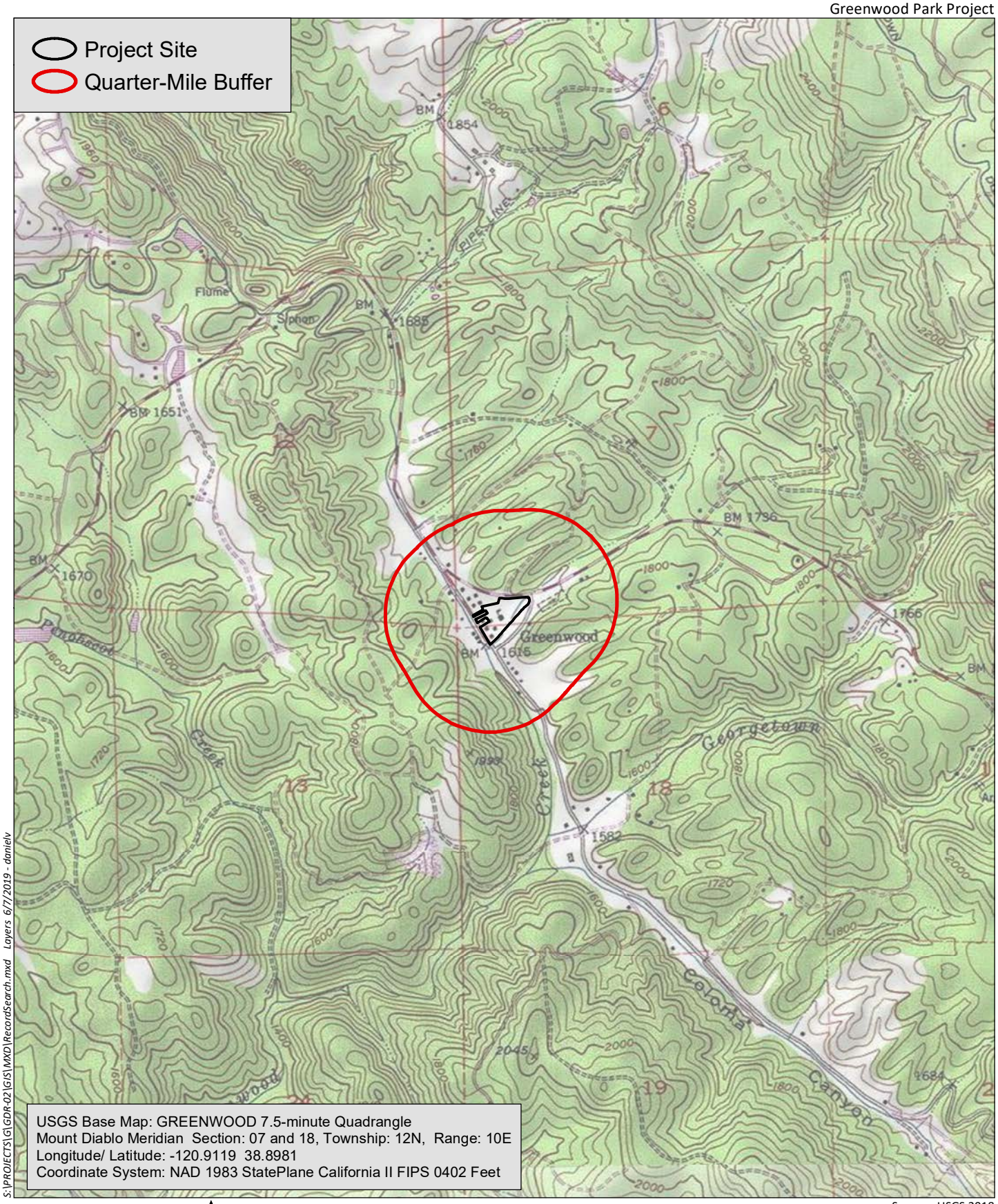
Please feel free to contact me at 925.788.9097 or via email at carriew@helixepi.com if you have any questions or would like to discuss the project in more detail.

Sincerely,

Carrie D. Wills

Carrie D. Wills
Senior Archaeologist
HELIX Environmental Planning
11 Natoma Street Ste. 155
Folsom CA 95630

Attachment: Project Area Map



USGS Base Map: GREENWOOD 7.5-minute Quadrangle
Mount Diablo Meridian Section: 07 and 18, Township: 12N, Range: 10E
Longitude/ Latitude: -120.9119 38.8981
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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Source: USGS 2018

HELIX Environmental Planning

Quarter-mile Record Search Map

Exhibit A

HELIX Environmental Planning, Inc.
11 Natoma Street
Suite 155
Folsom, CA 9530
925.788.9097 **cell**
www.**helixepi.com**

July 24, 2019

Cylde Prout, Chairman
Colfax-Todds Valley Consolidated Tribe
P.O Box 4884
Auburn, CA 95604

Subject: Greenwood Project

Dear Mr. Prout:

HELIX Environmental Planning Inc. (HELIX) is conducting a Cultural Resource Assessment for a project within the unincorporated area of Greenwood, El Dorado County, California. The proposed Greenwood Development Project (Project) area totals approximately 6 acres and is bounded to the south and east by Ricci Road, to the north by an open field south of Highway 193 and to the west by Main Street. The proposed Project would develop a multi-use park including a soccer field, a little league baseball field, a multi-use sports field, 30-person bleachers, shade shelters, retaining walls, exercise stations, a BBQ area, and associated sidewalks and landscaping. The proposed Project also intends to convert existing buildings onsite to be used in conjunction with the park: these will include a restroom, storage room, recreation meeting room, and a district office. The existing playground, pavement, and access routes are proposed to remain and be incorporated into the Project design.

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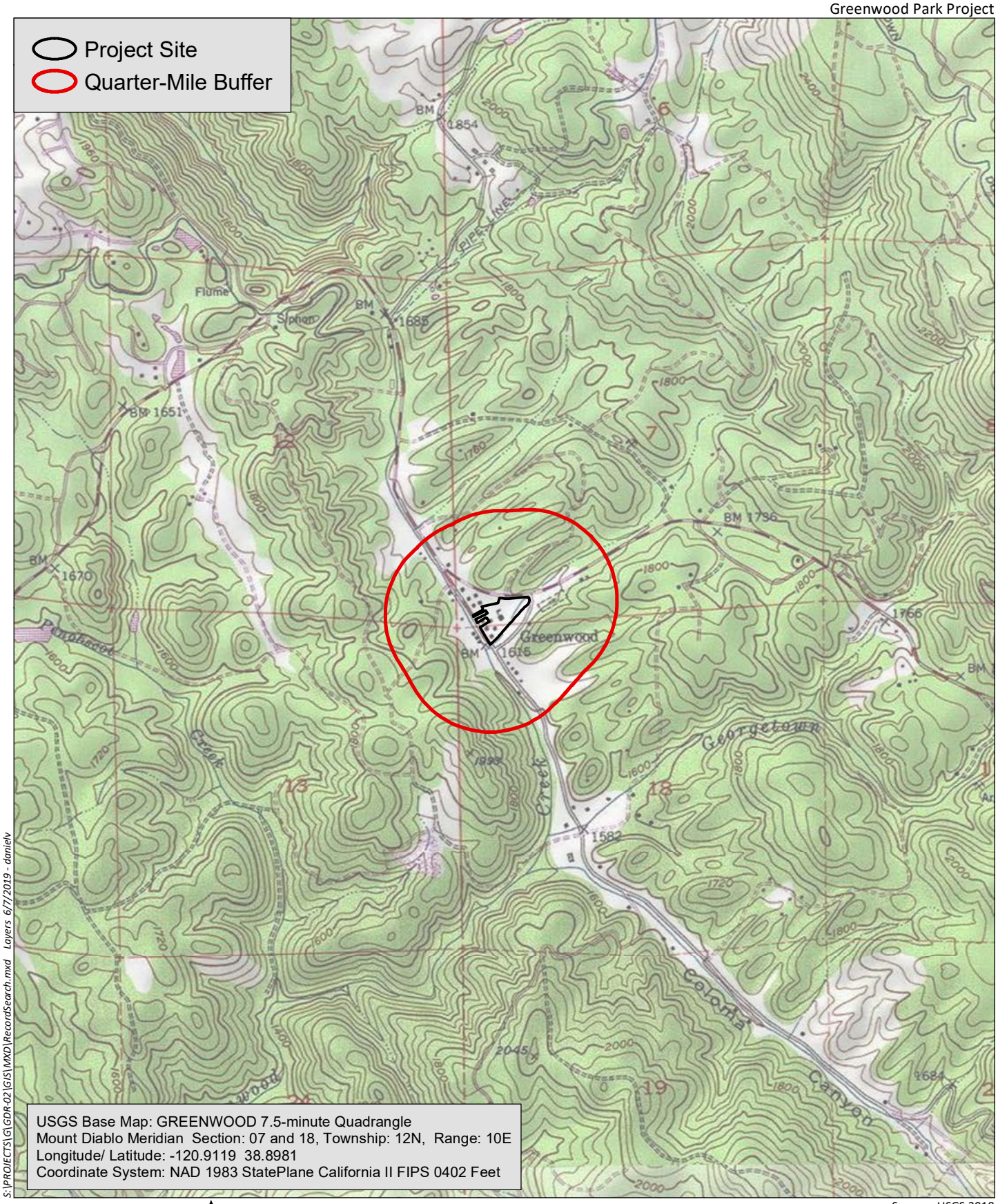
Please feel free to contact me at 925.788.9097 or via email at carriew@helixepi.com if you have any questions or would like to discuss the project in more detail.

Sincerely,
Carrie D. Wills

Carrie D. Wills
Senior Archaeologist
HELIX Environmental Planning
11 Natoma Street Ste. 155
Folsom CA 95630

Attachment: Project Area Map



USGS Base Map: GREENWOOD 7.5-minute Quadrangle
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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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Source: USGS 2018

HELIX Environmental Planning

Quarter-mile Record Search Map

Exhibit A

SLF Response Letter

UAIC Chairman
Mr. Whitehouse

MIWOK MAIDU United Auburn Indian Community of the Auburn Rancheria

Gene Whitehouse, Chairman
John L. Williams, Vice Chairman
Calvin Moman, Secretary
Jason Camp, Treasurer
Gabe Cayton, Council Member

August 19, 2019

Carrie D. Wills
Helix Environmental Planning
11 Natoma Street, Suite 155
Folsom, CA 95630

Subject: Greenwood Development

Dear Carrie D. Wills,

Thank you for requesting information regarding the above referenced project. We appreciate the opportunity to provide comments and would like to consult on this project. The United Auburn Indian Community (UAIC) of the Auburn Rancheria is comprised of Miwok and Southern Maidu (Nisenan) people whose tribal lands are within Placer County and whose service area includes El Dorado, Nevada, Placer, Sacramento, Sutter, and Yuba counties. The UAIC is concerned about development within its aboriginal territory that has potential to impact the lifeways, cultural sites, and landscapes that may be of sacred or ceremonial significance.

Our records do not show any known cultural resources in the project area; however, the UAIC's Preservation Department has identified the project area as potentially sensitive for cultural resources/tribal cultural resources. In order to ascertain whether the project could affect cultural resources that may be of importance to the UAIC, we request copies of any drafted or completed archaeological reports, including the record searches, survey results, and copies of environmental technical documents for the proposed project. The information gathered will provide us with a better understanding of the project and cultural resources on site and is invaluable for consultation purposes.

Finally, please contact us if you know of any Native American cultural resources within your project area or if you discover any. If cultural resources are identified within or immediately adjacent to the project area, it is UAIC's policy that tribal monitors must be present for all ground disturbing activities.

Thank you again for taking these matters into consideration, and for involving the UAIC in the planning process. We look forward to reviewing the additional documents requested. Please contact Anna M. Starkey, Cultural Regulatory Specialist, at (916) 251-1565 or email at astarkey@auburnrancheria.com if you have any questions.

Sincerely,

Gene Whitehouse,
Chairman

CC: Matthew Moore, Tribal Historic Preservation Officer

Appendix D

Paleontological Report

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942
619.462.1515 tel
619.462.0552 fax
www.**helixepi**.com

July 29, 2019 Project # GDR-02

Mr. Carl Clark
Georgetown Divide Recreation District
4401 State Highway 193
Greenwood, CA 95635

Subject:

Dear Mr. Clark:

On behalf of Georgetown Divide Recreation District (GDRD), HELIX Environmental Planning, Inc. (HELIX) has prepared this Paleontological Resource Assessment (Assessment) for an approximately 6.30-acre parcel within Greenwood, an unincorporated area of El Dorado County, California.

INTRODUCTION

The Georgetown Divide Recreation District (GDRD) proposes to expand the existing Greenwood Park from 1 acre (in current recreational use) to approximately 6 acres and construct youth sports fields (one multi-use field and one combined youth soccer/softball/baseball field) for day-time use. Other proposed improvements would include a restroom building, parcourse exercise station, picnic tables, bicycle parking, and parking lot. The proposed park expansion of the existing Greenwood Park would provide enhanced recreational opportunities to the local community. The existing Greenwood Old School House building and adjacent playground would be retained for continued use by the community.

Geologic Setting

The Western Sierra Nevada is comprised of a series of metasedimentary and metavolcanics rocks, termed the Western Metamorphic Belt, that abut the Mesozoic Sierra Nevada Batholith to the east and recent Central Valley deposits to the west (Clark 1964; Duffield and Sharp 1975; Konigsmark 2002; Olmsted 1972; Strand and Koenig 1965). The belt is divided into several smaller, fault-bounded units that strike approximately northwest parallel to the Sierra Nevada range and are generally older toward the east (Clark 1964; Konigsmark 2002). Subduction during the Mesozoic is primarily responsible for the units' deformation and structure (Konigsmark 2002). Historically, many of the rocks of the Western Sierra Nevada are notable for bearing gold (Nash 1989). The Study Area is underlain by the Mariposa Formation, consisting of Jurassic-age slates, greywackes, and conglomerates (Wagner et al. 1981). Local geomorphology is primarily controlled by alluvial processes in small tributaries and colluvial processes on the hillslopes surrounding the Study Area. Surface soils within the Study Area are gravelly silt loam and placer diggings (USDA 2019).

PALEONTOLOGICAL RESOURCES ASSESSMENT

HELIX Environmental Planning, Inc. conducted a search of the University of California Museum of Paleontology digital records and reviewed relevant academic literature and regulatory reports to determine the presence of previously recorded fossil localities in the Study Area and to assess the likelihood that a unique paleontological resource will be destroyed by the proposed project. Geologic maps and soil reports provided the units anticipated at depth within the Study Area.

Paleontological Context

Researchers have identified El Dorado County fossil localities from the Mississippian to the Quaternary; however, a majority of specimens are recorded from unique speleological contexts dating to the Pleistocene (UCMP 2019). The Crystal Caverns and Hawver Cave localities have produced thousands of Pleistocene specimens, including bison, cougar, dire wolf, fox, ground sloth, and saber-toothed cat (Stock 1918; UCMP 2019). The Jurassic Consumnes and Mariposa Formations yield invertebrates at scattered locations (Duffield and Sharp 1975; UCMP 2019).

Paleontological Records Search

A review of the University of California Museum of Paleontology digital records did not identify any previously recorded fossil localities directly within the Study Area; however, the Jurassic Mariposa Formation, which underlies the Study Area (Wagner et al. 1981), contains an El Dorado County fossil locality, UCMP-B2638 (Table 1). Clark (1964:25-26) notes a number of molluscan and ammonite fossils recorded from the Mariposa Formation, including *Buchia concentrica, Amoeboceras dubium, Perisphinctes virgulatiformis, Amusium aurarium*. Mariposa Formation fossils have been found in Calaveras, El Dorado, Mariposa, and Tuolumne counties (Clark 1964; UCMP 2019).

Table 1
FOSSIL LOCALITIES IN THE VICINITY OF THE STUDY AREA

Locality ID	Location	Age	Lithology	Taxa
UCMP -B2638	El Dorado County	Jurassic	Marine sedimentary	Numerous invertebrates

Source: University of California Museum of Paleontology digital records https://ucmpdb.berkeley.edu/. Accessed June 3, 2019

Paleontological Sensitivity Analysis

The young, coarse, and disturbed silt loam and placer diggings at the surface of the Study Area (USDA 2019) are unlikely to contain paleontological resources and the likelihood of the proposed project to destroy a unique paleontological resource in these deposits is low. The underlying Mariposa Formation is fossiliferous, but paleontological resources are scattered along its extent that stretches multiple counties and its invertebrate fauna are well-documented (Clark 1964:25-26; Duffield and Sharp 1975:15; Taliaferro 1942:77-81; UCMP 2019). However, the occurrence of a fossil-bearing formation beneath the Study Area suggests that new or unanticipated paleontological resources may be encountered at depth.

SUMMARY AND CONCLUSIONS

Paleontological Resources Assessment

Ground disturbance associated with the proposed project will not destroy a unique paleontological resource in the soils present at the surface of the Study Area. The bedrock underlaying the Study Area may contain invertebrate fossils of the Mariposa Formation, but its fauna are well-documented. Bedrock disturbance associated with the proposed project may encounter new or unanticipated paleontological resources.

Sincerely,

Carrie D. Wills

Carrie D. Wills, M.A., RPA
Senior Archaeologist

For
Adam (AJ) White, M.A., M.S.

Attachments Figure 1: Project Location

REFERENCES

Clark, Lorin D.
1964 *Stratigraphy and structure of part of the western Sierra Nevada metamorphic belt, California*Unpublished USGS Numbered Series. Professional Paper. U.S. Govt. Print. Off.,.

Duffield, Wendell A., and Robert V. Sharp
1975 *Geology of the Sierra Foothills Melange and adjacent areas, Amador County, California*Unpublished USGS Numbered Series. Professional Paper. U.S. Govt. Print. Off.

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2002 *Geologic Trips Sierra Nevada*. GeoPress.

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1989 *Geology and geochemistry of gold deposits of the Big Canyon area, El Dorado County, California*. U.S. Geological Survey bulletin: 1854. [Reston, Va.] : Department of the Interior, U.S. Geological Survey, 1988.

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Strand, R.G., and J.B. Koenig
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2019 Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed June 3, 2019.

Wagner, D.L., C.W. Jennings, T.L. Bedrossian, and E.J. Bortugno
1981 Geologic map of the Sacramento quadrangle, California, 1:250,000. Regional Geologic Map. California Division of Mines and Geology, Sacramento, CA.

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Source: Base Map Layers (ESRI; DigitalGlobe, 2018)

HELIX Environmental Planning

Aerial

Figure 1

Appendix E

Photographs

Photograph 1: Overview of project area looking towards Hwy 193; facing north

Photograph 2: Overview of northern portion of project area covered with star thistle and weeds; facing southwest

Photograph 3: View of Greenwood School House and access road; facing southwest

Photograph 4: View of one of two residences at address 4067 Main Street (not over 45 years old); facing north

Photograph 5: Second residence at 4067 Main Street (not over 45 years old); facing east

Photograph 6: One of two storage buildings in southeastern portion of project area (not over 45 years old); facing northwest

Photograph 7: Second storage building in southeastern portion of project area (not over 45 years old); facing west

Photograph 8: View of recorded site Resource P-9-5268 —embellished concrete—and vegetation where rest of site was recorded but not found during survey; facing northeast

Photograph 9: View of typical ground surface visibility in northern project area – less than 2% visibility

Photograph 10: Overview of project area; facing west

Photograph 11: Overview of project area in western portion of project; facing south

Photograph 12: View of area of logs, vehicles and debris in southeastern portion of project area; facing north

Photograph 13: Overview of two storage buildings and large pile of ground asphalt; facing northeast

Photograph 14: Overgrown weedy vegetation south of Greenwood School House; facing north

Appendix F

Greenwood School House Historical Evaluation

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

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Review Code | Reviewer | Date | Listings

Page 1 **of** 11 ***Resource Name or #:** (Assigned by recorder)

P1. Other Identifier: *P2.

Location: ☐ **Not for Publication** X **Unrestricted**

***a. County** El Dorado **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Greenwood **Date** 1973 **T** 12N ; **R** 10E ; **of Sec** 7 ; MD **B.M.**

c. Address 4065 Main Street City Greenwood Zip 95635

d. UTM: (Give more than one for large and/or linear resources) Zone __, _____ mE/ _____ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Resources is the Greenwood School House which was constructed in 1859 and used as a schoolhouse until 1954. It also served the Greenwood community as a meeting hall, polling site, and emergency shelter. The building is in very good condition and is in its original location. The Greenwood School House is California Historic Landmark #521 for El Dorado County. Details of the School's building components and style are provided on below on Continuation sheets.

***P3b. Resource Attributes:** (List attributes and codes)

***P4. Resources Present:** ☐ Building ✗ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #)

P5a. Photograph or Drawing

***P6. Date Constructed/Age and Source:** ✗ Historic ☐ Prehistoric ☐ Both
According to plaque at school site, it was built in 1859

***P7. Owner and Address:**
Town of Greenwood

***P8. Recorded by:** (Name, affiliation, and address) Carrie D. Wills and Kathy Crawford HELIX Environmental Planning 11 Natoma Street Ste. 155 Folsom CA 95630

***P9. Date Recorded:** June 25, 2019

P10. Survey Type: (Describe)
Reconnaissance Survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Greenwood Park Project, prepared for Georgetown Divide Recreation District, July 2019

***Attachments:** ☐NONE ✗ Location Map ☐Continuation Sheet ✗ Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♄ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Greenwood School House ***NRHP Status Code**
Page 3 **of** 11

B1. Historic Name: Greenwood School House
B2. Common Name: Greenwood School House
B3. Original Use: School B4. Present Use: Public meeting place and park
***B5. Architectural Style:** Vernacular
***B6. Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1859 in vernacular style the structure appears to have few alterations. Details of the School's building components and style are provided below on Continuation sheets.

***B7. Moved?** ✗ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:**
There is a play yard associated with the School House, but it is of modern design, and was built ca. 2011.

B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** Development of town of Greenwood **Area** Greenwood

Period of Significance Development of Greenwood 1859-1954 **Property Type** Educational
Applicable Criteria (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

B13. Remarks ***B14. Evaluator:** Kathy Crawford, MA
Date of Evaluation: July 29 2019

(Sketch Map with north arrow required.)

(This space reserved for official comments.)

*Recorded by K.A. Crawford/Crawford Historic Services Date 07/29/2019
Continuation Update

***P3a. Description:**

The subject building, the Greenwood School House, is a one-story, basic rectangular shape, one-room School House building. The building is located on a site in Greenwood, an unincorporated area of El Dorado County, California. The building's foundation rests on a set of concrete pier footings. The exterior walls of the building are composed of horizontal shiplap siding, painted white. The building has a front gable roof system with metal sheeting on the roof and a narrow eave overhang. A metal stovepipe projects from the roof. A horizontal decorative railing extends across the lower edge of the front gable section on both the front and rear elevations.

East Elevation

The east elevation is the primary elevation of the School House. The east elevation contains a front porch area which serves as the main entrance to the School House. The front porch is accessed by a sloping concrete ramp with a metal railing. The ramp leads to a centered, recessed porch area. A wood railing system is present on each side of the opening to the porch. The entrance door into the School House is wood. Each of the side walls contains a wood framed, multi-lite window centered on the front wall. The porch section contains a shed style roof with metal covering.

South Elevation

The south elevation contains horizontal shiplap siding. Three windows are present on this elevation. Each window is a wood framed, double hung sash style window.

West Elevation

The west elevation contains a rear porch section, similar to the east façade porch section. The open porch is centered on the rear elevation and is sheltered by a shed roof system with a metal covering. The roof is supported by a square wood post. The walls on each side of the porch opening have horizontal shiplap siding. A wood door with a glass window in the upper portion is present are the back of the porch, giving access to the school room. Narrow, rectangular shaped, horizontal transom windows are present on the back wall of the porch area.

North Elevation

The north elevation contains wood, horizontal shiplap siding and three windows. The windows are wood framed, double hung sash style windows.

The building is in good condition. The property includes large trees and bushes around the building. A concrete and marble plaque is present on the grounds of the School House which commemorates the Greenwood School House.

Alterations

The building appears to have undergone numerous alterations in order to maintain the quality of the original structure according to the Native Sons of the Golden West newsletter dated May 8, 2015. The artist's rendering of the building, seen in the significance section, shows a cupola area with a school bell at the front of the roof on the east elevation. This element was removed at an unknown time but possibly in 1954 when the school was closed. The concrete ramp to the main entrance was added ca. 2015. The windows, front porch entrance area on the south elevation, and door replacements were made in 2015 according to the Native Sons of the Golden West newsletter dated May 8, 2015. Interior changes include the creation of a small kitchen area with cabinets and refrigerator and the addition of carpeting. Heating and cooling systems were added, ca. 2014-2015. The changes were included in the information obtained from the Greenwood Civic Organization and the Native Sons of the Golden West newsletter dated May 8, 2015

***B10. Significance**

History of Greenwood

The community of Greenwood is an unincorporated community located in El Dorado County. The Greenwood area was originally called "Long Valley", and the first general store opened in 1848. It was then renamed Louisville after the first child born in El Dorado County. In 1849, John Greenwood opened a trading post that was the hub of the area, and the name changed to Greenwood (Durham 1998). The Gold Rush brought economic prosperity to Greenwood, and the town boomed with a theatre, multiple hotels and stores, and a brewery. Around $5 million in gold was mined from the Greenwood District, half of which is said to have come from the Sliger Mine. Several gold mines were still in operation during the 1880s (Belli 2005). Mining prosperity continued into the 20th century, as quartz mining also became popular. The community of Greenwood is now registered as a California Historical Landmark.

History of One-Room School Houses

This brief overview of the history of one-room School Houses in the United States was compiled from various online sources, including videos on the School Houses located on www.bing.com, the One-Room School House Center, www.oneroomschoohousecenter.weebly.com, the One-Room School House in America, www.americaslibrary.gov., and the One-Room School House, History of Education, www.historyeducation.com.

One-room schools are a common form of building used for educational purposes in rural areas throughout the world. They are usually constructed in small, rural towns and villages and were used extensively across the United States as rural communities were settled and developed. Few remain in active use at this time, as they have been phased out for more progressive forms of education. The Amish communities continue to use one-room School Houses for elementary education. As populations grew, and towns became able to financially support multiple schools for multiple grades, the one-room School Houses were phased out. The schools were also used for Saturday social events and, on Sunday, the schools served as the local chapel. The schools functioned as community centers in these rural environments. Many of these schools, the ones that were not torn down or removed, are considered historic sites and many are listed on local, state, and national registers of historic properties.

In a one-room School House all the students, both boys and girls, meet in one room and all grade levels are present at the same time. One teacher taught the academic basics to the different levels. The teachers were often young women from the community, as this was considered a proper profession for women prior to marriage. They usually boarded with a local family and, upon marriage, were replaced by another unmarried

woman. Their level of competency varied and many times, the teacher had been a student in the school just a short time before her employment. If the teacher was a man, with a family, the more affluent communities provided a small home next to the school for his residence.

The teachers had varied responsibilities besides presenting the appropriate curriculum. In winter, the teachers arrived early to start a fire in the potbelly stove, a standard fixture in the school room. Winters were freezing in most parts of the country and warming the room prior to starting lessons was important. Many times, the teacher would also keep a pot of soup or stew warming on the stove for the lunch period. The older students had responsibilities as well, including chopping wood, carrying water, and other heavy lifting chores. The younger children clapped erasers, cleaned the chalkboard (blackboard), swept the floors, and did other chores necessary to maintain a clean classroom.

The school day went from 9:00 a.m. to 4 p.m. with breaks during the day for lunch and recess. Schools did not operate during the summer months usually as the communities needed their sons back to help work the farms and mothers needed their daughters help to feed the work crews.

When one reads the histories of rural communities, one of the first things done as the town was organizing was to build the school. The school was always an important part of the community. Men from the local community usually built the school, using local materials. Most of the schools were constructed of wood, but schools in the Midwest might be built of sod, or schools in the Southwest were often constructed with adobe bricks. The buildings were of simple construction, with hand sawn and hand planed timers and planks. Square nails were commonly used to hold the planks together. The buildings were usually rectangular shaped. Many of the schools had a small cupola on the roof for the school bell. Sometimes the school building was painted red, but the majority were painted white. Plumbing and sanitation facilities were usually non-existent as sewer and water systems had not usually been developed in rural communities during the 18^{th}-20^{th} centuries.

The quality of facilities at one-room schools varied with local economic conditions, but generally, the number of children at each grade level would vary with local populations. Children usually walked to school, no matter the weather. Some lucky children had horses or mules to ride or were brought in wagons of some type. Horses were put out to pasture during the day and then ridden home at the end of the school day. Bicycles were also common for students to use to get to school, balancing books on handlebars or strapped to the back of the bicycle. The motorized school bus did not appear until the 1920s in the United States. Their arrival hastened the demise of the one-room School Houses as they could travel longer distances and schools became consolidated into larger schools as more students could be easily brought to a central location. By World War II, the vast majority of one-room School Houses had been phased out and had become part of the American folklore. President Abraham Lincoln attended as one-room School House as a child, attributing his values to the rural lifestyle. Novelist Laura Ingalls Wilder was educated in a one-room School House and memorialized her early life and education in her series of popular books – *Little House on the Prairie*.

History of Greenwood School House

The artist's rendering of the Old Greenwood Schoolhouse was obtained from the Greenwood Civic Organization website, date and artist unknown.

Greenwood School House Plaque

A concrete and marble plaque was installed at the Greenwood School House location. The plaque reads:

> The Greenwood School House: The first school house in Greenwood was located yards from this location. It burned down in 1855. In 1858 the Greenwood school district was established, and this one room school house was built by the community. It remained open from 1859 to 1954. This building has also served the Greenwood community as a meeting hall, a polling site, an emergency shelter and the old school bell was used to alert inhabitants in the area to natural disasters. The school was closed in 1954 and all the students from Greenwood were transferred to Cool. After the school closed, the bell was incorporated into the California State Landmark for the town of Greenwood. The property was purchased by the community in 1957. It remained open as a public meeting place and park. The preservation efforts of the Greenwood Civic Organization, the Greenwood Divide Recreation District, and the native sons of the Golden West, has preserved this piece of California's history so that it may continue to benefit the community.
>
> *Dedicated May 7, 2016 by the Native Sons of the Golden West Dean C. Zellers, Grand President and Georgetown No. 9F and Georgetown Divide Recreation District.*

Information regarding the subject building, the Greenwood School House was obtained from thee Greenwood Civic Organization website, https://ourgreenwood.wordpress.com/old-school-house/ . The following information was

obtained from the website and parts of the information differ from that provided on the plaque placed on the site in 2016.

> The Greenwood School House was originally built in 1886 (sic) to 'school the children of the miners and the local proprietors.' Following devastation of much of the town by a fire in the early 1900's, the present School House building was built in 1906 (sic). The last classes were held there in 1956. At that time, the Greenwood Civic Organization (GCO) was formed and convinced El Dorado County to deed the building and the property to them for $25. The only condition was that it be maintained as a community hall. For these past 50+ years it has been and still is Greenwood's Community Center.
>
> The Greenwood School House is not just a building, it represents community, history, a place for learning and a center where people gather and share.
>
> When we moved to Greenwood, we joined GCO… not to take care of the building but to be part of the community. I saw a building in disrepair and a community with no funds to change that. But there was a special spirit in those walls, it was still a place where people came together said Gail McConigle, past president.
>
> In 2006 an ACE Hardware grant was awarded to the Greenwood Civic Organization for building renovations. That $5000 allowed GCO to make a few necessary repairs and with a lot of volunteer help and additional donations the changes included a paint job inside and out and carpet. But it was also the beginning of the realization that to do all the things needed it would take $50,000.
>
> During the year-long discussion in GCO about what was needed, lots of ideas and wishes were put on the table. One person said, "I wish we had a playground for the kids." The Greenwood Drive Residential District (GDRD) heard them and responded that they could help with that. And so they did. They also heard our dilemma: what we needed – renovations and liability insurance – vs. what we had – lots of heart and an old building. And since it fit within their scope of influence, namely recreation, they came forth with various proposals to help.
>
> One of those proposals was for them to acquire grants to make the necessary renovations to the building and provide liability insurance. However, since one must own the property before they can acquire grants or insurance, GDRD suggested the GCO deed the property to them. After many long discussions the membership, torn as it was between *keeping* our building and *preserving* it, decided to deed. We continue to work together with GCRD to maintain it as our community center.
>
> This has been a win-win relationship. We identify problems, they address them and as they are able, they fix them. Case in point, in the spring of 2012 a new heating/cooling system was installed. No more freezing winter meetings and Christmas Sing-A-Longs or sweltering summer picnics. GCO has installed new kitchen cabinets, countertops and a refrigerator, which helps make the space more user-friendly for a variety of community events.
>
> Today, the Greenwood School House is home to a pre-school, the Greenwood Civic Organization, and a meeting hall for community groups and family activities.

The One-Room Schoolhouse Center provided a list of known one-room Schoolhouses across the United States. Approximately 400 one-room School Houses are still standing, but not necessarily in their original locations in every case. Their listings for California include 39 one-room Schoolhouses in various counties, including Calaveras, Sacramento, San Diego, Santa Barbara, Chico, Amador, King, Monterey, San Jose,

and several others. The Old Greenwood Schoolhouse building was not included in the list. The list included known sites but did not make evaluations or conclusions about the properties.

Integrity Statement

In addition to determining the significance of a property under local, state and federal criteria, it is necessary to assess whether the property has integrity. Integrity is the ability of a property to convey and maintain its significance. A property must not only be shown to be significant under the established criteria, it must also have integrity. In order to retain historic integrity, a property must possess several, and usually most, of the seven key aspects of integrity, which are location, design, setting, materials, workmanship, feeling and association.

1. Integrity is the authenticity of a historical resource's physical integrity clearly indicated by the retention of characteristics that existed during the resource's period of significance.
2. Integrity relates to the presence or absence of historic materials and character defining features.

Application of the seven aspects of integrity:

Location*: Location is the place where the historic property was constructed or the place where the historic event occurred.*

The subject building remains at its original location in the Greenwood area. Therefore, the property retains this element of integrity.

Design: *Design is the combination of elements that create the form, plan, space, structure, and style of a property.*

The overall exterior design of the building has remained intact. The review of the historic aerial photographs and maps, combined with the visual examination of the property, indicated that the overall original design of the subject property has remained the same. The overall mass, scale and design of the building have been retained. Some alterations have taken place but did not significantly affect the overall integrity. Therefore, the building has retained this aspect of integrity.

Setting*: Setting is the physical environment of a historic property.*

A review of historic aerial photographs and visual observation indicates that the neighborhood has undergone transitions over the decades, as is common to many rural environments. A review of historic aerial photographs indicates that the Greenwood area was undergoing changes during the late 19th and 20th centuries due to gold mining activity and population changes. However, the area still retains its essentially rural character and the setting for the School House property has retained its overall historic viewshed. Therefore, the building has retained this aspect of integrity.

Materials*: Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.*

The subject building appears to have retained the majority of its original materials. Therefore, the building has retained this aspect of its integrity.

Workmanship: *Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.*

The quality of the original workmanship appears to have been maintained. Therefore, this aspect of the building's integrity has been retained.

Feeling: *Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.*

The property has basically maintained the original c. 1859 feeling of the building. Therefore, this aspect of integrity has been maintained.

Association: *Association is the direct link between an important historic event or person and a historic property.*

The subject property has not been determined to be directly linked to an important historic event or person. Therefore, it does not have an associative element.

Conclusion: Of the seven aspects of integrity, the building has retained the majority of the seven aspects of integrity. Therefore, the subject building has retained a sufficient amount of integrity for historic significance.

California Register of Historical Resources Eligibility Evaluation

Criterion 1: Event: Properties can be eligible for the California Register if they are associated with events that have made a significant contribution to the broad patters of local or regional history, or the cultural heritage of California or the United states:

The property was assessed under California Register of Historical Resources **Criterion1: Event** for its potential significance as part of any historic trends or events that may have made a significant contribution to the broad patterns of our history. The subject building, the Greenwood School House, is an important element in the life of the local community. The construction of a School House is a significant event in the development of a community. These schools serve as not only centers of education but also as meeting places, chapels, and other community uses. The subject school building was constructed by the residents of the Greenwood area in 1859 to replace the previous one lost in a fire. The School House was used until the 1950s as a School House. The building has subsequently been maintained by various community groups, renovated, and put into active use as a meeting hall and for community social events. The School House building continues to be an important element in the life of the Greenwood community. This pattern of development and continuous use of the building indicates the importance of the School House building to the local community. This is part of the pattern of the development of the one-room School House in the United States during the last two centuries. **Therefore, the property does appear to meet the criteria for significance under Criterion 1: Event.**

Criterion 2: Person: Properties may be eligible for the California Register if they are associated with the lives of persons important in local, California, or national history:

The property was assessed under California Register of Historic Places **Criterion 2: Person** for its potential significance and association with a person of importance in local, state, or national history. There is no evidence to suggest that any of the persons involved with the construction, development and use of the building were considered important in the history of the Greenwood area, the State of California, or the United States. None of the persons associated with the property appear to be historically significant at the level necessary to meet the criteria for the California Register of Historical Resources. **Therefore, the property does not appear to meet the criteria for significance under Criterion 2: Person.**

Criterion 3: Design/Construction: *Properties may be eligible for the California Register of Historical Resources if they embody the distinctive characteristics of a type, period, region or method of construction; or that represent the work of a master; or they possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction.*

The property was assessed under California Register of Historical Resources **Criterion 3: Design/Construction** for its potential significance as a property which embodies the distinctive characteristics of a type, period, region, method of construction or style of architecture, represents the work of a master architect, builder or craftsman, possesses high artistic values, or represents a significant or distinguishable entity whose components lack individual distinction.

"Style of construction"

No stylistic guides or architectural standards were located for the construction and design of one-room School Houses. A number of organizations across the United States exist to salvage and protect the remaining one-room School Houses in the country. A review of various architectural guides was undertaken to determine the various character defining features of School House, in addition to an online review of images of School Houses across America in various states, and an online review of the various histories compiled about one-room School Houses. As a result of this review, a basic list of primary character defining features of one-room School Houses was compiled. This list of characteristics was used to evaluate the subject property.

Primary Characteristics of One-Room School House Architecture

The one-room School House building has distinctive design and construction characteristics. The building's style and type displays typical features and design concepts that reflect the rural nature of the building type.

Primary characteristics include:

*Rural location
*Simple construction
*Small scale and size
*Use of local materials, including wood or logs, brick, sod, adobe, stone or other materials native to the region
*Non-architect designed
*Built by local craftsmen
*Vary by geographic region
*Vary by time frame
*Rectangular or square in shape
*Octagonal in shape, extremely rare
*One prominent single entrance on the main elevation
*Defining feature of main elevation – front gable roof
*Roof materials – metal, wood, shingles, tile, or sod
*Stovepipe projecting from roof, connected to potbelly stove inside the school room
*Belfry or cupola with a school bell
*School bell set up in school yard
*Prominent front porch
*Wood railings on front porch

*Short set of stairs to front porch
*Roof of front porch - front gable or shed style
*Pediments and arches over prominent primary entrance and side windows
*Wood framed windows
*Multiple windows on sides of building, usually set in evenly spaced rows
*Multi-lite, double hung sash style windows on sides of building to permit air and sunlight
*Wood horizontal or vertical siding
*Square nails
*Use of the space as meeting hall, chapel, or community center
*Open space around school building for recess activities

The subject building, the Greenwood School House, contains the following primary character defining features of the School House style and type of architecture:

*Rural location
*Simple construction
*Small scale and size
*Use of local materials - wood horizontal siding
*Non-architect designed
*Built by local craftsmen
*Rectangular shape
*One prominent single entrance on the main elevation
*Defining feature of main elevation – front gable roof
*Roof materials – metal
*Stovepipe projecting from roof
*Roof originally included cupola with a school bell
*Prominent front porch with shed roof
*Wood railings on front porch
*Short set of stairs to front porch
*Wood framed windows
*Multiple windows on sides of building, set in evenly spaced rows
*Multi-lite, double hung sash style windows on sides of building
*Use of the space as meeting hall, chapel, or community center
*Open space around school building for recess activities

The building is a good example of this style and type of one-room School House design. The School House building has also retained a sufficient amount of integrity for historic significance.

"Type of construction" means the form and materials clearly demonstrate, through the presence of essential physical features, a specific purpose and/or function.

The subject building was designed and constructed as a one-room School House in 1859. It was designed to serve a specific purpose and/or function. However, the building's design is not a "unique type" of construction as this type of design is used for similar one-room School House buildings throughout the United States.

"<u>Method of construction</u>" means it is a rare or an important example of building practices, construction innovations, or technological advances during a specific time in history.

No information was located to indicate that the building was an example of building practices, construction innovations, or technological advances during a specific time in history.

"<u>Period of construction</u>" means the age and physical features reflect the era when the specific recognized architectural style, building type, or method of construction became popular.

The building was constructed in 1906 as a one-room School House building. The building is a good example of this style and type of architecture and does serve as a significant example of early 20th century rural one-room School House design and construction.

"<u>Master architect, builder, or craftsman</u>" means that the building was designed, constructed or created by a master in their respective fields.

No architect, contractor, or craftsman was located as responsible for the design or construction of the subject property. The building was presumably built by the local residents and craftsmen of Greenwood after the first one-room School House burned down a few years earlier. Therefore, the subject building cannot be considered to represent the work of a master in their respective fields. Therefore, the building is not considered to be important under this element of evaluation.

"<u>High artistic values</u>" means that the building displays unusual, significant, or creative artistic elements not generally seen on other buildings of its type and time period.

This building does not display high artistic values as its overall design reflects the simple rural nature of one-room School House design.

In its current condition, this c. 1906 one-room School House building does meet the criteria for significance under Criterion 3: Design/Construction as it is a good example of a small, locally built, one-room School House.

Due to the fact that no indigenous materials went into the construction of the building, the subject building complex is not a valuable example of the use of indigenous materials or craftsmanship.

The style and type of the subject building does rise to a level of significance to qualify for the California Register of Historical Resources as it is a good example of a rural, locally built with local materials, one-room School House. The building has also retained a sufficient amount of integrity for historic significance. **Therefore, the property does appear to meet the criteria for significance under Criterion 3: Design/Construction as a good example of one-room School House design and construction.**

<u>Criterion 4: Information Potential:</u> Properties may be eligible for the California Register if they have yielded, or have the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The property was assessed under California Register of Historical Resources **Criterion 4: Information Potential** for its potential significance and its ability to convey information. The property does not yield, or may not be likely to yield, information important in prehistory or history. For buildings, structures, or objects to be significant under Criterion 4, they need to "be, or must have been, the principal source of information." This is not the case with this property. **Therefore, the property does not appear to meet the criteria for significance under Criterion 4: Information Potential.**

In summary, the subject property, the Greenwood School House building, does appear to qualify for the California Register of Historical Resources under Criterion 1: Event as a good example of the classic American one-room School House and under Criterion 3: Design/Construction as a good example of the one-room School House type of architecture. Therefore, the subject property is considered to be an historic resource for the purpose of the CEQA.

***B12. References:**

California Code of Regulations, California Register of Historical Resources, Chapter 11.5, *Criteria for Listing in the California Register*, Section 4852 (b).

California Historical Landmarks Listings, El Dorado County, www.ohp.parks.ca.gov.

Ching, Francis D.K., *A Visual Dictionary of Architecture*, John Wiley & sons: New Jersey, 2012.

Google, "4065 Main Street, Greenwood, CA," www.google.com.

Greenwood Civic Organization, "Greenwood School House," www.greenwoodgco@gmail.com.

Historicaerials.com, "4065 Main Street, Greenwood, CA," historic aerial photographs and USGS quadrangle maps – 1904-2015, www.historicaerials.com.

Native Sons of the Golden West https://nsgw.org/greenwood-school-project/

Images and Videos of One-Room School Houses, www.bing.com.

Locust Grove School House, "Typical Characteristics of One-Room School Houses," www.locustgroveSchool House.org.

McAlester, Virginia S., *A Field Guide to American Houses*, Alfred A. Knopf: New York, 2015.

One-Room School House Center, "America's One-Room School Houses, List of States," www.oneroomSchool Housecenter.weebly.com.

"One-Room School House," History of Education, www.historyeducation.com.

"One-Room School Houses in America," www.americaslibrary.gov.

"The Legacy of One-Room School Houses: A Comparative Study," www.journals.openedition.org/ejas/9205.

Appendix G

Resumes

Carrie D. Wills, RPA

Senior Archaeologist

HELIX Environmental Planning

Summary of Qualifications

Ms. Wills provides guidance to clients on pre-contact and historical resource issues for small, mid-size and large, multi-component projects. She has extensive experience managing projects that include background research utilizing state, federal and local databases; pre-construction field surveys and assessments; and the formulation of mitigation measures designed to avoid or reduce impacts to cultural resources from project development. She has conducted site evaluations that include testing procedures, data recovery and analysis of resources at both pre-contact and historic sites. Her experience includes evaluating sites, buildings and resources for historical significance, and preparing reports that comply with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). She has extensive experience coordinating with various agencies including city and county governments, U.S. Army Corps of Engineers (USACE), and the Bureau of Reclamation. In addition, Ms. Wills has provided oversight for SB 18 and AB 52 consultations with Native American tribal representatives and has good working relationships built on mutual trust and respect.

Selected Project Experience

Iron Point Retirement Community (2015 - 2016).
Senior Archaeologist for archaeological studies for a 4.68-acre parcel located in south/central City of Folsom in northeastern Sacramento County. Conducted a record search at the North Central Information Center (NCIC), requested a Sacred Lands File search at the Native American Heritage Commission (NAHC), conducted a field survey and provided the results for the Initial Study Report. Work was conducted for the City of Folsom who was the lead agency.

Cresleigh Ravine (2015 - 2016).
Senior Archaeologist for archaeological studies for the Cresleigh Ravine and Campus at Iron Point Mixed Residential Development project on two parcels (Cresleigh Ravine and Campus at Iron Point) totaling 17.3 acres within the City of Folsom in northeastern Sacramento County. Studies included a record search at the North Central Information Center (NCIC), and a Sacred Lands File search request from the Native American Heritage Commission (NAHC). A field survey was conducted and the findings and mitigation measures were provided in the Initial Study Report. A second field survey was conducted with a representative from the United Auburn Indian Community (UAIC) with negative results. The work was conducted for the City of Folsom Community Development Department and the City of Folsom was the lead agency.

Education

Master of Arts, Anthropology, emphasis archaeology, California State University, Hayward, 1994
Bachelor of Arts, Anthropology, California State University, Hayward, 1989

Registrations/ Certifications

Register of Professional Archaeologists #11138, 1999

Professional Affiliations

Society for Historical Archaeology
Society for California Archaeology

Pique at Iron Point Apartments (2015 - 2016).
Senior Archaeologist for an Initial Study for a 34-acre project in the east/central area of the City of Folsom in northeastern Sacramento County. Studies included a record search at the North Central Information Center (NCIC), historic map review, a Sacred Lands File search request from the Native American Heritage Commission (NAHC), a field survey and preparation of the findings for inclusion in the Initial Study Report. Although the field survey was negative, mitigation for inadvertent discoveries were provided. The work was conducted for the City of Folsom who was the lead agency.

Country House at Broadstone Memory Care Facility (2015 - 2016).
Senior Archaeologist for a project site consisting of a 1.91-acre parcel located in south/central City of Folsom in northeastern Sacramento County. Research included a record search at the North Central Information Center (NCIC), historic map review, a Sacred Lands File search request from the Native American Heritage Commission (NAHC), and a field survey. Althought the field survey was negative, mitigation measusres for inadvertent discoveries were provided for inclusion in the Initial Study Report. The work was conducted for the City of Folsom who was the lead agency.

Old Library Building (2016 - 2016).
Senior Archaeologist for a 0.91-acre parcel located within the central boundary of the City of Folsom's historic district in northeastern Sacramento County. Archaeological work for the project included a record search at the North Central Information Center (NCIC) in addition to a historic map review. Subject to AB 52, the project required consultation with the United Auburn Indian Community (UAIC) who reported a Traditional Cultural Resource (TRC) near the project. Auger testing was conducted with negative results. The findings of the research and the testing were provided in an Archaeological Assessment Report. The work was conducted for the City of Folsom who was also the lead agency.

Colusa County Airport (2016 - 2016).
Senior Archaeologist for a Section 106 of the National Historic Preservation Act (NHPA) project located within Colusa County. The components of the assessment included a record search at the Northwest Information Center (NWIC), a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, a field survey and preparation of a report following Section 106 guidelines. Work performed for C&S Engineers, potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE) as the lead agency.

DGL Consulting - 2015 (2015 - 2016).
Senior Archaeologist and team leader for numerous telecommunications projects primarily in the SF Bay Area requiring record searches, map reviews, field surveys, historic building and ground disturbance evaluations, and compliance reports for State Historic Preservation Officer (SHPO) submittal. Coordinated team efforts with archaeologists and architectural historians, primarily for AT&T projects. Work

conducted as a consultant for DGL Consulting with the Federal Communications Commission (FCC) as the lead agency.

Environmental Assessment Specialists - 2016 (2016 - 2016).
Senior Archaeologist and team leader for telecommunications projects across California that require record searches, map reviews, field surveys, historic building and ground disturbance evaluations, and compliance reports for State Historic Preservation Officer (SHPO) submittal. Coordinated team efforts with archaeologists and architectural historians, primarily for T-Mobile projects. Work conducted as a consultant for EAS, Inc. with the Federal Communications Commission (FCC) as the lead agency.

ExteNet Systems (2016 - 2016).
Senior Archaeologist and team leader for telecommunications projects throughout California requiring record searches, map reviews, historic building and ground disturbance evaluations, and compliance reports for State Historic Preservation Officer (SHPO) submittal. Coordinated field surveys and building evaluations with archaeologists and architectural historians, primarily for AT&T projects. Work conducted as a consultant for ExteNet Systems with the Federal Communications Commission (FCC) as the lead agency.

8044 Michel Road, Calaveras County, CA (2016 - 2016).
Senior Archaeologist for a 39 acre project in Calaveras County. Conducted an assessment to identify the presence or absence of potentially significant cultural resources within or near the project area. Tasks included a record search at the Central California Information Center (CCIC) and a field survey summarized in a report that included inadvertent discovery mitigation. Work was conducted for a private developer and the lead agency was Calaveras County.

NID Raw Water PEIR (2016 - 2016). Senior Archaeologist for a Program Environmental Impact Report (PEIR) to assess the potentially significant environmental effects associated with the implementation of the Nevada Irrigation District's (NID's) Capital Improvement Program (CIP). Tasks included review of previous archaeological reports, sensitivity maps and record searches which served to provide baseline information and recommendations for future projects. Work was conducted for NID which is also the lead agency.

Sheldon Road Apartments Project (2016 - 2016).
Served as Senior Archaeologist for a 19 acre Class A multi-family apartment community located in the City of Sacramento, Sacramento County. Components of the research for the project included a record search at the North Central Information Center (NCIC) and review of Department of Parks and Recreation (DPR) forms for demolished buildings within the project area. In addition, a Sacred Lands File search was requested from the Native American Heritage Commission and letters were sent to tribal representatives. A field survey was conducted with negative results and the findings were incorporated into an Initial Study

report. Work was conducted for SLC Sheldon LLC c/o LandCap Investment Partners, LLC and the lead agency was the City of Sacramento.

RE Mustang Two - Environmental Consulting (2016 Present).

Senior Archaeologist for Mustang Two Solar Energy Project which would generate alternating current electricity on approximately 1800 acres of land in unincorporated western Kings County. The project included a record search and historic map review at the Southern San Joaquin Valley Information Center (SSJVIC), a Sacred Lands File search request to the Native American Heritage Commission (NAHC) and a field survey of the 1800 acre project area. In addition, the Tachi Yokut tribe was consulted about specific tasks including construction monitoring and curation. The work was conducted for RE Mustang Two, LLC and Kings County is lead agency.

Fresno VA Parking (2015 - 2015).

Senior Archaeologist for a Section 106 of the National Historic Preservation Act (NHPA) 9-acre project located within the City of Clovis, Fresno County. Tasks included a record search at the Southern San Joaquin Valley Information Center (SSJVIC), a search of the Native American Heritage Commission's (NAHC's) Sacred Lands File, a paleontological record search and a field survey conducted within the project Area of Potential Effects (APE). The findings (negative) were included in a Cultural Resource Impact Prediction Report. The work was conducted for Terracon with the U.S. Department of Veterans Affairs as the lead agency.

Terracon Consultants - 2016 (2016 - 2016).

Senior Archaeologist and team leader for ongoing telecommunications projects throughout northern California. Projects require record searches, map reviews, field surveys, historic building and ground disturbance evaluations, and compliance reports for State Historic Preservation Officer (SHPO) submittal. Coordinate with architectural historians for building evalutations and submittals for SHPO concurrence. Work conducted as a consultant for Terracon with the Federal Communications Commission (FCC) as the lead agency.

Baywood Drive Apartments in Petaluma California (2015 - 2015).

Senior Archaeologist for a 5.5-acre multi-family apaartment project located within the City of Petaluma in Sonoma County. Under Section 106 of the National Historic Preservation Act (NHPA) the project included a record search at the Northwest Information Center (NWIC), a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, a paleontological assessment, a field survey of the Area of Potential Effects (APE) and preparation of a report following Section 106 guidelines. Work performed for The Reliant Group, Inc., and the U.S. Army Corps of Engineers (USACE) was the lead agency.

21450 Todd Valley Road (2016 - 2016).

Senior Archaeologist for a 36 acre project southwest of the community of Foresthill in Placer County. The assessment was to provide baseline conditions for cultural resources and did not include an impact assessment. Tasks included a record search

at the North Central Information Center (NCIC), a request for a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, a pedestrian field survey and a summary report. The work was completed for TSD Engineering, Inc. and Placer County was the lead agency.

Previous Project Experience

The Conservation Center for Wildlife Care (2013 - 2014).
At the request of the Peninsula Humane Society and SPCA, serving as both Senior Archaeologist and Project Manager, conducted a cultural resource investigation that included a NWIC record search and NAHC Sacred Lands File search, and a field survey for the approximately 170 acre APE at the proposed Conservation Center for Wildlife Care located outside the City of Saratoga. In addition, coordinated with the project's architectural historian on the building/structure evaluations for six structures and recorded the structures on appropriate DPR forms. The final Section 106 report was presented to the USACE for submittal to the SHPO for concurrence with the Finding of No Adverse Effect.

Napa Logistics Park Phase II Project City of American Canyon, Napa County (2014). Project comprised a 176-acre parcel to be developed for industrial uses, infrastructure, and wetland preservation areas. Total build-out potential would be 2,270,640 square feet of warehouse, distribution, and accessory retail/office uses. Serving as the project manager for cultural resources, tasks included a record search at the Northwest Information Center (NWIC), a search of the Native American Heritage Commission's (NAHC) Sacred Lands file, a field survey, and two structure evaluations and a comprehensive report written to Section 106 standards.

Kathleen A. Crawford
Consulting Architectural Historian

Summary of Qualifications

Ms. Crawford has 30 years of experience in the preparation of a wide range of historical and architectural projects. She meets the Secretary of the Interior Standards for Architectural History and History (36 CFR Part 61). She also meets the California Department of Transportation (Caltrans) standards as an Architectural Historian. She has extensive experience with 19th- and 20th-century architecture in California and has prepared over 12,000 historic and architectural assessments of structures in California for a variety of historical projects conducted for various types of city, state, and federal agencies. The majority of these projects required compliance with Section 106 of the National Historic Preservation Act. Ms. Crawford has extensive experience in the implementation of Section 106 in reference to historic buildings from all historic periods and architectural styles. The vast majority of these projects required preparation of California Department of Parks and Recreation (DPR) 523 forms for submittal to the State Historic Preservation Office. She has prepared several Historic American Building Survey (HABS) surveys and documentation over the years and has worked with the Secretary of the Interior's Standards for the Treatment of Historic Properties in the course of the historic and architectural evaluations. In addition, she has participated in the production of numerous cultural resources reports and assessments, environmental impact reports, and historic building surveys of potential historic districts in California, Arizona, and Kentucky. Ms. Crawford has been a lecturer in the History Department at San Diego State University since 1989, and her extensive teaching experience in U.S. History has aided her understanding of the historical assessment and evaluation process.

Education

Master of Arts, History, University of San Diego, 1987

Bachelor of Arts, History, University of San Diego1984

Bachelor of Arts, Anthropology, University of San Diego, 1984

Selected Experience

Crawford Historic Services, Historical and Architectural Consulting (1985 - Present). Sole proprietor of historical projects consulting service with clients including:

Michael Brandman and Associates, Irvine, California (2001 - Present). Ms. Crawford meets the Secretary of the Interior's Standards as an Architectural Historian and has prepared over 2000 Section 106 Compliance Reports for Historical and Architectural Assessments for Cell Tower sites in California, Nevada, Arizona, Texas, and New Mexico. All projects required Section 106 compliance level assessments and preparation of DPR 523 forms for the project sites and submittal to the State Historic Preservation Office for concurrence with the findings of effect. Clients include AT&T, T-Mobile, Verizon, Pacific Bell, and Cingular. Assessments include 19th- to 20th-century historic buildings (civic, hospitals, private residences, businesses, churches, schools), cemeteries, structures, telephone poles, water tanks, and steel lattice towers. Over 1,000 projects have taken place in Southern California. Over 500 of the projects have taken place in Northern California in Alameda, San Francisco, Sacramento, and San Jose counties.

- **Oakland International Airport, Oakland**. Preparation of Historic and Architectural Assessment of circa 1960s Airport Structures for National Register of Historic Places eligibility. January 2012.

- **California State Capitol Building Complex, Sacramento**. Preparation of Historic and Architectural Assessment of circa 1860s–1950s California State Capitol Building for installation of new cell tower service for entire State Capitol complex. April 2011

- **Independent Order of Odd Fellows Cemetery, Sacramento**. Preparation of Historic and Architectural Assessment of circa 1890s National Register-eligible historic Sacramento cemetery. January 2011

- **Leamington Hotel, Oakland**. Preparation of Historic and Architectural Assessment of circa 1920s National Register-eligible hotel in downtown Oakland. July 2010

- **East Bay Alliance Chinese Church, Oakland**. Preparation of Historic and Architectural Assessment of circa 1940s church complex. September 2010

- **Piedmont Apartments, Oakland**. Historic and Architectural Assessment of circa 1930s apartment complex, Oakland. December 2010

- **Sheraton Palace Hotel, San Francisco**. Preparation of Historic and Architectural Assessment of circa 1900 National Register-listed landmark historic hotel for cell tower construction, November 2010

- **Swedish American Hall, San Francisco**. Preparation of Historic and Architectural Assessment of circa 1890s National Register-eligible building for proposed cell tower placement. May 2010

- **Seton Medical Center, San Francisco**. Preparation of Historic and Architectural Assessment of circa 1950s Seton Medical Center for cell tower construction. August 2010

Publications

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IS/MND Appendix D

Greenwood Park Noise Assessment

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July 26, 2019 GDR-02

Mr. Carl Clark
Georgetown Divide Recreation District
4401 State Highway 193
Greenwood, CA 95635

Subject: Greenwood Park Project Noise Assessment

Dear Mr. Clark:

HELIX Environmental Planning, Inc. (HELIX) has assessed the noise impacts associated with the construction and operation of the proposed Greenwood Park Project (project). The analysis has been prepared to support environmental review conducted by the Georgetown Divide Recreation District (GDRD) pursuant to the California Environmental Quality Act (CEQA).

PROJECT DESCRIPTION

The project site is located at 4065 Main Street in the unincorporated community of Greenwood in western El Dorado County (County), California. The site consists of 8 parcels within a triangular area formed by State Route (SR) 193/Georgetown Road to the north, Main Street/Greenwood Road to the southwest and Ricci Road to the southeast.

The project would expand the existing Greenwood Park operated by GDRD from 1 acre (in current recreational use) to approximately 6 acres and construct youth sports fields (one multi-use field and one combined youth soccer/softball/baseball field) for day-time use. Other proposed improvements would include a restroom building, parcourse exercise station, picnic tables, bicycle parking, and parking lot. The proposed expansion of the existing Greenwood Park would facilitate enhanced recreational opportunities to the local community. The existing Greenwood Schoolhouse and adjacent playground would be retained for continued use by the community. The project would acquire two adjacent parcels currently owned by El Dorado County and currently used as a maintenance facility. One 2,300 square-foot (SF) maintenance facility building would be demolished, and another 2,450 SF maintenance facility building would be retained by GDRD for storage. The primary public entrance and parking area would be shifted from the current location along Main Street to the area along Ricci Road currently occupied by the County maintenance facility. Two existing single-family residences facing Main Street within the project site would be renovated for use by GDRD for offices and community meeting rooms.

Project Construction

Project construction is anticipated to begin in June 2021. Site preparation/grubbing and demolition would last approximately two months and may occur concurrently. Grading is anticipated to start in August 2021 and would last approximately two months. Paving of approximately 7,750 SF of parking and 12,350 SF of paths and miscellaneous hard surfaces is anticipated to occur in October 2021. Installation of the remaining project features and landscaping, including a pre-fabricated public restroom building, is anticipated to start in December 2021 and last approximately one year. Project construction is anticipated to be completed in December 2022.

BACKGROUND AND SETTING

Noise Terminology and Metrics

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this wide range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 mPa.

Because decibels are logarithmic units, SPL cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

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

Groundborne Vibration Terminology and Metrics

Groundborne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of groundborne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Several different

methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints. Generally, a PPV of less than 0.08 in/sec does not produce perceptible vibration. At 0.10 PPV in/sec, continuous vibrations may begin to annoy people, and it is the level at which there is a risk of architectural damage (e.g., cracking of plaster) to historical buildings and other vibration-sensitive structures. A level of 0.30 PPV in/sec is commonly used as a threshold for risk of architectural damage to standard dwellings (Caltrans 2013).

Regulatory Framework

El Dorado County General Plan

The El Dorado County General Plan Public Health, Safety, and Noise Element contains Goal 6.5: "Ensure that County residents are not subjected to noise beyond acceptable levels." The following objective and policies from the General Plan would be applicable to the project (County 2004):

> Objective 6.5.1: Protection of Noise-Sensitive Development
>
> Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels.
>
> Policy 6.5.1.2 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 6-2 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.
>
> Policy 6.5.1.7 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6-2 for noise-sensitive uses.
>
> Policy 6.5.1.11 The standards outlined in Tables 6-3, 6-4, and 6-5 shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally-recognized holidays. Further, the standards outlined in Tables 6-3, 6-4, and 6-5 shall not apply to public projects to alleviate traffic congestion and safety hazards.

Table 6-2, *Noise Level Performance Protection Standards for Noise Sensitive Land Uses Affected by Non-Transportation Sources*, of the General Plan establishes noise level standards for sensitive land uses. For rural areas, the noise standard limits are: 50 dBA L_{EQ} and an L_{MAX} of 60 dBA from 7:00 a.m. to 7:00 p.m.; 45 dBA L_{EQ} and an L_{MAX} of 55 dBA from 7:00 p.m. to 10:00 p.m.; and 40 dBA L_{EQ} and an L_{MAX} of 50 dBA from 7:00 a.m. to 7:00 p.m.

Table 6-4, *Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in Rural Centers – Construction Noise*, of the General Plan establishes construction noise level standards (that occurs outside the hours specified in Policy 6.5.1.11) of: 55 dBA L_{EQ} and an L_{MAX} of 75 dBA from 7:00 a.m. to

7:00 p.m.; 50 dBA L_{EQ} and an L_{MAX} of 65 dBA from 7:00 p.m. to 10:00 p.m.; and 45 dBA L_{EQ} and an L_{MAX} of 60 dBA from 7:00 a.m. to 7:00 p.m.

El Dorado County Municipal Code

The El Dorado County Municipal Code, Chapter 9.16, *Noise*, defines and prohibits loud or raucous noise:

> Section 9.16.040 – Loud and raucous noises—Definitions.
>
> *Loud and raucous* noise means:
>
> 1. Any noise made by the motor of any automobile, truck, tractor, motorcycle, or aircraft of any kind not reasonably required in the operation thereof under the circumstances and shall include, but not be limited to, backfiring, motor racing, and the buzzing by airplanes;
>
> 2. The sound of the discharge of any explosive except by or with the permission of any appropriate State or local licensing agency;
>
> 3. The human voice or any record or recording thereof when amplified by any device whether electrical or mechanical or otherwise to such an extent as to cause it to unreasonably carry on to public or private property or to be heard by others using the public highways, public thoroughfares, or public buildings;
>
> 4. Any sound not included in the foregoing which is of such volume, intensity, or carrying power as to interfere with the peace and quiet of persons upon public or private property or other users of the public highways, thoroughfares, and buildings.
>
> Section 9.16.040 – Loud and raucous noises—Prohibited.
>
> Except as otherwise provided in this chapter, it is unlawful for any person to willfully make, emit, or transmit or cause to be made, emitted, or transmitted any loud and raucous noise upon or from any public highway or public thoroughfare or from any aircraft of any kind whatsoever, or from any public or private property to such an extent that it unreasonably interferes with the peace and quiet of another's private property.

Existing Noise and Vibration Setting

Greenwood is a sparsely populated unincorporated rural community. The existing noise environment is dominated by vehicular traffic noise on SR-193, adjacent to the project site's northern boundary. Other noise sources include traffic on local streets and general noise associated with rural community residences adjacent to the project including heating, ventilation, and air conditioning (HVAC) systems; landscape maintenance equipment; and pets.

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, including residences, schools, libraries, or similar facilities where quiet is an important attribute of the environment. Noise receptors are individual locations that may be affected by noise. The closest noise sensitive land uses (NSLUs) to the project site are a single-family residence at 4057 Main Street, less than 10 feet north of the existing park public entrance (and future maintenance access); a

single family residence at 4049 Main Street, approximately 90 feet west of the proposed central multi-use sports field; and a single family residence at 4059 Main Street, approximately 45 feet north of the project site and approximately 100 feet northwest of the proposed central multi-use sports field. There is also a cemetery located at SR 193 and Ricci Road, approximately 100 feet from the project site.

Vibration-sensitive land uses are those that would be susceptible to disturbance or damage by excessive vibration. Vibration sensitive land uses may include residences, facilities containing sensitive equipment, or structures that are old or fragile. The structures on or near the project site include residences, which may be susceptible to annoyance from vibration, and the Greenwood Schoolhouse, which is an older, potentially historic building, would be potentially susceptible to structural damage from excessive vibration.

Two short-term (15-minute) ambient and traffic noise measurements (M1 and M2) were conducted during a site visit on July 9, 2019. Site M1 was located within the project site, adjacent to the existing playground and west of the Greenwood Schoolhouse. Site M2 was located near the project site boundary along SR-193, approximately 90 feet west of Ricci Road. A Larson Davis Sound Track LxT sound level meter was used for noise measurements. The sound level meter was field-calibrated immediately prior to the noise measurements to ensure accuracy using a Larson Davis model CAL150 calibrator. All sound level measurements conducted and presented in this report were made with a sound level meter that conforms to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI SI.4 1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

The measured noise levels and related weather conditions for the short-term measurements are shown in Table 1, *Project Site Visit Noise Measurement Results*. See Attachment A, *On-Site Noise Measurements*, to this letter report for survey notes from the short-term measurements.

Table 1
PROJECT SITE VISIT NOISE MEASUREMENT RESULTS

M1 - Ambient	
Date:	July 9, 2019
Conditions:	Temperature: 697°F. Wind Speed: 1 mph. 49% humidity. Sunny.
Time:	9:41 a.m. – 9:56 a.m.
Location:	Within the project site, approximately 20 feet west of the playground and 40 feet east of the Greenwood Schoolhouse.
Measured Noise Level:	38.3 dBA L_{EQ}
Notes:	Traffic along SR-193, approximately 390 feet north of the measurement location was the dominant noise source; some noise from barking dogs and the backup alarm from a commercial vehicle occurred the measurement.
M2 - Traffic	
Date:	July 9, 2019
Conditions:	Temperature: 70°F. Wind Speed: 2 mph. 45% humidity. Sunny.
Time:	10:14 a.m. – 10:29 a.m.
Location:	Approximately 30 feet south of the SR-193 centerline and 90 feet west of Ricci Road.
Measured Noise Level:	69.3 dBA L_{EQ}
Notes:	Traffic along SR-193 was the dominant noise source. 55 cars, 1 medium truck, and 3 heavy trucks were counted during measurement.

SIGNIFICANCE CRITERIA

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

1. Result in the 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;

2. Result in the generation of excessive groundborne vibration or groundborne noise levels;

3. Expose people residing or working in the project area to excessive noise levels from public use airports or private airstrips.

The County has not established a noise ordinance applicable to construction activities. The applicable noise standards from the General Plan are described in the Regulatory Setting, above.

IMPACT ANALYSIS

Issue 1: Exposure to Excessive Noise

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

Construction

Construction of the project would generate noise from the use of heavy construction equipment for site-preparation, demolition, and grading. The equipment to be used for project construction had not been determined at the time of this analysis. Based on the construction equipment from the air quality emissions modeling for the project, heavy equipment used for the project construction would include: rubber-tired dozers; excavators; graders; backhoes; and forklifts (HELIX 2019).

Project construction noise was analyzed using the Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM), which utilizes estimates of sound levels from standard construction equipment based on measurements and surveys conducted on a project site in Boston, Massachusetts (FHWA 2008). The RCNM output report is included as Attachment B, *RCNM Results,* to this letter report.

Construction equipment would be used sporadically throughout the project site but would be concentrated primarily in areas requiring demolition or substantial earth moving (such as the County maintenance facility area on the southeast side of the project site and the proposed sports fields in the center and eastern areas of the project site). Multiple pieces of construction equipment would be rarely used simultaneously in close proximity to each other. A conservative scenario was modeled consisting of the simultaneous use of a dozer, grader, and excavator operating for one or more hours in the area requiring grading for the center sports field, approximately 60 feet from the nearest noise sensitive land use, a residential property adjacent to the eastern project site boundary. Other project construction activities would be expected to use less intensive equipment or fewer number of equipment simultaneously. The resulting construction noise at the residential property line would be approximately

82.1 dBA L_{EQ} (1 hour) and 83.4 dBA L_{MAX}. This noise level would exceed the daytime construction noise limits of 55 dBA L_{EQ} and an L_{MAX} of 75 dBA as well as the evening and nighttime construction noise limits from Table 6-4, as discussed in the Regulatory Framework, above. Without mitigation this would be a potentially significant impact.

Per Policy 6.5.1.11 of the General Plan: The standards outlined in Table 6-4 of the General Plan Noise Element shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally-recognized holidays. Mitigation Measure NOI-1 would limit project construction activity to the hours specified in Policy 6.5.1.11. With implementation of Mitigation Measure NOI-1, construction of the project would not result in the generation of a substantial temporary increase in ambient noise levels in excess of the standards established in the General Plan Noise Element and construction impacts would be less than significant.

Operation

Long-term operation of the project would result in new and changed sources of noise in the community from use of the expanded reactional facilities, community buildings, and offices. However, the project would eliminate noise from use of the County maintenance facility. Relocation of the park's primary public entrance and parking from Main Street to Ricci Road would shift vehicle and parking lot noise away from the residences along main street. The project is not anticipated to substantially increase traffic in the area. The outdoor recreational facilities would not include lighting and would, therefore, be limited to daytime use. Any persons using the park's public facilities would be subject to the County Ordinance Chapter 9.16 which prohibits loud or raucous noises which unreasonably interferes with the peace and quiet of another's private property, as described in the Regulatory Framework discussion, above. Therefore, long-term operation of the project would not result in the generation of a substantial permanent increase in ambient noise levels in excess of the standards established in the General Plan Noise Element and operational impacts would be less than significant.

Issue 2: Excessive Vibration

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

Long-term operation of the project would include recreational uses and would therefore not be a source of significant groundborne vibrations or groundborne noise. Operational vibration impacts would be less than significant.

During construction, the largest potential source of vibration during project construction would be a vibratory roller, primarily used to achieve soil, aggregate and asphalt compaction. Vibratory rollers could be used in the construction of parking lots, driveways, and paths on the project site, including within 10 feet of the Greenwood Schoolhouse, a listed historical structure on the project site. A large vibratory roller is assumed to generate a vibration level of approximately 0.210 in/sec PPV at a distance of 25 feet (Caltrans 2013). At a distance of 10 feet, a large vibratory roller could produce vibration levels as high as

0.58 in/sec PPV.[1] This would exceed the 0.1 in/sec PPV vibration criteria for potential architectural damage to historical structures and would be a potentially significant impact.

To reduce vibration levels to acceptable levels (0.10 in/sec PPV), the use of vibratory rollers would need to be set back from the Greenwood Schoolhouse or other historic structures by at least 50 feet, or be used in static mode (no vibrations) near the buildings. Further, reducing vibration levels to 0.10 in/sec PPV would ensure that surrounding occupied residences would not be adversely affected by project construction.

Mitigation measure NOI-2 would require vibratory rollers to be used in static mode when operating within 50 feet of any historic structure (including the Greenwood Schoolhouse) or occupied residence. With implementation of mitigation measure NOI-2, project construction activities would not result in excessive groundborne vibration or groundborne noise levels that would damage structures on or near the project site or result in vibration-related annoyance to building occupants. Construction vibration impacts would be less than significant following mitigation.

Issue 3: Airport Noise Exposure

Would the project expose people residing or working in the project area to excessive noise from a nearby public use airport or private airstrip?

The closest public airport or private airstrip to the project site is the Georgetown Airport, approximately 3 miles northeast of the project site. Per the El Dorado County Transportation Commission's (EDCTC) *El Dorado County Airport Land Use Compatibility Plan*, the project site is not within the Georgetown Airport Influence Area (EDCTC 2012). Therefore, the project would not expose people residing or working in the project area to excessive noise levels from airport operations and there would be no impact.

MITIGATION MEASURES

NOI-1 **Construction Hour Limits**. The GDRD shall restrict construction activity involving the use of noise generating equipment to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally-recognized holidays. If construction activity is to be performed by contractors, the GDRD shall specify the construction time limitations on contract documents. The designated contractor shall post a publicly visible sign at all project site entrances listing the construction hour limitations and the contact information (including phone number) of a designated public liaison for construction noise complaints.

NOI-2 **Construction Vibration Limits.** Vibration-generating construction equipment shall not generate vibration levels that exceed 0.1 in/sec PPV at historic structures or occupied residences. This shall be demonstrated by ensuring that construction plans submitted to GDRD prior to approval of building permits specify that large vibratory rollers are to be set back from historic structures (including the Greenwood Schoolhouse) or any occupied

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

residence by 50 feet, or be used in static mode only (no vibrations) when operating within 50 feet of historic structures or occupied residences. If vibration-generating equipment other than large vibratory rollers are used during construction, project construction plans shall include specifications that demonstrate that vibration limits do not exceed 0.1 in/sec PPV at the historic structure or occupied residences.

SUMMARY

With implementation of Mitigation Measure NOI-1 to limit the hours of construction in accordance with the County General Plan Noise Element, construction of the project would not result in a temporary noise increase in excess of standards. Long-term operation of the project would result in day-time use only of the project's expanded outdoor recreational facilitates and users of the park would be subject to the County Ordinances prohibiting loud or raucous noises. Relocating the primary public entrance and parking areas to Ricci Road would shift vehicle noise away from residences along Main Street. The project would not result in a permanent increase in ambient noise levels in excess of local standards or expose users to excessive aircraft noise. Long-term operation of the project would not be a significant source of groundborne vibration. With implementation of Mitigation Measure NOI-2 to restrict the use vibratory rollers near historical or occupied residences, construction of the project would not result in the generation of excessive groundborne vibration or groundborne noise levels.

Sincerely,

Martin Rolph
Noise Specialist

Joanne M. Dramko, AICP
Senior Noise Specialist

Attachments:

Attachment A: On Site Noise Measurements
Attachment B: RCNM Results

REFERENCES

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Attachment A

On Site Noise Measurements

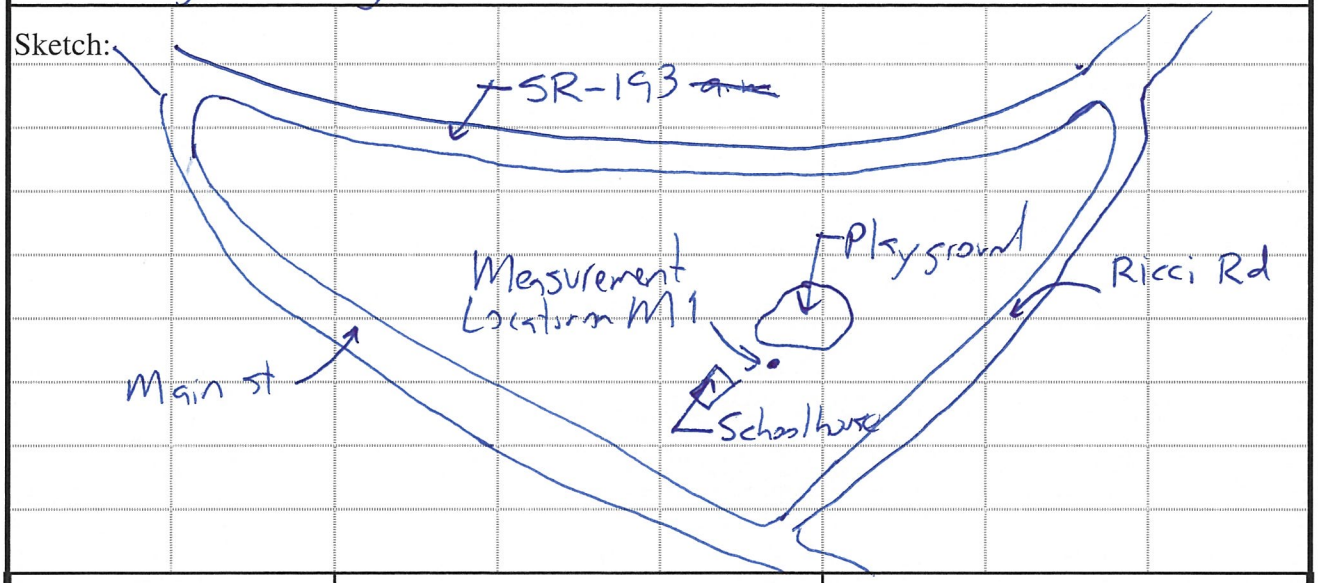
M1

Site Survey

Job # GDR-02	Project Name: Green Wood Park		
Date: 7/9/19	Site #:	Engineer: Martin Rolph	
Address: 4065 Main St., Greenwood, CA			
Meter: Sound Track LXT	Serial #: 0001013	Calibrator: Cal 150	Serial #: 5529

Notes: Traffic on SR-193 dominant noise source.
Back-up alarm on Ricci Rd @ 9:44 a.m.
Dogs barking at 9:52 a.m.

Sketch:



Temp: 67° F	Wind Spd: 1 mph	Humidity: 49 %
Start of Measurement: 9:41 a.m.	End of Measurement: 9:56 a.m.	38.3 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

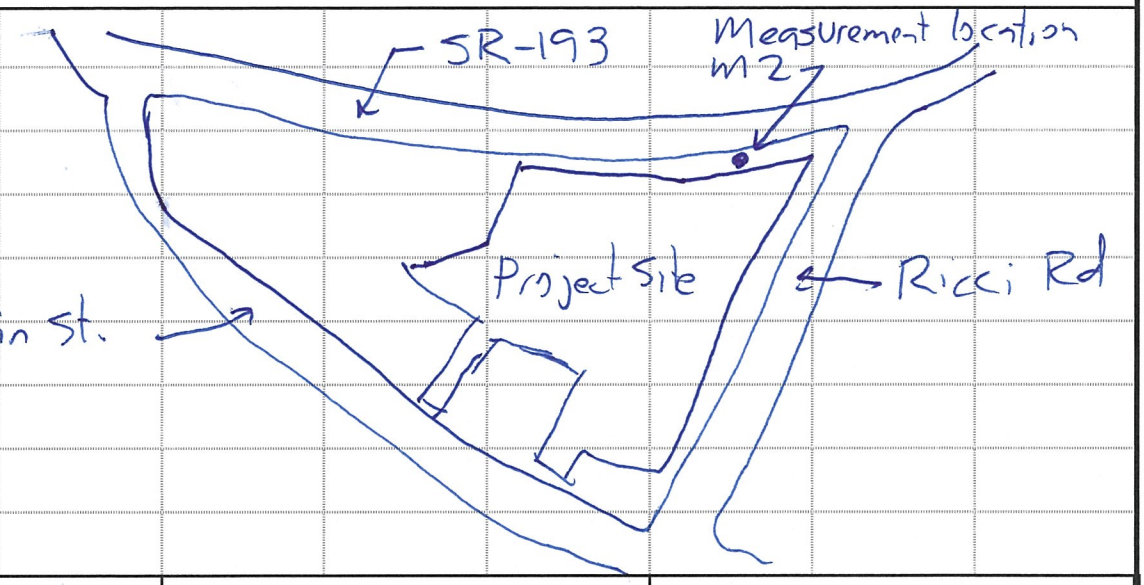
M2

Site Survey

Job # GDR-02	Project Name: Greenwood Park		
Date: 7/9/19	Site #:	Engineer: Martin Rolph	
Address: 4065 Main St., Greenwood, CA			
Meter: Sound Track LXT	Serial #: 0001013	Calibrator: Cal150	Serial #: 5529

Notes: 3 vehicles on Ricci Rd, remaing traffic on SR-193

Sketch:



Temp: 70°F	Wind Spd: 2 mph	Humidity: 45 %
Start of Measurement: 10:14 a.m.	End of Measurement: 10:29 a.m.	69.9 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
~~IIII IIII I~~ (55 total)	I (1 total)	III (3 total)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Attachment B

RCNM Results

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 7/9/2019
Case Descri GDR-02 Greenwood Park

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Single Fami	Residential	60	50	45

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	60	0
Grader	No	40	85		60	0
Excavator	No	40		80.7	60	0

	Calculated (dBA)		Results						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						
Dozer	80.1	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Grader	83.4	79.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Excavator	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						
Total	83.4	82.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						

*Calculated Lmax is the Loudest value.